On-Call Engineering Support Services

MARINA COAST WATER DISTRICT

October 27, 2017

Harris & Associates®

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Harris & Associates®

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

Subject: On-Call Engineering Support Services

Dear Mr. Wegley:

Marina Coast Water District (District) needs assistance with engineering services to deliver capital improvement projects and oversee development projects. Harris & Associates (Harris) has the staff and expertise to perform Engineering Support Services for the District. Please consider the following benefits Harris offers:

District Experience. Our staff has worked with District staff on a myriad of projects for the last 15 years including Construction Management (CM)/Inspection services on Capital Improvement Project and private development projects. We understand and have even developed some of the various guidelines, processes and methods to review, approve, construct and accept District or developer projects.

Full Service. The Harris team provides the full range of services to plan, design, permit, bid/award and construct public agency improvement projects. Our staff includes civil designers, program managers, financial engineers, grant coordinators, environmental planners, and construction managers/inspectors. We have included several subconsultants to address the full range of services in the RFP.

Land Development Expertise. In addition to our work with the District, Harris is currently providing development inspection and management services to the cities of Gilroy, Morgan Hill, Salinas, Sand City, Soledad, and Gonzales. Our seasoned team will assist District staff with inspection and improvement plan review.

Our team is well versed in District Standard Plans, Standard Specifications. We will protect the District's interests while partnering with various stakeholders for win-win projects that make sense for the District and the developer.

Local Office. Harris has maintained an office in the Monterey Bay Region for over 20 years. We have 18 staff based in our Salinas office to provide a variety of services such as capital project delivery, wet utility system upgrades, civil design, and CM/Inspection.

An Approach Centered on Communication. Communication is a main driver of successful project delivery. A large part of communication is listening and we believe in a direct line of communication (in person, phone) to fully understand city staff's expectations and needs. We look to increase our work for the District.

Over the past 15 years, Harris staff have worked diligently to establish ourselves as a reliable partner in assisting the District in the delivery of projects and services. We sincerely look forward to being selected and continuing this successful relationship.

Regards,
Harris & Associates, Inc.

PATRICK DOBBINS

Patrick Dobbins, PE, QSD
Project Manager
(831) 789-8668 | Patrick.Dobbins@WeAreHarris.com

Dana Van Horn, PE, QSD
Construction Manager
(831) 419-7234 | Dana.VanHorn@WeAreHarris.com

1. Approach

The District provides water service and wastewater collection service in the City of Marina and on the former Fort Ord Military installation. It also conveys sewage to the Monterey Regional Water Pollution Control Agency treatment plant. The District has plans to provide recycled water for public and private landscape irrigation and commercial uses. Development projects have installed recycled water irrigation in anticipation of the availability of non-potable water.

Solid Plan of Action

Issue. The lack of a clear plan of action has negative impacts on the budget and schedule and makes it difficult for team members to navigate through a project.

Approach. Harris' work plan, outlined on page 6, was developed for pipeline projects and based on working on hundreds of pipeline projects. The key components to this work plan are:

- Establish goals of project
- Evaluate alternatives to achieve goals with available budget
- Early coordination with agencies and utilities
- Early start on regulatory agency coordination
- Immediate start of field investigations
- Constant communication with District staff

Benefit/Proven Success. We have applied this same approach on our Ross Valley Sanitary District sewer projects. Under a cease and desist order, the District is obligated to complete 4 miles of sewer rehabilitation a year. One of our first tasks was to develop an overall work plan to achieve this mandate. Following our solid work plan we have met this and exceeded this goal; to date we have rehabilitated over 20 miles of pipe since 2014.

Early Coordination with Stakeholders/Agencies/ Utilities

Issue. The assigned projects will require coordination with various agencies 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 One Water, Caltrans, State Parks, and public utilities (PG&E, Comcast, AT&T). We recognize that each has their own agendas, protocols and unique requirements. Early coordination efforts avoid conflict with existing facilities and/or other planned construction work by other agencies. Frequent and effective communication with other stakeholders avoids potential conflicts by identifying them early; this avoids/mitigates impacts to construction costs and schedule.

Approach. Early and constant communication with affected agencies is important. We will send written communications to all of the agencies notifying them about these projects and requesting information on any anticipated projects and as-built data for existing facilities. For larger or multiple projects, we would recommend a regularly scheduled coordination meeting to keep everyone "in the loop" during the planning, design and construction phases. For certain agencies, we will also provide them with a set of each of our submittal milestones to get their feedback or concerns and requirements that affect our construction documents.

Benefit/Proven Success. For our Monterey Sewer project, there were two locations that PG&E facilities conflicted with our sanitary sewer upgrades. We submitted an application for gas relocation as soon as we finalized the design in order for PG&E to immediately add this to their queue of multiple projects. We were able to plan our schedule to work on other sites until PG&E was able to relocate the gas lines. This allowed us to plan ahead to avoid downtime during construction.

For a Monterey Sewer Force Main Emergency project, our pipe alignment ran along Highway 68. The project was fast-tracked as the existing pipe was experiencing longitudinal cracking and sewer leakage at various locations. At the start of design, we contacted Caltrans to gather requirements of traffic control and special work hour requirements that needed to be incorporated into the construction documents. This early coordination allowed us to efficiently obtain the Encroachment permit from Caltrans and enable us to start construction immediately.

Caltrans required night work for SS Force Main work on Highway 68

A collaborative approach between the District, stakeholders and agencies will save cost and time and reduce impacts to residents, businesses and the traveling public.

Utilize Sustainable Techniques

Issue. Constructing or rehabilitating pipelines using traditional open cut methods can be disruptive to the public and the environment. The extra materials and off-hauling of disposals needed for traditional methods not only causes inconveniences but it is also wasteful which can translate to higher costs.

Approach. As a leader in trenchless technology we will utilize trenchless techniques where feasible to save time, minimize impact to the public, apply sustainable approach and stretch the District dollars.

Benefit/Proven Success. For the District's 1st Avenue 30-inch concrete sewer pipe, we looked at several trenchless applications to rehabilitate the failing pipe: continuous sliplining, segmental sliplining and Cured-in Place Pipe Lining (CIPP). Our study found that CIPP was the quickest and most cost efficient method. We fast-tracked the design documents and were able to deliver preliminary plans and specifications within one month. Conventional rehabilitation by open trench would have cost three to four times more. The District was able to save time and money on this project.

Types of trenchless techniques that we have utilized on past projects include but are not limited to:

- Pipe Bursting
- Pipe Reaming
- Pilot Tube Guided Boring
- Horizontal Directional Drilling
- Fold and Form
- Jack and Bore
- Continuous and Segmental Sliplining
- Cured-in-Place Piping

For our FY 2014/2015 Pipeline Rehabilitation Project, the Harris team balanced the budgetary resources through construction method optimization, while also evaluting the hydraulic capacity, structural condition, and operation improvements. I would not hesitate to consider Harris & Associates for future projects.

RANDELL ISHII, ROSS VALLEY SANITARY DISTRICT

Pipeline Project Work Plan

Pipeline Project Work Plan							
District assigns Task Order							
PHASE I	Kick-off with entire team (Harris staff + Subs) to discuss Work Plan & Schedule				Gather asbuilts and CCTV data from District		
PHASE II	Notify residents, businesses, schools of surveying work, if necessary						
PHASE III	Perform site visits: gather photos, construction issues	Review asbuilts and CCTV data from District	Perform CCTV	Send Utility Maps request and inquiry on planned projects from Utilities and other jurisdictions	Begin Environmental Process. Coordination w Regulatory Agencies.	Perform Topographic Survey	Perform Utility Locating Surveying
PHASE IV	Review CCTV and log findings		Coordinate with Regulatory Agencies for any Environmental concerns			Back check Utilities from Utility Locating against utility maps	
PHASE V	Prepare conceptual plan sheets		Continue Environmental Process/ Follow up with Regulatory Agencies			Prepare Alternatives Analysis	
PHASE VI	Submit conceptual design/Alternative Analysis and review with District				After determining pipe method, perform Geotechnical Studies for PB, OC, Microtunneling, Jack & Bore		
PHASE VII	Finalize Construction Methods; Finalize Basis of Design Report						
PHASE VIII	Prepare 60% PS&E & Quality Control Review Submit 60% PS&E to Utilities		Submit 60% PS&E to District			Submit 60% PS&E to other jurisdictions, if necessary	
PHASE IX	Meet with District to discuss 60% PS&E review comments	Prepare 90% PS&E Submit 90% PS&E to Utilities			Submit 90% PS&E to District	Submit 90% PS&E to other jurisdictions, if necessary	Notify residents, businesses, schools of upcoming work
PHASE X	Meet with District to discuss 100% review comments	Prepare Final PS&E Submit Final PS&E to Utilities			Submit Final PS&E to District	Submit Final PS&E to Town/City/ County	Present to Board for approval
PHASE XI	Provide Bid Period Services				Issue Addendum, if required		
PHASE XII	Engineering Services during Construction				Apply for Permits, if required		

2. Key Personnel

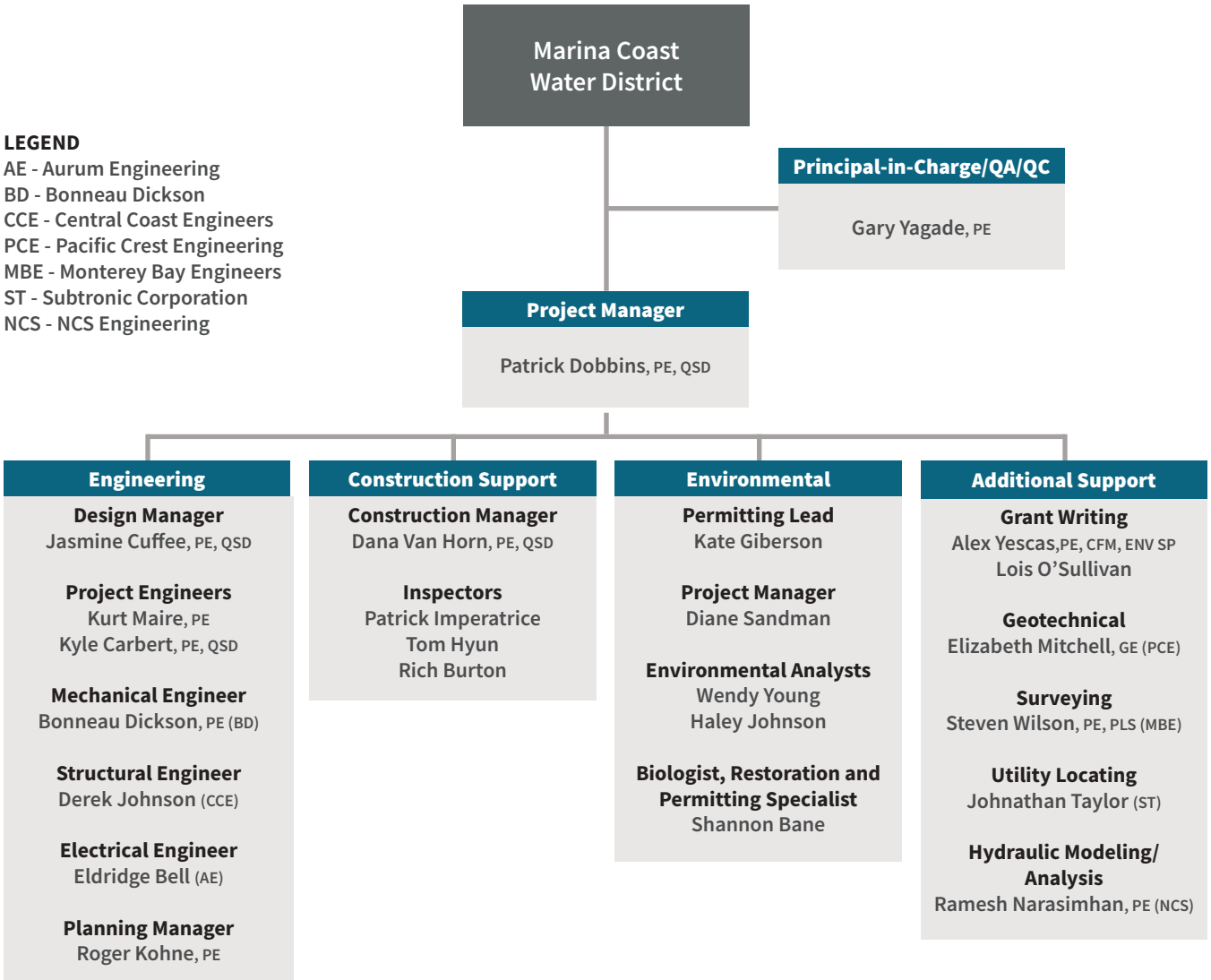
Harris has served public agencies and private clients since 1974. We have developed a robust program of services that offer our clients expertise and assistance in various realms of engineering services, program and construction management, public finance, and environmental services. Our engineering services include:

