

CRESCENTA VALLEY WATER DISTRICT

2700 FOOTHILL BOULEVARD
LA CRESCENTA, CALIFORNIA

To be held on
August 5, 2020 at 1:30 PM

Agenda for the Meeting of the Engineering Committee
of the Crescenta Valley Water District

Posted August 4, 2020 at 1:30 PM

TELECONFERENCING NOTICE

[This meeting will be held by teleconference only.]

Pursuant to the provisions of Executive Order N-29-20 issued by Governor Gavin Newsom on March 18, 2020, the public may not attend the meeting in person.

Any member of the public may participate using a touchtone phone. You may select any of the following phone numbers (there are more than one for increased reliability during this time of increased phone traffic)

(669) 900-6833

(346) 248-7799

(929) 205-6099

(253) 215-8782

(301) 715-8592

(312) 626-6799

Then, enter Access Code: 814 6602 2585

[Pursuant to the above Executive Order, the public may not attend the meeting in person]

Any person may make a request for a disability-related modification or accommodation needed for that person to be able to participate in the public meeting by contacting the District by phone or in writing at the above email address. Requests must specify the nature of the disability and the type of accommodation requested. A telephone number or other contact information should be included so that District staff may discuss appropriate arrangements. Persons requesting a disability-related accommodation should make the request with adequate time before the meeting for the District to provide the requested accommodation.

Call to Order

Adoption of Agenda

Public Comment:

At this time, members of the public shall have an opportunity to address the Committee on items of interest that are within the subject matter jurisdiction of this Committee. This opportunity is non-transferable, and speakers are limited to three (3) minutes each.

Action Items

The public shall have an opportunity to comment on any action item as each item is considered by the Committee prior to action being taken. This opportunity is non-transferrable, and speakers are limited to one two-minute (2) comment each.

1. Request for Proposal - Professional Consulting Services to Prepare a Local Hazard Mitigation Plan, Project M-1004
2. Request for Proposal - Professional Consulting Services for procurement and installation of AMI Communications Network, Project E-1020
3. Request for Proposal - Professional Engineering Services for Design of FY 20/21 Pipeline Replacement Projects, Project E-1021 & E-1022
4. Project Update - FY 20/21 Capital Improvement Project Program

Committee Member's Request for Future Agenda Items

Next Engineering Committee Meeting – September 4, 2020

Adjournment

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 1

August 5, 2020

To: Engineering Committee
From: David S. Gould, P.E. – Director of Engineering
Subject: Proposal Review - Professional Consulting Services to Prepare a Local Hazard Mitigation Plan, Project M-1004

BACKGROUND:

The California Governor's Office of Emergency Services (Cal OES) in conjunction with the Federal Emergency Management Agency (FEMA) are making funding available through its 404 Hazard Mitigation Grant Program (HMGP), which provides funds for projects that reduce the effects of future natural disasters. The grant program that Crescenta Valley Water District (CVWD or District) applied for is part of the FEMA pre-disaster mitigation (PDM) program.

Under the HMGP program, Cal OES is making available grant funding for agencies such as CVWD to create a local hazard mitigation plan (LHMP). The LHMP is a document that outlines potential high priority hazards and creates projects that could be implemented to reduce overall risk to the District during a natural or man-made event such as drought, water shortage, energy shortage/outage, wildfire, earthquake, terrorism and cyber-attack.

In March 2019, CVWD submitted a notice of interest application under the HMGP to Cal OES for development of a local hazard mitigation plan. In April 2020, CVWD received notification from Cal OES that FEMA has approved CVWD's application to prepare a LHMP under the HMGP. The total eligible cost is \$166,653 with FEMA responsible for 75% of the grant, which is \$124,990.50 and CVWD responsible for 25% of the grant, which is \$41,663.50. The LHMP must be completed with 35 months or by February 20, 2023.

DISCUSSION:

In June 2020, staff sent out a request for proposal (RFP) to prepare a LHMP to eleven (11) consulting firms that have previously provided professional services and have complete a local hazard mitigation plan, in accordance with the FEMA/Cal OES guidelines. Attached for your review is the RFP that included the scope of work and other project parameters. On June 22, 2020, staff held a pre-proposal teleconference meeting with the consulting firms and provide information about CVWD, the scope of work and proposed schedule. The proposals were due on July 10, 2020 and CVWD received six (6) proposals.

Staff reviewed each proposal and ranked them in accordance to the following categories and weighted percentages, 1) Proposal, Project Concept & Scope of Work– 40%, 2) Previous work experience – 30%, 3) Expertise of project staff on similar projects – 20% and 4) Costs of service – 10%.

Tetra Tech, Inc was the highest ranked consultant, as shown in the attached consultant ranking table. Tetra Tech proposal had a well-rounded approach and project team. Their project approach was streamlined, organized, and efficient. They recommend using industry best practice tools/models and included a designated person for public relations, which is key during engagement with stakeholder committees and various community groups. Tetra Tech also had a team member with extensive water system design and planning experience that could be helpful in emphasize the need for water infrastructure and supply reliability. Tetra Tech was also the most efficient firm in terms of the cost per hour and the number of hours proposed to complete the project.

RECOMMENDATION:

It is staff's recommendation to the Engineering Committee to endorse awarding a consulting contract to Tetra Tech for \$122,709 to prepare CVWD's local hazard mitigation plan as they provide a cost-effective proposal with the amount below the grant amount available at the next Board meeting.

Prepared & Submitted by:



David S. Gould, P.E.
Director of Engineering

Attachments:

1. Consultant Ranking Table
2. CVWD - Request for Proposal
3. Tetra Tech proposal dated 7/10/20

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Crescenta Valley Water District

Professional Consulting Services to Prepare a Local Hazard Mitigation Plan, Project M-1004

Consultant Ranking

Ranking	Weighted Percent	Tetra Tech		Wood Environment &		APetrow Consulting		Hagerty Consulting		Engineering Solutions		Category Five	
		Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Proposal - Project Concept & Scope of Work	40%	4.5	1.80	4.1	1.64	3.8	1.52	3.8	1.53	3.6	1.42	3.7	1.49
Project Experience	30%	4.7	1.40	4.3	1.30	4.0	1.20	3.8	1.13	3.7	1.10	3.8	1.13
Project Team Qualifications	20%	4.5	0.90	4.3	0.87	4.0	0.80	3.6	0.72	3.5	0.70	3.3	0.67
Consultant's Fee	10%	4.3	0.43	3.2	0.32	3.8	0.38	4.3	0.43	3.8	0.38	3.2	0.32
Final Weighted Score	100%		4.53		4.12		3.89		3.82		3.61		3.60
Proposal Cost			\$122,709		\$130,135		\$124,820		\$115,682		\$121,760		\$136,843

Each consultant's proposal rated 1 - 5 (5 outstanding - 3 average - 1 unsatisfactory) on each category above. Each rating is multiplied by the weighted average for each category and totaled for the final weighted score.

Categories:

Project Concept & Scope of Work - How well the consultant's proposal addressed the needs of the District as outlined in the request for proposal & how well the consultant

Project Experience - How much previous experience has the consultant on projects similar to this project

Project Team Qualifications - How did the consultant's proposal use its staff and the experience of the individual people involved

Consultants Fee - How well the consultant's proposal utilized their staff and the costs associated with the proposal



REQUEST FOR PROPOSAL

PROFESSIONAL CONSULTING SERVICES TO PREPARE A LOCAL HAZARD MITIGATION PLAN, PROJECT M-1004

PROPOSAL DUE DATE: July 10, 2020

INTRODUCTION:

The California Governor's Office of Emergency Services (Cal OES) in conjunction with the Federal Emergency Management Agency (FEMA) is making funding available through its 404 Hazard Mitigation Grant Program (HMGP), which provides funds for projects that reduce the effects of future natural disasters. The grant program that Crescenta Valley Water District (CVWD or District) applied for is part of the FEMA pre-disaster mitigation (PDM) program.

PDM is designed to assist States, territories, federally-recognized tribes, and local communities to implement a sustained pre-disaster natural hazard mitigation program to reduce overall risk to the population and structures from future hazard events, while also reducing reliance on Federal funding in future disasters. Congressional appropriations provide the funding for PDM. Under the HMGP program, Cal OES is making available grant funding for agencies such as CVWD to create a local hazard mitigation plan (LHMP). The LHMP is a document that outlines potential high priority hazards and creates projects that could be implemented to reduce overall risk to the District during a natural or man-made event such as drought and water shortage, energy shortage/outage, wildfire, earthquake, terrorism and cyber-attack. Additional information can be found at the FEMA website (www.fema.gov) and the Local Mitigation Planning Handbook. (<https://www.fema.gov/media-library/assets/documents/31598>)

In March 2019, CVWD submitted a notice of interest application under the HMGP to Cal OES for development of a local hazard mitigation plan.