- Potable and recycled water pipeline design
- Sewer and storm drain pipeline design
- Pipeline rehabilitation
- Pump station design
- Booster station facilities
- Modification, replacement, and rehabilitation of existing booster stations
- Trenchless technology solutions, and
- Specifications, quantity/cost estimates, utility coordination, and permits.

We are a leader in the use of innovative design technologies including no-dig pipeline rehabilitation, storm water quality solutions, and new pavement technologies. Our staff have specific experience in potable water and waste water infrastructure improvements the District will need.

Organizational Chart

LEGEND
AE - Aurum Engineering
BD - Bonneau Dickson
CCE - Central Coast Engineers
PCE - Pacific Crest Engineering
MBE - Monterey Bay Engineers
ST - Subtronic Corporation
NCS - NCS Engineering



The matrix below summarizes our team's experience with similar projects, which are further discussed in section ***3.Project Experience*** of our proposal. Team member's qualifications are provided in their individual resumes on the following pages.

RELEVANT PROJECT	Patrick Dobbins	Jasmine Cuffee	Gary Yagade	Kurt Maire	Kyle Carbert	Roger Kohne	Dana Van Horn	Patrick Imperatrice	Tom Hyun	Rich Burton	Kate Giberson	Diane Sandman	Wendy Young	Haley Johnson	Shannon Bane	Alex Yescas	Lois O'Sullivan	Aurum Engineering	Bonneau Dickson	Central Coast Engineers	Pacific Crest Engineering	Monterey Bay Engineers	Subtronic Corporation	NCS Engineering
	Harris Staff																	Subconsultants						
Program Management Services, Marina Coast Water District	●				●		●	●																
City Engineering Services, City of Gonzales	●				●	●		●	●		●						●	○				○		○
Water/Sewer Program Management, City of Soledad	●	●		●	●	●	●		●		●		●		●	●			○		○	○	○	○
Sewer Line Rehabilitation, City of Monterey	●	●		●	●		●	●	●	●												○	○	
Sewer and Pipeline Rehabilitations, Ross Valley Sanitary District		●		●	●																		○	
Freedom Boulevard Trunk Sewer Improvements, City of Watsonville		●		●																	○		○	
Esplanade Pump Station, Santa Cruz County Sanitation District		●																						
On-Call Environmental Services, Santa Cruz County Sanitation District											●		●											
As-Needed CEQA Environmental Services, City of Vista			●									●		●										

Patrick Dobbins, PE, QSD

PROJECT MANAGER

Patrick has 30 years of public works experience and a proven record of accomplishment in Monterey County. For over ten years, Patrick provided staff augmentation and project management services for the City of Seaside's CIP, delivering over 50 CIP projects. Patrick has been City Engineer to the City of Gonzales for the last two years.

RELEVANT EXPERIENCE

- **Marina Coast Water District**, ***Construction Management and Inspection.*** Principal in Charge. Patrick oversees this contract for the installation of a water distribution system and sewer collection system for the Ford Ord redevelopment on behalf of the District for the past year. The most recent phase of inspection includes the construction of a pump station.
- **City of Gonzales**, ***City Engineering Services.*** City Engineer. Patrick has served as the contract City Engineer for Gonzales delivering capital improvement program projects from concept to completion. His responsibilities include defining projects for consultant to prepare scopes, fees, and schedules, reviewing submitted materials, preparing a detailed schedule listing all milestones and durations, developing and updating a budget so all soft and hard costs are tracked, bidding strategies, preparing staff reports for City Council meetings, preparing City agreements for execution, overseeing construction management and providing final acceptance. Projects included improvements to the city wastewater treatment plant, new access ramps and sidewalks, bio-retention bulb-outs and plan review of single lot developments.
- **City of Monterey**, ***Sewer Line and Lift Station Rehabilitation Program.*** Project Manager. Patrick is managing program, design, and construction management services for the $12M SRF funded rehabilitation of the City's sewer collection system, consisting of major improvements to sewer pump stations, main lines and manholes. Work includes the rehabilitation of 22,000 feet of pipelines using trenchless technology, seven sewer lift stations, and 431 manhole structures. Our services include coordination with City staff; review of our subconsultant's condition assessment report, DVDs, and recommendations; and preparation of the engineer's preliminary opinion of probable construction costs for the related repairs, a prioritization list, and a color-coded citywide conditions exhibit illustrating the condition of the City's sewer system.
- **Castroville Community Services District**, ***On-Call Services.*** District Engineer. Patrick is helping the District with delivering various infrastructure projects, storm drainage, water project, traffic calming project, sewer collection system improvements. He prepared plans for site improvements at Well 2B, which includes proprietary filter system funded by Prop 84 grant monies. He also prepared basis of design report for sewer improvements identified by Master Sewer Plan and revised the design to improve the alignment and issue for bids for the Union Street Storm Drain Project.

EDUCATION

BS, Civil Engineering

REGISTRATIONS

Professional Civil Engineer, CA

CERTIFICATIONS

California Department of Public Health, Water Treatment Operator Grade T1

California Department of Public Health, Water Distribution Operator Grade D1

Qualified SWPPP management services for the Developer/ Practitioner

Jasmine Cuffee, PE, QSD

DESIGN MANAGER

Jasmine has over 25 years of experience in the design of various public works improvement projects specializing in roadway design, pavement rehabilitation, site design, storm drain, water, reclaimed water, and sanitary sewers. Her pipeline experience consists of various projects using current trenchless technology methods. Her responsibilities have included design of drainage, grading, and horizontal and vertical alignments for both roadway and pipeline; preparation of specifications and cost estimates; budget analysis; community relations; coordination with various agencies; processing of federal funding documents; and project management.

EDUCATION

BS, Civil Engineering

REGISTRATIONS

Professional Civil Engineer, CA

CERTIFICATIONS

SMARTS, Qualified SWPPP Developer (QSD)

RELEVANT EXPERIENCE

- **City of Gonzales**, ***Gonzales Old Town Low Impact Development.*** Principal-in-Charge/Quality Control Manager. This $500,000 project retrofits existing curb and gutter to install stormwater treatment basins in new curb bulb-out extensions to capture and infiltrate stormwater run-off. Jasmine provided oversight and quality control for the preparation of plans, specifications and estimate.
- **City of Soledad**, ***Well No.*** 9 Treatment Design. QA/QC Manager. As part of our on-call, Harris is providing engineering services for the bid preparation, bid selection and design phases for treatment of manganese and iron for Well #9.
- **City of Monterey**, ***Sewer Line and Lift Station Rehabilitation Program.*** Project Manager. $16.8 million rehabilitation of over 60,000 feet of sewers, 431 manholes, and seven pump stations. Rehabilitation methods include spot repairs, pipe bursting, and CIPP lining. Work takes place in heavily traveled areas throughout the City. Point-of-contact, providing staff oversight and quality control
- **Ross Valley Sanitary District**, ***Standard Specifications Update.*** Project Director. Updated the District's Standard Specifications and Drawings, including the Front Ends and Technical sections. Provided quality control
- **Ross Valley Sanitary District**, ***FY 2014 Gravity Sewer Rehabilitation, Group A and B.*** Design Manager. This project includes $3.5 million rehabilitation of 5-, 6-, and 8-inch gravity sewer segments with Grade 5 structural defects under a cease and desist order. Rehabilitation methods include open cut, CIPP lining, and pipe bursting. Many Group B projects were located in easements outside of roadways, between properties, and in steep hills.
- **Ross Valley Sanitary District**, ***FY 2015/16 Larkspur Sanitary Sewer Emergency Repair Project.*** Project Manager. This project is an emergency repair of the existing sewer pipe located at #3 Boardwalk 1 in Larkspur, California. As a portion of the pipe runs along a marsh, Harris provided environmental consulting services, including processing permits and coordinating with environmental agencies (USACE, RWQCB, BCDC).

Kurt Maire, PE, QSD

PROJECT ENGINEER

Kurt has 11 years of experience as a project manager/engineer. His areas of specialization include design of gravity and pressure pipelines, trenchless technologies, and water and wastewater pump stations. Kurt's recent experience designing sanitary sewer improvements for the City of Mill Valley and other County of Marin agencies on narrow and curvy streets means that Kurt is already familiar with construction issues in this topography. His experience will help him to address site specific challenges and determine innovative solutions and design methods in the challenging conditions involved in this project. For a proposed open cut of a sanitary sewer under nearly 300 feet of wooden stairs at the end of Bernard Street in Mill Valley, Kurt specified pipe bursting to avoid replacement of stairs, which would also require new handrails to meet more recent building codes. His proposed method ended up saving the City tens of thousands of dollars.

EDUCATION

BS, Civil Engineering

REGISTRATIONS

Professional Civil Engineer, CA

Qualified Storm Water Pollution Prevention Plan (SWPPP) Developer (QSD)

RELEVANT EXPERIENCE

- **Ross Valley Sanitary District***, FY 2014 Group A & B, FY 2014/15, 2015/16 and 2016/17 Diversion and Relief Pipeline Rehabilitation.* Project Engineer. Kurt has been involved in District's annual collection system rehabilitation projects for the last three years, which involved open-cut, cured-in-place pipe (CIPP) lining, horizontal directional drilling, and pipe bursting rehabilitation methods for the District's program of rehabilitation work. Many Group B projects were located in easements outside of roadways, between properties and in steep hills. Kurt was able to choose rehabilitation methods that are constructible and effective in these difficult conditions.
- **City of Monterey***, Sewer Line and Lift Station Rehabilitation Program.* QA/QC Manager. $16.8 million rehabilitation of over 60,000 feet of sewers, 431 manholes, and seven pump stations. Rehabilitation methods include spot repairs, pipe bursting, and CIPP lining. Work takes place in heavily traveled areas throughout the City.
- **City of Soledad***, Soledad Regional Recharge Project.* Project Engineer. The project included open cut construction of over 4,500 LF of reinforced concrete and/or polypropylene pipe ranging from 30 to 72 inches in diameter, also including elliptical piping; construction of a reinforced concrete box channel; removal, replacement, and installation of new precast manholes, custom cast-in-place manholes, and an underground detention system; connections between the new system and the existing system; re-grading and modifying an existing storm drain recharge basin for additional capacity; and installation of a new inlet pipe and overflow piping for the basin. The project also included installation and grading of a 12-foot-wide access road for the basin. Kurt performed a quality and constructability review for the project and assisted with preparation of the plans and specifications. Kurt determined that an underground detention system could be used to eliminate a sump in the collection system. The new detention system will reduce maintenance for the City and provide for additional groundwater recharge.

Kyle Carbert, PE, QSD, ENV SP

PROJECT ENGINEER

Kyle has 11 years of experience in wastewater collection system design, pipeline rehabilitation, and cost estimating. He takes pride in his understanding of the costs and benefits of different pipeline replacement and rehabilitation alternatives, most notably open-cut, pipe bursting, cured-in-place pipe (CIPP), and pilot tube guided auger boring (PTGB). He has applied this knowledge most recently for Ross Valley Sanitary District's 2016/2017 Diversion and Relief Pipeline Rehabilitation project, the City of Mill Valley's Miller Ave Sewer Improvements project, and City of San Mateo's El Cerrito Relief Line project.

RELEVANT EXPERIENCE

- **City of Soledad**, ***Storm Drain Improvement Projects.*** Project Manager. Providing project management for the design effort associated with this contract. The project includes repurposing an existing drainage basin for use as a park and upsizing the storm drain system and recharge basin; including multi-agency coordination due to the alignment of the storm drain system. Kyle will also assist with pursing Prop. 1 grant funds to support the construction of future stormwater recharge projects in the City.
- **City of Soledad**, ***Storm Water Management Plan Annual Report Assistance.*** Assistant Project Engineer. Assisted the City in preparing their Storm Water Management Annual Report. This included an executive summary, preparation, review, recommended language for general summaries, measurable goal status, appropriateness, and effectiveness write-ups as were required under each of the MCMs. Made recommendations for forward scheduling and/or adjustments over the five year permit term. Coordinated with the RWQCB and provided QA/QC review of the report before the final submittal was made to the Department of Water Resources.
- **City of Monterey**, ***Sewer Line and Lift Station Rehabilitation Program.*** Project Engineer. This $16.8 million program includes the rehabilitation of over 70,0000 LF of sewer, 431 manholes, and seven pump stations. Rehabilitation methods include spot repairs, pipe bursting, and CIPP lining. Kyle performed field investigations and prepared final specifications.
- **Ross Valley Sanitary District**, ***FY 2016/2017 Diversion and Relief Pipeline Rehabilitation.*** Project Engineer. Kyle is currently leading the alternatives analysis and preliminary design efforts for the capacity improvements portion of this project, which seeks to install a 12-inch diversion sewer and upsize an existing 18-inch pipe to 24-inch pipe. He is currently investigating using pilot tube guided auger boring for deep excavations and as well as using pipe bursting or pipe reaming to minimize disruption in a busy roadway.
- **City of San Mateo**, ***El Cerrito Relief Line.*** Project Engineer. $15 million sewer rehabilitation including two miles of 27- to 30-inch sanitary sewer pipeline. Trenchless technology minimized public and traffic impacts - methods included pilot tube guided boring and pipe bursting. Kyle was responsible for the preparation of plans and cost estimates.

EDUCATION

MS, Civil and Environmental Engineering

BS, Civil and Environmental Engineering

REGISTRATIONS

Professional Civil Engineer, CA

Qualified Storm Water Pollution Prevention Plan (SWPPP) Developer (QSD)

CERTIFICATIONS

Qualified SWPPP Developer/ Practitioner (QSD/QSP)

Envision Sustainability Professional (ENV SP)

TRAINING

ADA Compliance Design Standard Implementation, 2005

West Contra Costa County, Walkability Workshop, 2005

Dana Van Horn, PE, QSD

CONSTRUCTION MANAGER

Dana is a licensed professional engineer with over 25 years of experience in the areas of project planning, construction engineering, and project management. She has worked for the City of Monterey on numerous projects over the last nine years. Her experience includes assignments in civil design, construction inspection, environmental liaison, supervision, and administration, contract management, and project management for both the public and private sectors. She has managed construction projects ranging from small improvement projects to a $1 billion infrastructure improvement program.

RELEVANT EXPERIENCE

- **Marina Coast Water District**, ***Project Management Services.*** Construction Manager. Dana is providing continued construction management support for inspection for the installation of domestic and recycled water and sewer collection systems for a number of development projects including: East Garrison Phase 1 and 2, Dunes at Monterey Bay Phases 1B and !C-1, 2 and 3, and the Department of Defense VA Medial Clinic. In addition to inspection services Harris has developed protocols for and are providing audits of water conservation measures installed by builders.
- **City of Monterey**, ***2009 Street and Sewer/Storm Drain Reconstruction.*** Resident Engineer. Project included three separate packages totaling $1 million which included street reconstruction, and sewer and storm drain repairs and upgrades which impacted local businesses and occurred adjacent to live traffic. Project included repairs to existing pipelines utilizing cured-in-place pipe lining technology. Dana's duties included: site observation of contractor's work for compliance with plans and specifications; contract administration including processing of RFIs; negotiation of change orders; and review or contractor's pay request and maintenance of project records compliant with the Federally funded (ARRA) project standards.
- **City of Santa Cruz**, ***Graham Hill Water Treatment Plant Electrical Upgrade.*** Resident Engineer. Harris provided contract administration and inspection services for an electrical service upgrade to the operational water treatment plant. This included the installation of new 21kV service (from PG&E) and a new substation. The substation included emergency power, distribution boards, and motor control centers, as well as a new building in which to house them. Dana was responsible for contract administration, coordination with PG&E, processing/reviews of plans and working drawings, review and approval of pay applications, change order negotiations, and project documentation.

EDUCATION

BS, Civil Engineering

REGISTRATIONS

Professional Civil Engineer, CA

CERTIFICATIONS

California State Water Resources Control Board, Qualified SWPPP Developer

Patrick Imperatrice

CONSTRUCTION INSPECTOR

Patrick has over 30 years of engineering and inspection experience. Public works projects include domestic water development, storm drain facilities, sanitary sewer collection and disposal systems, storage and distribution systems, and utility systems.

CERTIFICATIONS

Construction Material Testing Methods Certification

RELEVANT EXPERIENCE

- **Marina Coast Water District**, ***Construction Management and Inspection.*** Construction Inspector for the installation of a water distribution system and sewer collection system for the Ford Ord redevelopment on behalf of MCWD for the past year. The most recent phase of inspection includes the construction of a pump station.
- **Marina Coast Water District**, ***Dunes - Phase 1C-2.*** Construction Inspector. Dunes on Monterey Bay is a residential home development being built by Shea Homes in Marina, CA. The developer is responsible for installing water, irrigation, sewer and electrical infrastructure as well as roads and sidewalks to service the homes being built. Harris will provide inspection of potable and recycled water systems and sanitary sewer collection system.
- **Marina Coast Water District**, ***Dunes - Phase 1C-3.*** Construction Inspector. Dunes on Monterey Bay is a residential home development being built by Shea Homes in Marina, CA. The developer is responsible for installing water, irrigation, sewer and electrical infrastructure as well as roads and sidewalks to service the homes being built. Harris will provide inspection of potable and recycled water systems and sanitary sewer collection system.
- **Marina Coast Water District**, ***East Garrison Water and Sewer Lines Phase II.*** Construction Manager/Lead Inspector. Construction management support for the installation of water and sewer lines at the East Garrison development project.
- **City of Soledad**, ***906 Front Street Water Line Emergency Repair.*** Construction Manager/Inspector. Patrick provided inspection and construction management services for the emergency repair of a failed water line. He assisted with daily coordination between the contractor and City representative, and preparation of daily construction logs. He also assisted with the water line shutdown to the impacted property owners.
- **City of Hollister**, ***Domestic Wastewater System Improvements, Phase 1.*** Lead Inspector. Patrick oversees the day-to-day inspections onsite for this $60 million project. His responsibilities include coordinating specialty inspections and testing through the sub-consultant(s), geotechnical engineering firm and materials testing firm. Throughout the course of each day Patrick is responsible for working with each inspector on reviewing the project plans and specifications, and any approved submittals that apply to the specific work being performed. As Patrick is working with the inspection team he performs inspections himself while bringing attention to project issues to the construction manager for additional direction and/or resolution.

Tom Hyun

CONSTRUCTION INSPECTOR

Tom has over 40 years of experience providing public works contract administration and construction management services. Tom served as a contract inspector of the cities of Gonzales, Salinas, and Marina where he administered numerous sanitary sewer, storm drain, utility undergrounding, and roadway construction projects. His skills include performing field inspections; providing change order recommendations; and reviewing extra work reports, progress payments, payrolls, and claims.

EDUCATION

Coursework, Civil Engineering Studies

CERTIFICATIONS

CA Board of Registered Construction Inspector; Division 1 Engineering

RELEVANT EXPERIENCE

- **City of Soledad**, ***La Cuesta Water Tank Rehabilitation.*** Construction Inspector. Tom inspected construction activities during replacement of corroded structural members supporting the water tank roof, replacing sections of the floor, and cleaning and re-coating the interior and exterior of the water tank.
- **Santa Cruz County Sanitation District**, ***Esplanade Pump Station and Aptos Transmission Force Main Relocation.*** This $11 million project involved upgrades to four pump stations and relocation of a failing 36-inch force main. Upgrades to the Esplanade pump station required replacing three vertical line shaft pumps with four new 200 HP horizontal dry pit submersible pumps. The existing electrical facilities were replaced while the pump station was operational. The project also included horizontal directional drilling of an 18-inch force main under a creek, insertion of a new 16-inch force main in portions of an existing 24-inch force main, and a jack-and-bore crossing under existing railroad tracks. The jack-and-bore was performed on an expedited schedule to accommodate a repaving project in the area.
- **City of Monterey**, ***Sewer Line and Lift Station Rehabilitation Program.*** Construction Inspector. Tom is providing construction inspection services for sanitary sewer wet well rehabilitation, pump replacement, and installation of new valves, vaults, sewer force main, backup diesel generators, and electrical and control equipment. The work also includes site demolition; grading; construction of new pavement, curb, fencing, and power gate; traffic control; erosion and emergency spill control; and bypass pumping.
- **City of Salinas**
  - Sewer Treatment Plant No. 1
  - Treatment Plant No. 2 Repairs and Upgrade
  - West Rossi/Davis Road Sewer Construction
- **City of Gonzales**
  - Water Storage Tank Repairs (incl. upgrading existing water distribution system)
  - Water Service Repairs including Slurry Seal (East of 101, North of 5th St)
  - Video Rincon St. Sanitary Sewer System
  - Gonzales Waste Water Treatment Plant

Rich Burton

CONSTRUCTION INSPECTOR

Rich has over 39 years of construction management experience on infrastructure projects, including managing complex traffic control projects which involve multiple lane closures. He verifies compliance with plans, specifications, and contract documents. All discrepancies are evaluated, discussed, and resolved expeditiously. Richard's duties also include reviewing and approving monthly billings; negotiating and building quotes for change orders; preparing submittals. He collaboratively coordinates with various city and county Public Works Departments, as well as Caltrans. Richard's project history spans the Monterey Peninsula and includes street and underground rehabilitation projects. Richard began his career as a laborer on pipeline projects.