- Hazard Mitigation Planning Committee (HMPC): District to organize a HMPC that will include representatives from each participating jurisdiction; staff with other local, state, and federal agencies; take the "whole community" approach including members of the public; and may also include a cross-section of the community, such as residents, private nonprofit organizations, community leaders, and business owners.
- Detailed Risk Assessment Plan: develop a plan to understand the risk and vulnerability of identified natural hazards and to provide a basis for hazard mitigation strategy development. The risk assessment will include 1) prioritization of the hazards that have occurred within the District, 2) maps that delineate areas affected by hazards and identify locations of local assets, 3) develop an overview of the District's vulnerability to specific hazards and 4) capability assessment that will inventory existing plans, policies, and procedures that the District has in place to temper the effect of hazards.
- Development of Mitigation Strategy: develop a strategy to address the District's exposure to identified hazards. This will require meetings of the HMPC, and include 1) developing mitigation goal statements that focus on reducing the risk and vulnerability from the identified hazards 2) developing a comprehensive range of specific mitigation actions items being considered to reduce the effects of each hazard, based on the risk assessment, 3) prepare a plan ensure that each required component are included in the plan.

- Hazard Mitigation Plan Maintenance Process and Plan Adoption: that will include 1) monitor, evaluate, implement, and update the LHMP, 2) implement and incorporate hazard mitigation plan goals and actions into other local planning documents, 3) implementation of a LHMP schedule, 4) continued public involvement in the LHMP development, maintenance, and future updates, 5) prepare a Final LHMP that incorporates public comments, make all necessary revisions, and submittal to Cal OES and FEMA Region IX for review and approval, 6) CVWD's Board to adopt the LHMP upon approval of the Plan from Cal OES and FEMA Region IX.

In April 2020, CVWD received notification from Cal OES that FEMA has approved CVWD's application to prepare a LHMP under the HMGP. The total eligible cost is \$166,653 with FEMA responsible for 75% of the grant, which is \$124,990.50 and CVWD responsible for 25% of the grant, which is \$41,663.50. The LHMP must be completed with 35 months or by February 20, 2023.

CVWD is requesting proposals from consulting firms to provide profession services and coordination to complete the LHMP, in accordance with the FEMA/Cal OES guidelines and the following scope of work.

SCOPE OF WORK

The Scope of work for this project is organized into four (4) phases:

- 1) LHMP Planning/Development Process
- 2) Risk Assessment (Hazard Identification, Vulnerability Assessment, and Capability Assessment)
- 3) Hazard Mitigation Strategy
- 4) Plan Maintenance Process.

1) LHMP Planning/Development Process

As part of the LHMP planning and development process, the District with the assistance of the consultant will organize a Hazard Mitigation Planning Committee (HMPC). Members of the HMPC will include representatives from each participating jurisdiction; CVWD's Emergency Planning Committee with staff, staff with other local, state, and federal agencies (if necessary); take the "whole community" approach including non-profits, religious institutions, disability access and functional needs groups, experts, or members of the public; and may also include a cross-section of the community, such as residents, community leaders, and business owners. The public will also be invited to participate on the HMPC. The HMPC tasks will include the following:

- Participate in the planning process, attend meetings either in-person or tele-conferencing, and provide data as requested
- Solicit input from citizens and professionals with knowledge of applicable hazards related to water and sewer infrastructure impacts.
- Provide input on how the risk differs across the planning area
- Identify new/proposed mitigation projects
- Review drafts of the plan
- Hold public meetings
- Coordinate the formal adoption of the plan by governing boards
- Manage the implementation of the proposed mitigation projects.

The consultant shall facilitate a minimum of three (3) public meetings. The meeting will either take place in-person or tele-conferencing. Each meeting will focus on educating the public on the LHMP development process and identify community concerns. The consultant shall provide content to post on the District's webpage. When a final draft LHMP is developed, the public will be invited to review and provide comments to the final draft. Public comments will be incorporated as appropriate by the consultant.