EDUCATION

BS, Industrial Technology

RELEVANT EXPERIENCE

- **City of Monterey**, ***Sewer Rehabilitation Project – Package 3, 5 & 6.*** Construction Inspector. This project involves the rehabilitation of the City's sanitary sewer system via pipebursting, sliplining, open cut and cast-in-place-pipe, as well as the rehabilitation of sewer manholes. Rich was the primary inspector on this citywide effort. He documented the contractor's daily activities, coordinated access to easements, responded/coordinated with impacted residents & businesses, monitored the contractor's implementation of approved traffic control plans, reviewed monthly contractor invoices and assisted in the negotiation of change orders.
- **City of Monterey**, ***Sewer Rehabilitation Project – Pkg.4 – Lift Station Upgrades***. Construction Superintendent. Rich managed all aspects of construction for the City's sanitary sewer wet well rehabilitation, pump replacement, and installation of new valves, vaults, sewer force main, backup diesel generators, and electrical and control equipment. The work also includes site demolition, grading, construction of new pavement, curb, fencing and power gate, traffic control, erosion and emergency spill control, and bypass pumping.
- **City of Monterey**, ***Kidney Subdivision at Ord Military Community.*** Construction Superintendent. Rich prepared and presented submittals for all materials used for utility improvements including underground piping and above ground apparatuses for water, storm water, and sanitary sewers. He also prepared and presented submittals for materials used for roadway improvements such as Portland cement concrete, asphalt concrete, and aggregate base materials.
- **City of Salinas**, ***Monte Bella Subdivision Phases I,II,III and IV.*** Construction Superitendent. Richard managed all aspects of construction starting with pre-construction meetings with owners, agencies and utility companies through final acceptance of the subdivision. This subdivision averaged 152 housing units per phase. Each phase started with rough earthwork and ended with completed infrastructure supplying streets, sidewalks, street lights and utilities for new homes. Richard was responsible for all submittals, scheduling, billings and quality control as well as crew and equipment dispatch.

Kate Giberson

ENVIRONMENTAL PERMITTING LEAD

Kate has more than 25 years of experience in project management of CEQA and NEPA environmental compliance documents and permitting for development and infrastructure projects. Infrastructure experience includes roadway, bridge, water/sewer facilities and pipelines, and Caltrans projects. Kate has led large multidisciplinary teams and managed several complex and controversial projects. Kate possesses excellent written and interpersonal communication skills and is highly organized, attentive to detail, and committed to producing high quality work products.

RELEVANT EXPERIENCE

- **City of Soledad**, ***Soledad Regional Recharge Project IS/ND.*** Project Manager. To reduce flooding impacts, the project includes replacing the storm drain pipeline in Gabilan Drive, installing new pipeline through agricultural land, and rerouting stormwater to the UPRR Basin.
- **City of Santa Cruz**, ***Live Oak Test Wells and Monitoring Wells IS/MND.*** Project Manager. The project included installing and modifying wells at nine locations in the Live Oak area to complete groundwater monitoring network.
- **City of Santa Cruz**, ***Mission Street Underground Utility District IS/MND.*** Project Manager. Project included relocation of the existing aerial utility system to underground. Key issues: traffic, cultural resources, biological resources in adjacent drainages, and hazardous materials.
- **City of Clovis**, ***Sewage Treatment/Water Reuse Facility Program EIR, Permitting, and Construction Monitoring.*** Project Manager. Project includes new 8.4 million gpd sewage treatment/water reuse facility, sewer collection pipelines, water distribution pipelines, pump stations, and storage.
- **San Francisco Public Utility District (SFPUC)**, ***Harry Tracy Water Treatment Plant Long-Term Improvements Project EIR.*** Project Manager. Project includes treatment process improvements, new water reservoir and pipelines, and pipeline replacement near a school and residents.

EDUCATION

MA, Urban Geography
BA, Geography

AFFILIATIONS

American Planning Association (APA) American Public Works Association (APWA) Association of Environmental Professionals (AEP)

TRAINING

American Planning Association
Caltrans Environmental Compliance Training Courses for Local Agency Partners:
-Categorical Exemptions and Categorical Exclusions
-Nuts and Bolts of Environmental Document Review

"This project will be remembered as one of the most expansive, complex, and demanding projects and EIRs the City has engaged in during the new century. Your service to the City as the EIR project manager stands out as the zenith of competence and professionalism. You provided excellent guidance, managed your team within schedule and budget, and kept me and my team alert to potential issues."

DAVID FEY, CITY OF CLOVIS

Diane Sandman, AICP

ENVIRONMENTAL PROJECT MANAGER

Diane has 16 years of experience in environmental sciences and planning. She has worked extensively on California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) compliance documents, including environmental impact reports (EIRs) and Mitigated Negative Declarations (MNDs) for numerous water/sewer and master plan projects. Diane has been responsible for permitting coordination with resource agencies including the US Army Corps of Engineers (USACE), US Fish and Wildlife Service (USFWS), California Coastal Commission (CCC), California Department of Fish and Wildlife (CDFW), and the Regional Water Quality Control Board (RWQCB).

EDUCATION

BA, Environmental Studies

CERTIFICATIONS

Certified EIR Preparer, County of San Diego

Certified Planner, American Institute of Certified Planners

RELEVANT EXPERIENCE

- **City of Vista/HDR,** ***Comprehensive Sewer Master Plan Program EIR.*** EIR Technical Advisor. Providing strategic input on the approach, format and contents of the Supplemental Program Environmental Impact Report document and Buena Sanitation District Comprehensive Sewer Management Plan as a subconsultant to HDR. Managing preparation of the air quality, greenhouse gas emissions (GHG)/energy, land use and noise sections of the Program EIR.
- **City of Vista,** ***Green Oak Trunk Sewer Replacement IS/MND.*** Project Director. This project will replace approximately 5,000 feet of vitrified clay pipe sewer mains with new sewer mains and associated services and manholes. Overseeing the preparation of the IS/MND; air quality, greenhouse gas emissions, and noise technical reports; and Phase II cultural resources testing.
- **City of National City,** ***Environmental Constraints Analysis for Group 2 Sewer Improvements and Nuisance Areas.*** Project Director. Harris staff assessed the environmental constraints of sewer improvements that addressed existing citywide sewer deficiencies. Diane was responsible for oversight of a constraints report that identified potential environmental issues, and the appropriate level of CEQA evaluation for 12 projects. Oversaw site-specific studies required to address potential issues, as well as any needs for resource agency permitting.
- **Elsinore Valley Municipal Water District,** ***Adelfa Booster Relocation IS/MND.*** Project Manager. The Initial Study determined impacts could occur on air quality, biological resources, cultural resources, noise, and transportation/traffic. Mitigation measures were implemented to fully mitigate these potential impacts, avoiding the need to prepare an EIR.
- **City of El Cajon,** ***Johnson Avenue Trunk Sewer Initial Study/MND.*** Project Manager. This document was prepared in conformance with State Water Resources Board CEQA Plus requirements due to the City's request for state revolving funds.
- **City of La Mesa,** ***La Mesa Sewer Repair and Replacement IS/MND, Technical Studies and CEQA Plus Requirements.*** Project Manager. Project proposed to replace up to 100,000 linear feet of sewer pipelines in portions of Maintenance Zones 2 and 3 of La Mesa's sewer system to correct sewer overflows due to wet weather inflow and infiltration into the sewerage system.

Roger Kohne, PE

PLANNING MANAGER

Roger has 25 years of experience in the master planning, design, and construction of water and wastewater infrastructure projects, including treatment facilities, pump stations, reservoirs, and pipeline rehabilitation. Design expertise includes water treatment plants and chemical feed facilities, including sodium hypochlorite. Key management skills include client interaction and communication, Utility Board/City Council document preparation and formal presentations, community outreach, project scope development, budget and schedule tracking, staff resource planning and coordination, and quality assurance.

EDUCATION

MS, Environmental Engineering

BS, Civil Engineering

REGISTRATIONS

Professional Civil Engineer, CA

RELEVANT EXPERIENCE

- **City of Gonzales**, ***Hydraulic Modeling and CIP Development.*** Project Manager. Roger is currently assisting the City in assessing its water distribution system and ability to meet future demands. Work includes developing a hydraulic model to evaluate and verify current level of service and deficiencies, design parameters and impacts for constructing a new well, and other system improvements.
- **City of Folsom**, ***Urban Water Management Plan and Water Master Plan Update.*** Project Manager. Managed preparation of the update to the City's UWMP and WMP. Developed hydraulic model calibration plan. Developing water demand projections with limited customer water meter data (the City had only recently completed its meter installation program), with much of the data representing extreme drought conditions and subsequent mandatory conservation measures was challenging.
- **City of Folsom**, ***Crestridge Water Main Replacement.*** Project Manager. Construction of 1,200 feet of 8-inch PVC water main, service switchover to 42 residents, and installation of new water meters in an older housing development. Roger oversaw the entire construction phase of the project, including bid solicitation, contract award, and construction management including inspection services and contractor communication.
- **Placer County Water Agency**, ***Bowman WTP Hypochlorite Conversion Project.*** Project Manager. Managed the design of new sodium hypochlorite feed equipment and associated civil, mechanical, electrical, and instrumentation upgrades at an existing 5 MGD water treatment plant. Roger worked with Agency staff to develop a safe and unique chemical transfer system that saved the Agency considerable cost.
- **City of Patterson**, ***Phase 3 Wastewater Treatment Plant Expansion.*** Project Manager. Managed updates to construction plans and specifications to expand an existing 2 MGD wastewater plant. Undertook significant late-stage design revisions that increased operational flexibility and reduced construction cost. Roger evaluated existing facility operations.
- **City of Tracy**, ***Hansen Sewer Upgrade Improvements.*** Project Manager. Managed the design of upgrades to an existing sanitary lift station and 4,000 feet of new 24-inch force main through an industrial area. Roger worked with and educated the client in evaluating other pump manufacturers that offered significant cost savings to the client's standards.

Alex Yescas, PE, CFM, ENV SP

GRANT MANAGER

Alex has 16 years of experience in the design of complex water, sewer, and stormwater facilities. He has implemented over 20 miles of water, sewer, and stormwater facilities. He has proven success as a technical lead in modeling and delineation of floodplains and is well versed in preparing grant applications throughout California.

RELEVANT EXPERIENCE

- **San Diego Unified Port District**, ***Tenth Avenue Marine Terminal.*** Project Manager. Prepared a $10 million TIGER grant application for the design and construction of water quality BMPs along the improved marine terminal.
- **City of National City**, ***Paradise Valley Creek Water Quality and Community Enhancement.*** Project Manager. Prepared a $400,000 grant application for this project that will increase the flood conveyance capacity of the existing creek.
- **City of El Cajon**, ***Broadway Channel Community Enhancements.*** Project Manager. Prepared a $500,000 grant application for this project that will improve the existing channel by widening it and incorporating a vegetated swale that supports native plant species, incorporates biofiltration, and increases flood conveyance.
- **City of Chula Vista**, ***Telegraph Canyon Channel Project.*** Project Manager. Prepared a $600,000 TIGER grant application for this project that will improve the existing channel with a vegetated swale that supports native plant species, incorporates biofiltration, and increases flood conveyance.
- **City of Soledad**, ***Stormwater Program Management.*** Project Engineer. Services include updating City procedures, standards and municipal code; training City staff on compliance with the new stormwater regulations; and developing and implementing a Public Education and Outreach Program.
- **Vallecitos Water District**, ***Linda Vista East Sewer.*** Project Manager. Upsizing and realignment design of 3,400 feet of eight-inch vitrified clay pipe and 14 manholes.
- **City of Carlsbad**, ***Storm Drain Replacement.*** Project Manager. Corrugated metal pipe portion of the existing system was abandoned in place and a new reinforced concrete pipe system was constructed.
- **San Diego Unified Port District**, ***Stormwater Systems Design - Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component.*** Project Manager. Responsible for stormwater systems design for this project that will demolish the south addition and the three east sections of Warehouse C adjacent to a fuel farm; and provide rail and site improvements at Tenth Avenue Marine Terminal.
- **City of San Diego**, ***Citywide Stormwater Permanent BMP Retrofit Project.*** Project Manager. Preparation of Water Quality Technical Reports (WQTRs) at nine sites to support retrofit/redesign to bring the sites into compliance with Region Nine Water Quality Control Board regulations, including applicable requirements of the Draft San Diego BMP Design Manual.