- Note: For security reasons, all critical infrastructure protection information will need to be redacted from the plan prior to dissemination or presentation to the public.

The CVWD LHMP will thoroughly document the hazard mitigation planning process, including but not limited to:

- A narrative description of how the plan was prepared and the process followed
- An outline of plan development meeting dates, attendees, and agendas
- Identify agencies and organizations that participated in plan development
- Coordination with existing planning mechanisms
- Description of how the public was involved and strategy for public outreach/meetings

2) **Risk Assessment (Hazard Identification, Vulnerability Assessment, and Capability Assessment)**

A detailed risk assessment will be developed for this LHMP. The purpose of this section is to understand the risk and vulnerability of identified natural or man-made hazards and to provide a basis for hazard mitigation strategy development. The risk assessment will include:

- a) **Hazard Identification and Profiles:** The Hazard Identification and Profiles will include a description and prioritization of the hazards that have occurred within the District impacting water and sewer infrastructure. The hazard categories may include:
 - Flood-related hazards
 - Wildfire hazards
 - Earthquake hazards
 - Severe weather-related hazards (extreme temperatures, drought, fog, heavy rains, thunderstorms, wind/lightning, etc.)
 - Nuclear hazards
 - Climate change hazards
 - Other man-made hazards
 - Other geologic and soil hazards
 - Other hazards as identified by the HMPC and other data sources
- b) **Hazard Mapping:** Using the best available data, the risk assessment will include maps (hazard and infrastructure maps will be provided by the Consultant) that delineate areas affected by hazards and identify locations of local water and sewer assets. The geographic information data will comprise a comprehensive inventory for use in developing map data layers (to the extent data is available), of the following items relative to the multiple hazard area:
 - Public buildings
 - Critical facilities and infrastructure
 - Maps that depict the location of parcels, structures, land use, and populations
 - Structures will be delineated by type of use (e.g. residential, commercial, industrial, etc.)
- c) **Vulnerability Assessment:** Based on the previous information, the Consultant will develop an overview of the District's vulnerability to specific hazards. Digital maps and GIS data (provided by the consultant) will be developed that identify local assets that are located within known hazard areas. HAZUS (computer model) will be used to model losses as appropriate. This vulnerability assessment will include (as the data allows):
 - Types and numbers of buildings, infrastructure, and critical facilities located within the planning area and within identified hazard areas
 - An inventory of all repetitive flood loss structures, as defined by FEMA, if applicable
 - Potential dollar losses from identified hazards will be estimated through a process that utilizes HAZUS or GIS analysis of Los Angeles County assessor's data with hazard locations
 - Description of land uses and development trends to advise future land use decisions

- d) **Capability Assessment:** A capability assessment will be conducted that will inventory those existing plans, policies, and procedures that the District has in place to temper the effect of hazards. This will include protective measures under the National Flood Insurance Program (NFIP), building codes, zoning ordinances, completed or ongoing mitigation projects, and mitigation policies established in the general or comprehensive plans of participating jurisdictions.

3) **Hazard Mitigation Strategy**

The LHMP will include a mitigation strategy to address the District's exposure to identified hazards. This will require meetings with the HMPC that will be facilitated by the consultant that will generate the following goals and strategies and include:

- a) **Developing mitigation goal** statements that focus on reducing the risk and vulnerability from the identified hazards.
- b) **Developing a comprehensive range of specific mitigation** actions items that should be considered to reduce the effects of each hazard, based on the risk assessment. The range of potential action items will include emphasis on mitigating losses for new and existing facilities and infrastructure. This section will include a list of prioritized hazard mitigation action items that best meet the District's needs for hazard damage reduction. Prioritization factors will include an analysis of proposed mitigation projects focused on several key areas, including but not limited to economic (including benefits and cost), engineering, technical, legal, environmental, social, and political feasibility. Action items given the highest priority will meet most or all aspects of the feasibility analysis and will be the best fit for the District and all stakeholder participants.
- c) **Draft plan** will be prepared by the Consultant in accordance with state and federal requirements based on previous tasks. The Consultant will ensure that each required component for each stakeholder participant is included in the Plan. The draft plan will be made available to the HMPC for review and comment. The Consultant will incorporate HMPC comments and prepare a public review draft to be distributed to interested parties.