EDUCATION

BS, Civil Engineering

REGISTRATIONS

Professional Civil Engineer, CA

CERTIFICATIONS

Certified Floodplain Manager

Envision Sustainability Professional

Lois O'Sullivan

GRANT WRITER

Lois has more than 25 years of experience in grant writing, administration, covering a broad spectrum of grantors and projects. Lois has won grant awards in the areas of community development, housing, social services, economic development, education, criminal justice, disaster response and recovery, major engineering projects, and public arts projects. Lois has been individually responsible for awards and management of approximately $19,000,000 in grants-in-aid. She has coordinated group projects and an additional lake stabilization/flood mitigation project award of $39,000,000. The total value of group projects Lois has supported, relative to numerous federally-declared disaster response and recovery operations, would range in the hundreds of millions.

EDUCATION

MPA, Public Policy and Administration

BA, Urban Studies

RELEVANT EXPERIENCE

- **City of Gonzales**, ***Agricultural Industrial Business Park Phase II.*** Grant Writer. Harris is preparing an Economic Development Administration (EDA) Technical Assistance grant application to help fund infrastructure and roadway improvements to expand the Business Park. Phase II will add 35± acres with building sites appropriate for agricultural-related businesses.Work includes coordination with EDA, determining the Comprehensive Economic Development Strategies (CEDS) requirement for this grant, determining opportunities for partnership funding, obtaining letters of support, researching other grant funding opportunities, preparing and presenting the grant application to City Council for approval and submitting the grant application to the EDA.
- **Elsinore Valley Municipal Water District**, ***Various Projects.*** Grant Writer and Administrator. Lois administered a lake reclamation and flood mitigation project (prepared and managed a County of Riverside Lake Reclamation Study Project grant valued at $50,000, plus a State Parks and Recreation Lake Reclamation Study grant of $50,000) through award of $39 million Department of Interior lake stabilization grant.
- **Economic Development Council of Northern Vermont**, ***Various Projects.*** Grant Writer and Administrator. Lois administered through close-out the $750,000 HUD/CDBG agribusiness plant expansion and whey processing plant. Interim management of seven HUD/EDA economic development grant-funded projects throughout Northern Vermont.
- **Environmental Protection Agency**, ***Air Quality Public Service Announcement.*** Grant Writer and Administration. Lois prepared the grant to produce the air quality public service announcement, which was televised statewide. She wrote and administered the grant.
- **California Arts Council**, ***National Endowment for the Arts, Vitalize Fairfax Project City of Los Angeles ? Murals.*** Grant Writer and Administration. Lois prepared and administered the arts consortium project.

Shannon Bane

BIOLOGIST, RESTORATION AND PERMITTING SPECIALIST

Shannon has 15 years of experience as an environmental planner. She specializes in education, restoration planning, natural resource planning, conservation planning, biological resource impact assessment, vegetation management, development and implementation of large scale monitoring programs, park-related planning, and fire ecology. She has managed and co-managed the preparation of habitat conservation plans, biological resource assessment projects, and restoration plans, and prepared mitigation, monitoring, and adaptive management plans for sensitive habitats and special-status species. All of her work includes sound scientific data collection and analysis as well as management, maintenance, and budgetary considerations..

RELEVANT EXPERIENCE

- **San Benito County Water District**, ***Pacheco Creek Restoration Project.*** Environmental Analyst/Biologist.
- **City of Santa Cruz**, ***Monarch Butterfly Survey Report.*** Project Manager.
- **California Department of Parks and Recreation and Alameda County Public Works Department**, ***Tesla Road Grading and Corral Hollow Creek Restoration Project.*** Resource Ecologist.

EDUCATION

MS, Environmental Studies

BA, Evolution and Ecology

TRAINING

CEQA, NEPA, FESA and HCP, Migratory Bird Treaty Act, Coastal Act, Wetland Permitting, 2000-2003

Fire Technology Program, 1995-1996

Geographic Information System Training (ESRI & Center for Integrated Spatial Research)

Grant Writing Workshop, 2014

Wendy Young

ENVIRONMENTAL ANALYST

Wendy has over 15 years of environmental consulting experience. She has managed and prepared environmental impact statements (EISs), environmental impact reports (EIRs), environmental assessments (EAs) and initial study/mitigated negative declarations (IS/MNDs), in accordance with NEPA and CEQA regulations. She has also managed and prepared habitat restoration plans, post-restoration monitoring, and adaptive management plans. In accordance with these projects, Wendy has prepared permitting packages and led consultation efforts with a number of government agencies, including the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Boards (RWQCB), and the California Department of Fish and Game (DFG).

RELEVANT EXPERIENCE

- **Alameda County Public Works Department**, ***Alameda County Flood Control Permitting Project.***
- **Stanford University**, ***Steelhead Habitat Enhancement Plan IS/MND at Los Trancos Creek Diversion Facility and Fish Ladder, San Francisquito Creek Diversion Facility and Pump Station, and Felt Reservoir.***
- **City of Mountain View**, ***Miramonte Reservoir.*** Visual Resource Analyst.

EDUCATION

BS, Environmental Biology and Management

Haley Johnson

ENVIRONMENTAL ANALYST

Haley is an environmental analyst with ten years of experience in policy analysis, planning and regulatory review in the private, public, and nonprofit sectors. She possesses expertise in CEQA, NEPA, the federal Endangered Species Act, and California water issues. As a project manager, Haley has experience interfacing with clients and overseeing teams of other analysts. She has written several technical reports that have been published in the Federal Register. Haley's background includes work in the legal services field where she analyzed data and wrote reports to support expert witnesses in matters of environmental and natural resource economics.

EDUCATION

BS, Environmental Science

RELEVANT EXPERIENCE

- **City of National City,** ***Group 2 and Nuisance Areas Sewer Repair Projects Environmental Constraints Analysis.*** Environmental Analyst. This project involved sewer improvements at 12 project locations to addresses existing citywide sewer deficiencies, while minimizing environmental concerns. The environmental analysis consisted of a constraints analysis that identified potential environmental concerns, and the appropriate level of CEQA evaluation for each project location. The team addressed all CEQA Guidelines Appendix G concerns. The primary challenge related to biological aspects of the project. Haley identified several improvement projects that could proceed with categorical or statutory exemptions, and two locations where additional analysis would be necessary.
- **City of Vista,** ***Comprehensive Sewer Master Plan Program EIR.*** Environmental Analyst. Work involves environmental services in support of the Supplemental Program EIR for the City of Vista and Buena Sanitation District Comprehensive Sewer Management Plan. The project is an update to the adopted 2008 Vista Sewer Master Plan Program EIR. Haley used ArcGIS to analyze impacts related to land use and drafted sections of the air quality, energy and greenhouse gas emissions, land use, and noise sections of the Supplemental Program EIR.
- **City of Vista/Buena Sanitation District,** ***Green Oak Trunk Sewer Replacement IS/MND.*** Environmental Analyst/Noise Technical Analyst/Air Quality and Greenhouse Gas Technical Analyst. This project will replace 4,400 linear feet of 12- to 21-inch gravity sewer main with new 24-inch polyvinyl chloride sewer main. Haley wrote the air quality, greenhouse gas emissions, and noise sections of the IS/MND. She relied upon her experience writing similar CEQA documents for the City to review and edit the other sections of the Green Oak Trunk Sewer Replacement IS/MND, which were drafted by another Harris environmental analyst. With input from a technical project manager, Haley wrote the technical memoranda for air quality and greenhouse gas impacts and noise impacts for the project. This involved modeling air and greenhouse gas emissions using CalEEMod and modeling construction noise using the Federal Highway Administration's Roadway Construction Noise Model.

Gary Yagade, PE

PRINCIPAL-IN-CHARGE/QA/QC

Gary has planned, designed and managed numerous stormwater, flood control and floodplain mapping projects throughout his 30 year career. He effectively implements strategic schedule, budget, and quality control measures that streamline projects to completion. His quality control process places a high emphasis on accuracy and completeness, which he achieves by closely monitoring work progress with weekly evaluations of established milestones and associated man-hours; utilizing various forms and checklists to confirm quality and thorough PS&Es are completed; and frequently communicating with his clients..

EDUCATION

BS, Civil Engineering

REGISTRATIONS

Professional Civil Engineer, CA

RELEVANT EXPERIENCE

- **City of San Diego/Orion Construction**, ***Catalina Water Mains and Sewer Mains Design-Build.*** Project Director. Responsible for design oversight for the upsizing of cast-iron and asbestos cement water main between Point Loma Reservoir and Catalina Standpipe. The overflow from the recently completed Catalina Standpipe will be directed to a new 18-inch RCP main that will connect to the existing storm drain system.
- **City of National City**, ***Sewer Design and Environmental Constraints Study (Group 2).*** Principal-in-Charge. Provided oversight for the environmental analysis consisting of a constraints report that identified potential environmental challenges, and the appropriate level of CEQA evaluation for each project. Many sewer lines identified for replacement were realigned from residential backyards to within the street right-of-way.
- **City of Del Mar**, ***Citywide Sewer Condition Assessment and Design.*** Project Director. Oversaw the CCTV inspection, assessments, and design of the City's entire 105-mile sewer system including all manholes.
- **City of Del Mar**, ***Group 1 Sewer Design.*** Principal-in-Charge. Preparing PS&E of prioritized citywide sewer infrastructure. Design included open-cut replacement of 5,200 LF of six- and eight-inch defective sewer main pipelines; trenchless rehabilitation of 2,300 LF of sewer main; points repairs of four sewers; rehabilitation of 205 LF of six-inch water main, numerous sewer manholes, and sewer lateral connections; and decommissioning of a sewer lift station. Implemented phasing plan to minimize public impacts during summer months.
- **City of National City**, ***Paradise Valley Creek Water Quality and Community Enhancement.*** Project Director. Oversaw the grant application for this project that will increase the flood conveyance capacity of the existing creek.
- **City of National City**, ***Operations and Maintenance Manual for Pump Station Improvements.*** Project Director. Overseeing preparation of Operation and Maintenance Manuals. The manuals include checklists and forms which enable the City staff to more easily keep maintenance records.
- **City of Vista**, ***Comprehensive Sewer Master Plan Program EIR.*** Principal-in-Charge. Oversaw the preparation of the air quality, greenhouse gas emissions (GHG)/energy, land use and noise sections of the Program EIR (PEIR).

Ramesh Narasimhan, PE

HYDRAULIC MODELING/ANALYSIS

Ramesh is President of NCS Engineers and has 29 years of project management and engineering experience in municipal water treatment, arsenic treatment, nitrates, radionuclides and residuals and disposal issues. He has designed several similar nitrate treatment plants throughout the West Valley. Ram has a strong background in treatment facilities master planning, optimization, pilot testing, water quality research, treatment facilities design, and construction management. In the past 10 years, he has overseen 10 water/wastewater and effluent master plans in Arizona.

EDUCATION

MS, Environmental Engineering

MBA

BS, Civil Engineering

REGISTRATIONS

Professional Civil Engineer, AZ, NM, CA

RELEVANT EXPERIENCE

- **City of Flagstaff**, ***Water System and Recycled Water Master Plan.*** Project Principal. NCS completed this water system master plan to address issues related to water resources, water distribution, water quality, and system improvements to meet current and future criteria. The City uses a both ground and surface water sources on a seasonal basis and has experienced accelerated growth and development during the past several years.
- **Water Infrastructure Finance Authority of Arizona**, ***Master Planning Projects.*** Project Manager. Under this multi-year on-call engineering services agreement, NCS was retained to assist with master planning evaluations for several small and medium water systems throughout the State of Arizona, including Vernon, Taliesin West Water System, and Yarnel Water System, to develop design criteria and assess funding needs. The projects included planning and modeling studies, pre-design, infrastructure evaluations, cost development, and permitting.
- **Apache Junction Water Company (AJWC)**, ***AZ, Water Model Development, Calibration and Master Plan Report.*** Project Manager. Tasks included project management and coordination, demand inversing, coordination of 14-day field data collection events, supply and installation of pressure recorders, data download and evaluation, Steady State and seven-day EPS water model calibration and verification against SCADA and field data, and development of the final model for client use.
- **Town of Kearny**, ***Master Plan, Preliminary Engineering Report and Rate Study.*** Project Manager. For this project, NCS developed the Water Resources and Water Distribution System Master Plan for near-term and long-term planning periods. The water system model was developed from hard copy drawings and calibrated for steady state and extended period simulations. The scope of work also included evaluation of the condition of the existing water resource, treatment, storage and distribution system facilities to identify the condition and remaining asset life, upgrades to the booster station, two-750,000 gallon storage tanks, and treatment plant; and construction of a new 300 gpm well, financial analysis and rate evaluation for a 10-year period to fund the required projects and assistance with USDA and WIFA financing and preparation of a Preliminary Engineering Report in USDA format.

Elizabeth Mitchell, GE

GEOTECHNICAL ENGINEER

Elizabeth is well experienced in local municipal and public works projects, including performing geotechnical engineering services for the Pure Water Monterey project, the County of Monterey, CSUMB, California American Water Company, the City of Santa Cruz, the County of Santa Cruz, the City of Watsonville and the University of California, among others. Her experience in the Monterey County area comprises over 100 projects that include geotechnical studies for pipelines, public works improvements, tanks, roads, bridges, utilities and below ground structures. For the past 27 years, Elizabeth has provided management, development and design of geotechnical investigation studies for a wide range of engineering projects, including various public works, infrastructure, water tanks and pipelines, forensic studies, light bridges, landslide repair, and single and multi- family developments.

RELEVANT EXPERIENCE

- **Pure One Water Monterey**, *Advanced Water Purification Facility.*
- **Monterey Regional Desalination Plant.**
- **Pure Water Monterey**, *GWR Injection Well Facilities.*
- **City of Castroville**, *Well 2B Arsenic Treatment Plant.*
- **City of Gonzales**, *WWTP Pond Improvements.*
- **Pajaro Valley Water Management Agency (PVWMA)**, *Watsonville Recycled Water Storage Improvements*
- **Monterey Regional Water Pollution Control Agency (MRWPCA)**, *Salinas Pump Station.*
- **Gilroy Wastewater Treatment Plant.**
- **California American Water Company**, *Various Tank Projects.*
- **City of Watsonville**, *Manana Lane Sewer Replacement Project.*
- **Soquel Creek Water District**, *Quail Run Tank Project.*
- **Salinas Source Water**, *IWW Diversion Project.*
- **Freedom Sanitation District**, *Sewer Replacement Project.*
- **Soquel Creek Water District**, *Bonita Well & Treatment Plant.*
- **City of Santa Cruz Water Department**, *Beltz Well #12.*
- **City of Santa Cruz Water Department**, *Reservoir #5.*

EDUCATION

MS, Civil Engineering

BS, Industrial Engineering

REGISTRATIONS

Registered Geotechnical Engineer, CA

Registered Civil Engineer, CA

CERTIFICATIONS

ICC Soils Special Inspector No. 8029279-EC

Qualified SWPPP Developer and Practitioner (QSD/QSP) No. 20502

Water Treatment Operator, Grade T2

Water Distribution Operator, Grade D2

Bonneau Dickson, PE

MECHANICAL ENGINEER

Bonneau has more than 40 years of experience in the design of sanitary engineering facilities. His experience includes work on more than 50 wastewater treatment facilities, more than 300 pump stations, and pipeline, water, storm drain, and other infrastructure projects. He specializes in simple, rugged reliable, cost-effective upgrades of existing wastewater and water facilities.

RELEVANT EXPERIENCE

- **North Tahoe Public Utility District**, ***Secline Wastewater Pump Station.*** Lead Technical Designer. This project involved designing an upgrade to an existing underground pump station. Bonneau developed an innovative design involving the installation of a new circular concrete wet well inside the existing rectangular concrete wet well. This avoided groundwater contact, reduced construction risks, and minimized excavation, and is estimated to have saved the client $250,000.
- **North Tahoe Public Utility District**, ***Dollar Wastewater Pump Station.*** Project Manager and Lead Technical Designer. This project involved the design of an upgrade to the pump station using 185 HP submersible dry pit pumps to avoid flood damage. Bonneau developed the innovative idea of re-using the existing buried steel dry wells. Avoiding the construction of a new concrete wet well saved the District approximately $1 million.
- **City of San Bruno**, ***Wastewater Pump Station Evaluation Study.*** Report Writer. This project involved conducting a study and preparing a report that overviewed the safety, aesthetics, condition, and reliability of six existing wastewater pump stations. The report identified crucial reliability issues at each pump station, evaluated the adequacy of the hydraulic capacity of each station, and developed a phased capital improvement plan for rehabilitation of the pump stations. Bonneau worked closely with the City to collect oral organizational history. He provided the City with a realistic estimate of the reliability of the wastewater pump stations.
- **Santa Cruz County Sanitation District**, ***Aptos-Esplanade Transmission Main Relocation.*** This pump station upgrade project involved the replacement of three 40 HP pumps with four 185 HP, dry pit submersible pumps. A new force main was built in an inland alignment with significant hills, increasing the horsepower rating of the pumps. He used horizontal dry pit submersible pumps to fit the limited headroom that was available in the existing pump room. The project also included four small new pump stations.
- **Santa Cruz County Sanitation District**, ***Forcemain.*** Analyzed water hammer problems in a 4.17 mile long, 36-inch diameter steel force main. Reviewed the effectiveness of an existing surge relief valve and made recommendations on how to prevent the check valves from slamming.
- **Santa Cruz County Sanitation District**, ***Sewer Pipe Rehabilitation.*** lead project engineer on the design of rehabilitation of 25,000 linear feet of sewer pipe to correct excessive leakage (infiltration and inflow). The project rehabilitated 500 building laterals from the sewers up to the edge of the public right-of-way. The design was completed in seven weeks to prevent a recurrence of overflows from a pump station.

EDUCATION

MBA, Business Administration

MA, Sanitary Engineering

BS, Civil Engineering

MS, Sanitary Engineering

REGISTRATIONS

Professional Civil Engineer, CA

AFFILIATIONS

Water Environment Federation (WEF)

California Water Environment Association (CWEA)

American Water Works Association (AWWA)

WateReuse

National and California Onsite Water Associations (NOWA and COWA)

Pipe Users Group of Northern California (PUG)

Jonathan Taylor

UTILITY LOCATING

Jonathan has experience locating underground pipes and cables. He performs thorough field work and clearly communicates findings, which enables project goals to be met in a complete and timely fashion. Since 2000, Jon has supervised the confirmation of more than seven hundred utilities.

CERTIFICATIONS

Hazwoper: 29CFR 1910.20, CGC 4216.3

Subsurface Utility Locator Training and Testing

RELEVANT EXPERIENCE

- **City of Mill Valley**, ***Sanitary Sewer Rehabilitation.*** Utility Locating. Rehabilitation sewers, pavement, and storm drains.
- **Castro Valley Sanitary District**, ***Priority 4 Sewer Improvements.*** Potholing. $1 million sewer improvements to the District's sewer master plan to increase peak fl ows during wet weather conditions.
- **City of Concord**, ***Downtown Sewer and Streetscape Improvements.*** Utility Locating. $6.2 million upgrade to 18,000 feet of sewer pipelines and streets.
- **Santa Cruz County Sanitation District**, ***Aptos Village and Aptos Esplanade Sewer Replacement.*** Utility Locating. Replacement of a two-mile, 30-inch diameter HDPE force main, with 3.5 miles of dual 18-inch and 20-inch force mains.
- **North Tahoe Public Utility District**, ***Rodeo Pump Station and Force Main Improvements.*** Utility Locating and Potholing. Replacement of vertical shaft pumps with new dry-pit submersible pumps and two new submersible pumps in the existing wet well to increase capacity and reliability. Replacement of 16-inch force main with 24-inch force main.

Steven Wilson, PE, PLS

SURVEYOR

Steven is an experienced land surveyor with 50 years of experience providing quality surveying services to public agencies and companies across California. Steven is a Monterey local, and worked for the County of Monterey and the cities of Monterey and Seaside early in his career. Between 1991 and 2008, Steven provided assistance with the development of professional licensing examinations for the California Board of Registration for Professional Engineers and Land Surveyors.

RELEVANT EXPERIENCE

- **City of Monterey**
  - Control Surveys for Sewer Repairs
  - On-Call Land Surveying Services
  - Topographic Survey of Sewer Lift Stations
  - Pearl Street Mapping
- **City of Seaside**
  - On-Call Acting Land Surveyor and Land Surveying Services
  - Lot Line Adjustment consultation
  - Tentative Map checking
  - Broadway and Library Mapping
- **City of Greenfield**
  - On-Call Land Surveying Services
  - Walnut Avenue and 3rd Street Construction Staking
  - 10th Street Boundary Survey

EDUCATION

AS, Engineering, General Education, and Business

REGISTRATIONS

Professional Civil Engineer, CA

Professional Land Surveyor,CA

AFFILIATIONS

National Society of Professional Surveyors (NSPS)

California Land Surveyors Association (CLSA), Life Member, Former President

American Council of Engineering Companies (ACEC)

Nevada Association of Land Surveyors (NALS)

3. Project Experience

This matrix highlights our Harris' relevant experience with other agencies. Projects include master planning, modeling, sewer rehabilitation/improvements, potable water, water treatment plants, condition assessments, pump stations and related on-call capital improvement projects.

Agency	Program Management/ Master Planning	Hydrology/Hydraulic Modeling	Condition Assessments	Capacity Analysis	Engineering & Design	Construction Services	Environmental Permitting	Pump Stations/Lift Stations	Pipelines	Potable Water	Sewer
Marina Coast Water District			●	●	●	●		●	●	●	●
City of Gonzales	●				●	●			●	●	◐
City of Soledad	●				●				●	●	◐
City of Monterey	●		●	●	●	●		●	●		●
Ross Valley Sanitary District			●	●	●	●	●		●		●
City of Watsonville		●	●	●	●	●			●		●
Santa Cruz County Sanitation District		●	●		●	●	●	●	●		●
City of Vista							●	●	●		●

PROJECT MANAGEMENT SERVICES ■ Marina Coast Water District

Harris has provided project management, quality assurance inspection and staff augmentation services for District projects for more than 10 years. These projects include:

Harris observed the installation of distribution waterlines for the new Veteran's Administration Medical Clinic.

Department of Defense VA Medical Clinic. Harris inspected the installation of the potable/recycled water distribution and wastewater collection systems for the development of this world class Veterans Administration Medical Clinic. Our team observed the excavation and installations of distribution waterlines including fire hydrants and backflow preventers for the VA clinic. Our staff performed hydrostatic pressure testing for the water system including disinfection and bacterial tests with chain of custody.

Harris has inspected water and wastewater distribution systems for three phases of the "Dunes on Monterey Bay."

Dunes - Phase 1C-2 & C-3. These phases of the "Dunes on Monterey Bay" development is a residential home construction in Marina, CA. The developer is responsible for installing water, irrigation, sewer and electrical infrastructure as well as roads and sidewalks to service the homes being built. Harris is providing inspection for the potable and recycled water distribution systems as well as the wastewater collection system for the three phases of development. This is a multi-phase development is comprised of 1,100 single-family homes, 150 apartments, parks, and commercial development. Inspection includes observation of pipe, connections bedding and backfilling for pipelines, mandrel and hydrostatic testing of sewer facilities and pressure and bacterial testing of potable distribution system.

Design and construction of the 1st Avenue Sewer Pipe Rehabilitation project was completed in under two months.

1st Avenue Sewer Pipe Rehabilitation. This fast-tracked project had a hard construction deadline to meet of the District would lose $380,000 in funding. The District relied upon Harris to determine the best rehabilitation option for 1,000 feet of a severely deteriorated 30-inch concrete sewer pipe, coordinate with a preselected contractor on the design parameters specific to their operations and expertise, and manage and QA the construction of the prime and subcontractors. Harris mobilized its design and CM groups and together met the aggressive deadline (less than two months) using cured-in-place pipe (CIPP) lining with a resin-impregnated felt to minimize costs and accelerated the construction.

Irrigation systems installed in residential parks at the East Garrison development met all State of California ordinances.

East Garrison Water and Sewer Lines Phase II. Harris is providing construction management support for the installation of water and sewer lines at the East Garrison development project at the former Fort Ord. The development build-out plan calls for 1,400 homes as well as a town center with 34,000 square feet of retail space, a 66,000-square-foot arts district in rehabilitated historic military buildings, neighborhood parks, open space and a community park.

East Garrison Water and Sewer Pipeline Condition Assessment. Harris provided an assessment of the water and sewer pipelines and related facilities constructed as part of the first phase of the East Garrison Project. During the economic downturn this developments was mothballed for several years. When the current developer resumed building, Harris documented the assessment of the in-place infrastructure by observing pressure testing of potable water lines and manholes; we also reviewed video footage of sanitary sewer lines to determine their condition. Our assessment included recommendations for repairs to facilities not meeting District standards such as out-of-round sewer pipe and manhole connections that require re-grouting.

Our quality assurance inspection services for these projects include:

- Inspect new sanitary sewer mains, manholes and laterals.
- Inspect, observe and document pipe deflection, manhole leakage and pressure testing for the new sanitary sewer collection system.
- Inspect new water mains, service laterals and all other appurtenances.
- Inspect, observe and document hydrostatic testing and disinfection in accordance with the disinfection plan of the new water distribution system.
- Identify potential issues during construction and work with District staff and the contractor for resolution.
- Make sure contractor compliance with the requirements in District's Procedures Guidelines and Design Requirements Manual in addition to the District Standard Details and the approved Project Plans.
- Prepare daily inspection reports and assist in developing project punch list(s) to verify quality and completeness in advance of project closeout and acceptance.

Harris is your trusted partner in implementing infrastructure and pipelines that comply with local, state and federal regulations for installation of recycled water and **conservation ordinances**. We developed a protocol to track meter and installation charges and provide notifications to the developer when they are out of funds. Dana Van Horn worked closely with the District to develop an efficient process for installation of water meters and established details for the District's design standards.

In a staff augmentation role, Patrick Imperatrice coordinates with your O&M staff and engineering division to add on new pipes for each completed phase of development at the former Fort Ord including, final testing and acceptance procedures. Our staff reviews the final house plans and inspects each house for compliance with conservation ordinances including verification of low flow fixtures and fixture counts.

In addition to their technical competence, our staff has the specialized experience necessary to work on the former military base such as unexploded ordinance training and environmental training for protected species (tiger salamander and red-legged tree frog).

CITY ENGINEERING SERVICES ■ City of Gonzales

Date Completed: 2014-Ongoing

Harris Team Members: Patrick Dobbins, Kyle Carbert, Roger Kohne, Patrick Imperatrice, Tom Hyun, Kate Giberson

Subconsultants: Aurum Engineering, Monterey Bay Engineers and NCS Engineering

Harris has delivered a wide variety of water, sewer, and storm water projects under our city engineering contract since November 2014. As an extension of City staff, we protect their interests. For example, on the Old Town Low Impact Development (LID) project (retrofit of curbs and gutters), Harris implemented an outreach approach that allowed property owners to select a plant palette from carefully crafted alternatives. This involved property owners, made them aware of the system being placed, and promoted a sense of ownership. On the ATP Sidewalk and Access Ramp Improvements, the number of sites identified in the preliminary survey exceeded the available funding, so Harris prepared a set of criteria to identify priority sites to work with the City's budget. Harris also prepared preliminary plans for pavement reconstruction of Alta Street, provided project management on the destruction of Well 3 and replacement of Well 7, and is managing the City's Phase II Stormwater Program. The includes the development of program elements for the Phase II MS4 permit. Harris and the City share an "Education in All Projects" policy. Harris' outreach approach includes public meetings, design charrettes, and proactive communications—even presenting to students at the local high school for the APWA Monterey Bay Chapter award-winning Pool Renovation.

Our team has successfully delivered 90 task orders encompassing water, sewer and stormwater projects for the City of Gonzales in the last three years.

Harris has met our needs well. They have assisted with project planning, design, construction inspections, construction management, and engineering estimates. I recommend Harris & Associates because of their breadth of expertise and local availability.

HAROLD WOLGAMOTT, CITY OF GONZALES

WATER/SEWER PROGRAM MANAGEMENT ■ City of Soledad

Date Completed: 2013-Ongoing

Harris Team Members: Patrick Dobbins, Jasmine Cuffee, Kurt Maire, Kyle Carbert, Roger Kohne, Dana Van Horn, Tom Hyun, Alex Yescas, Kate Giberson, Wendy Young, Shannon Bane

Subconsultants: Bonneau Dickson, Pacific Crest Engineering, Monterey Bay Engineers, Subtronic Corporation, and NCS Engineering

Over the last four years Harris has received authorization on 67 Task Orders for water, sanitary sewer and storm water projects. Harris is currently preparing a Water Master Plan. This work built on the water system evaluation that was performed by Harris in 2015, as well as the current maintenance efforts associated with the City's water wells and storage tanks. The primary tasks included GIS Mapping of the City's water system; reviewing current water demands, developing projections and identifying patterns; preparing Capital Improvement Program with construction cost estimates and phasing.

Harris provided project management for the rehabilitation of Well 6 and Well 9 Treatment System. The Reclaimed Water Transmission Pipeline project is an example of how we protect the City's interests. Our staff designed the transmission pipeline and currently managing the construction of this important infrastructure project. Harris also assisted the City with a successful grant application under the Prop. 1 Stormwater and Recycle Water Program so that the distribution of recycle water throughout the City can be appropriately planned.

A new flow meter and 3,200 LF of pipeline will be installed for Soledad's reclaimed/recycled water transmission pipeline.

SEWER LINE REHABILITATION PROGRAM ■ City of Monterey

Date Completed: 2012-Ongoing

Harris Team Members: Patrick Dobbins, Dana Van Horn, Jasmine Cuffee, Kurt Maire, Kyle Carbert, Tom Hyun, Rich Burton, and Patrick Imperatrice

Subconsultants: Monterey Bay Engineers and Subtronic Corporation

Harris provided program management, civil design, and construction management services for the rehabilitation of the City's aging sewer collection system. This three-year, $16.8 million program evaluated and rehabilitated over 70,000 LF of sewers, 471 manholes, and seven pump stations.

Harris provided oversight and review for CCTV inspection of all of the City's pipelines. Our team prepared PS&E for rehabilitation of the pipe with spot repairs and/or lining. Harris also led the preparation of the bid packages for the major pipeline rehabilitation and all pump station upgrades. Principal rehabilitation methods included pipe bursting and CIPP lining.

Because of the number of deficient pipelines in the 200-mile collection system, a prioritization was followed to maximize the budget and get the worst pipelines fixed. The extensive use of trenchless technology maximized the amount of pipelines that were rehabilitated. Pipe bursting and CIPP lining were used extensively. Trenchless technology saved the City approximately $3.5 million in construction costs.

Eight-inch pipe bursting launch pit in Monterey.

SEWER AND PIPELINE REHABILITATIONS ■ Ross Valley Sanitary District

Date Completed: 2012-Ongoing
Harris Team Members: Jasmine Cuffee, Kurt Maire, Kyle Carbert,
Subconsultants: Subtronic Corporation

Over the last three years, Harris designed three major sewer rehabilitation projects for the District.

FY 2015/2016 Gravity Sewer Improvements: Work included the inspection, evaluation, and design for rehabilitation and upgrade of approximately 35,400 feet of sanitary sewer pipes ranging from six to 10 inches in diameter. Trenchless construction was used for a majority of the project, including pipe bursting, CIPP, and horizontal directional drilling. Harris' services included design of construction documents, assistance during the bid period, and engineering services during construction. This project also required an environmental review and permit acquisition assistance, as some pipelines crossed existing creeks under bridge decks. Accelerated five-month design schedule was required to meet cease-and-desist order requirements.

FY 2014/2015 Pipeline Rehabilitation: Harris provided design services for this $5.4 million project, which included the rehabilitation of approximately 20,364 LF of six- and eight-inch gravity sewer pipe through open-cut, pipe bursting, pipe reaming, horizontal directional drilling, and CIPP lining.

Work locations included narrow, hilly, and winding residential streets, work in private easements, and work on major arterial roads. The Harris team worked closely with three agencies in the District to verify all requirements and schedules were met. The team successfully completed the project in seven months and under budget.

FY 2014 Gravity Sewer Rehabilitation, Group A/B: Harris provided design and construction management services for this $3.5 million project, which included the rehabilitation of 16,892 LF of five-, six- and eight-inch gravity sewer segments that have Grade 5 structural defects (in need of immediate repair). The District was under a cease-and-desist order from the San Francisco RWQCB; the partnership between the Harris team and the District resulted in successfully meeting the deadline.

Harris developed the District's sewer rehabilitation criteria, which is now used as the basis for District's future sewer rehabilitation selection approach.

The Harris team evaluated pipe and site conditions to determine the best rehabilitation approach. Pipe bursting and CIPP lining were heavily utilized. For the Group B project, pipe bursting was half and CIPP was less than a quarter of the costs compared to open-cut.

Construction of the Group A projects was completed according to the RWQCB's rigid interim milestone. Harris completed the bidding documents for Group B on schedule and the engineer's estimate was on target with the contractor's estimate.

Harris coordinated public outreach efforts, verified that the contractor distributed 30-day, 7-day, and 24-hour public notices.

New 16 inch pipe being installed by pipe bursting.

No matter the scope of work, I have always been impressed with their results. They are highly professional and responsive, the drawings are detailed and they follow the work plan through to project completion. I recommend Harris & Associates without hesitation and would hire them again.

JILL BARNES, ROSS VALLEY SANITARY DISTRICT

FREEDOM BOULEVARD TRUNK SEWER IMPROVEMENTS ■ City of Watsonville

Date Completed: 2016-Ongoing
Harris Team Members: Jasmine Cuffee and Kurt Maire
Subconsultants: Pacific Crest Engineering and Subtronic Corporation

Harris is providing civil design engineering services for the replacement of 4,820 LF of eight- to ten-inch sanitary sewer pipe with 18- and 21-inch pipe to increase system capacity and thereby reduce the risk of wet weather overflows. Pipe bursting will be done on approximately 1,100 feet, increasing the existing 10-inch to 18-inch. The rest of the pipe will be rerouted, relocating the pipe from easements through residential yards near waterways to street right-of-ways.

Challenges of the project included:

- Pipe bursting ACP pipe and working closely with the Monterey Air Resources Control Board for permitting requirements.
- Routing the new pipeline down the major arterial Freedom Boulevard and avoiding the dense number of underground utilities.
- Avoiding impacts to the California Tar Plant, an environmentally-sensitive plant species.
- Construction on Watsonville Airport property and conforming to permitting requirements.

Harris reviewed the City's CCTV inspection videos of the existing 10-inch sanitary sewer mains to assess the conditions of the pipes and found the absence of laterals exist and collapsed or protruding pipes which allowed for pipe bursting.

Harris also serves as the City's trenchless technology advisor for the Mananas Sewer project and is designing the Airport Freedom Sewer project for the City.

ESPLANADE PUMP STATION ■ Santa Cruz County Sanitation District

Date Completed: 2005-2014
Harris Team Members: Jasmine Cuffee
Subconsultants: Bonneau Dickson and Subtronic Corporation

This $11 million project included the rehabilitation of the Esplanade Pump Station, four new smaller pump stations, and 17,000 LF dual force mains. Three vertical line shaft pumps were replaced with four new 200 HP horizontal dry pit submersible pumps and a bridge crane was installed to facilitate removal and re-installation of the pumps. The existing electrical facilities had to be replaced while keeping the pump station operational. Replacing the existing 225 KW generator with an 800 KW generator required a large opening be cut in the wall of the generator room. Structural engineering analysis of the building indicated additional reinforcement of the wall was required to resist seismic events. The project involved two new conventional submersible pump stations and two new small grinder pump stations.

ON-CALL ENVIRONMENTAL SERVICES ■ Santa Cruz County Sanitation District

Date Completed: Ongoing
Harris Team Members: Kate Giberson and Wendy Young
Subconsultants: N/A

Harris is providing on-call environmental consulting services for various sanitation projects throughout Santa Cruz County. Work includes preparing Caltrans Preliminary Environmental Studies (PES), preparing and reviewing environmental technical studies (air quality, biological resources, cultural resources, GHG, noise, hydrology/water quality, traffic, etc.), obtaining CEQA and NEPA clearance, and obtaining permits from various regulatory agencies, including USACE, CCC, USFWS, CDFW, SWRCB and RWQCB.

For one task order, Harris is providing environmental compliance for the replacement of sewer lines in six project locations throughout the unincorporated community of Freedom, near the City of Watsonville. A CEQA-Plus IS/MND is being prepared because the project is receiving funding from both the SWRCB and U.S. Department of Agriculture. Harris will also prepare and process regulatory permits for the project, once approved.

AS-NEEDED CEQA ENVIRONMENTAL SERVICES ■ City of Vista

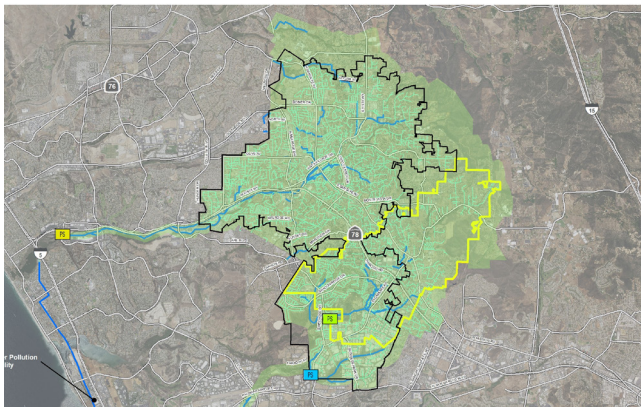
Date Completed: 2016-Ongoing

Harris Team Members: Diane Sandman and Haley Johnson

Subconsultants: N/A

Under a three-year on-call contract, Harris is providing as-needed CEQA environmental services for the City, reducing the backlog of projects encountered by the Planning Division. Our services consist of preparing CEQA documents such as Initial Studies/Mitigated Negative Declarations (IS/MND), Initial Studies/Negative Declarations (IS/ND), and other related environmental documentation for private development projects. Projects are assigned on a task order basis.

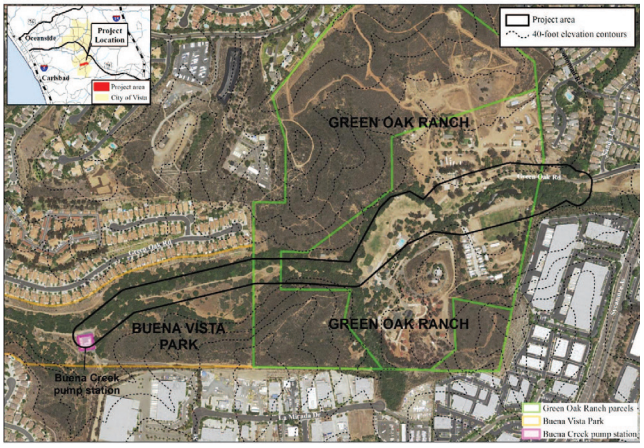
2017 Comprehensive Sewer Master Plan Program EIR: Harris is providing environmental services in support of the Supplemental Program Environmental Impact Report (PEIR) for the City of Vista and Buena Sanitation District Comprehensive Sewer Management Plan. The project is an update to the adopted 2008 Vista Sewer Master Plan Program EIR.



Harris is preparing the air quality, GHG emissions/energy, land use and noise sections of the City of Vista Comprehensive Sewer Master Plan PEIR.

Green Oak Trunk Sewer Replacement Draft IS/MND: Harris is providing environmental services for this project that will replace approximately 5,000 LF of vitrified clay pipe sewer mains with polyvinyl chloride sewer mains and associated services and manholes.

Three pipe alignments were considered for the project. The Draft IS/MND analyzed one alignment alternative based on project plans. Harris' environmental team prepared the Draft IS/MND; air quality, GHG emissions, and noise technical reports; and oversaw Phase II cultural resources testing.



Approximately half of the Green Oak Trunk Sewer project is located within a City-owned open space park (Buena Vista Open Space Park), and the other half is within a privately held camp (Green Oak Ranch).

Diane Sandman is one of the best project managers I have ever encountered. The qualities that I find exemplary in Diane are her communication skills, her knowledge of CEQA, and her attention to the quality (written and graphic) of CEQA compliance documents.

JOHN HAMILTON, CITY OF VISTA

4. References

CLIENT	Patrick Dobbins	Jasmine Cuffee	Gary Yagade	Kurt Maire	Kyle Carbert	Roger Kohne	Dana Van Horn	Patrick Imperatrice	Tom Hyun	Rich Burton	Kate Giberson	Diane Sandman	Wendy Young	Haley Johnson	Shannon Bane	Alex Yescas	Lois O'Sullivan	Aurum Engineering	Bonneau Dickson	Central Coast Engineers	Pacific Crest Engineering	Monterey Bay Engineers	Subtronic Corporation	NCS Engineering
	Harris & Associates																	Subconsultants						
City of Gonzales Harold Wolgamott Public Works Director (831) 675-5000 hwolgamott@ci.gonzales.ca.us	●				●	●		●	●		●						●	●				●		●
City of Soledad Don Wilcox Public Works Director (831) 223-5173 donald.wilcox@cityofsoledad.com	●	●		●	●	●	●		●		●		●		●	●			●		●	●	●	●
City of Monterey Laurie Williamson Senior Engineer (831) 242-8748 williamson@monterey.org	●	●		●	●		●	●	●	●												●	●	
Ross Valley Sanitary District Katherine Hayden Infrastructure Assets Manager (415) 259-2949 ext. 217 khayden@rvsd.org		●		●	●																		●	
City of Watsonville Tom Sharp Senior Utilities Engineer (831) 768-3076 tom.sharp@cityofwatsonville.org		●		●																	●		●	
City of Vista John Hamilton, AICP Environmental Planner (760) 643-5391 jhamilton@ci.vista.ca.us			●									●		●										

5. Services, Local Understanding and Capacity

Services

Harris & Associates provides the full range of services listed in the Request for Proposals. Our staff includes civil designers, program managers, financial engineers, grant coordinators, environmental planners, and construction managers/inspectors. We have a staff of 18 based in our Salinas Office and staff in our Concord headquarters provides additional support to perform all of the services the District is seeking.

Our services include:

- Project planning (CIP project development, schedule and budget preparation, alignment studies, etc.)
- Development Review (improvement plans, technical studies and map documents)
- Civil design (wet utilities pipelines, pump stations, reclaimed water facilities, roadways, etc.)
- Permitting and CEQA/NEPA clearance
- Storm Water Permit compliance
- Bid/Award phase
- Construction Management/Inspection

Harris assessed the water and sewer pipelines and provided construction support for MCWD's East Garrison project.

Local Understanding

Harris has maintained an office in the Monterey Bay Region for over 20 years and have worked for the District for the last 15 years. We have a deep understanding of the very limited supply of water in the region which includes former Fort Ord. There is a myriad of efforts by various agencies in the area to construct reliable water supply projects. This includes a "One Water Approach" as an integrated water management mindset that considers potable-water, wastewater, groundwater, stormwater, flood-control, and other elements as intertwined.

Harris only works for public agencies so our staff has an unrivaled expertise in public project delivery. This includes management, review and inspection of private development projects. We provide contract city engineering and district engineering services to agencies in Monterey County so we are very familiar with local field conditions, contractors, state regulators and specialty consultants. Harris staff also holds leadership positions in local professional associations such as American Public Works Association and Monterey Bay Water Works Association so we keep our technical skills current and have a strong network of "go to" experts in the water/sewer field.

Capacity

The Harris team is available immediately and structured to respond quickly with the right level of expertise for each task order. We will provide timely responses to your requests and inquiries from our Salinas office. If additional support is needed, we are able to draw from a pool of approximately 185 professional and support staff throughout our firm to complete your projects expeditiously.

6. Comments on Professional Service Agreement

Harris has reviewed the Marina Coast Water District's Sample Agreement. If selected for negotiations, Harris will execute said agreement. However, during negotiations, we would like the opportunity to discuss minor adjustments to benefit both parties.