4) **Hazard Mitigation Plan Maintenance Process**

- a) **Monitoring, Evaluating, and Updating:** This chapter will detail how the District's HMPC will monitor, evaluate, implement, and update the Plan. For example, maintenance will occur at an annual meeting of the HMPC where the LHMP mitigation strategy and implementation progress will be evaluated and modified as appropriate. The Plan will be revised, updated, and re-adopted every five (5) years in accordance with the requirements of the Disaster Mitigation Act of 2000.
- b) **Incorporation into Existing Planning Mechanisms:** The District will develop the LHMP in order for it to be implemented and incorporated into hazard mitigation plan goals and actions into other local planning documents, such as the local emergency operations plan, community wildfire protection plans, storm water plans, etc. The District will make it available to the City of Glendale, Los Angeles County, La Canada Flintridge and CV Fire Safety Council, so they might incorporate the LHMP into the Safety Element of their General Plan.
- c) **Implementation Schedule:** Consultant should prepare a preliminary implementation schedule that will include procedures for ensuring the Plan's implementation, including an implementation schedule for each action item.
- d) **Continued Public Involvement:** The District is committed to support public involvement in the LHMP development, maintenance, and future updates. A description of public involvement activities for the Plan will be included in the final LHMP.

- e) **Final Plan:** The Consultant will collect and incorporate public comments into the public review draft, make all necessary revisions, and will prepare a Final Plan for submittal to Cal OES and FEMA Region IX for review and approval. The Consultant is responsible for all plan revisions from Cal OES, FEMA, or the District until the plan is adopted by District's Board of Directors.
- f) **LHMP Adoption and Approval:** The governing body of each participating jurisdiction will adopt the LHMP upon approval of the Plan from Cal OES and FEMA Region IX.

Deliverables:

LHMP Deliverables: Consultant to develop the LHMP with the following anticipated deliverables:

1. Deliverables will conform to 44 CFR Section 201.6 and will include: Development of a Local Hazard Mitigation Plan which is reviewed by the public, Cal OES, FEMA, and the HMPC. Within the LHMP it will include seven chapters: Introduction, Community Profile, Hazard Assessment, Threat and Vulnerability Assessment, Hazard Mitigation Strategy, Plan Maintenance, and reference source document.
2. Deliverables shall be the HMPC invitation as well as four (4) meeting agendas, sign-in sheets
3. Deliverables shall be the community outreach materials including the Community Engagement Strategy; CVWD LHMP Website, Community kickoff meeting presentation, comment boards and sign in sheets as well as three (3) more community meeting comments boards and sign-ins; and CVWD LHMP Online Survey results.
4. Deliverable will be Key Facilities Inventory.
5. Deliverable will be a LHMP Implementation Workbook.

PROPOSAL REQUIREMENTS:

Scope of Work

The proposal shall include a detailed list itemizing the tasks required to complete the scope of work addressing all project criteria outlined above. Each task shall include a detailed estimate of man-hours required to complete each task.

Proposal Fee Schedule

The proposal shall include a "Fee Schedule" outlining all applicable hourly rates and costs for services. The proposal shall provide a breakdown of fees associated with the project task as specified above. The proposal shall also include a "not-to exceed" total fee, which shall include all work necessary to complete the project objective.

Schedule

The proposal shall include a proposed project schedule detailing the time of completion for design and permitting. The schedule shall include the number of calendar days required to perform each task and the total number of calendar days required to complete the entire project.

CVWD's goal is to award a contract for consulting services by August 2020 and to complete the LHMP by October 2021.

Project Experience

The proposal shall include description of comparable LHMPs completed by consultant including experience working with FEMA and Cal OES within past three (3) years including date completed, location of work names, addresses, and phone numbers of persons in charge of project, and the name and address of the public agency or firm for whom the project was constructed. Previous projects could include prior experience with FEMA and Cal OES for cost recovery after a declared disaster or emergency, grants funding for pre-disaster projects and other preparedness programs.

Consultant's Representative

The proposal shall name a responsible representative, an alternate, and all sub-consultants to perform the assigned tasks. The chosen consultant's representative will remain responsible and in charge of all duties from contract negotiations through project completion. If the primary representative is unable to continue with the project, then the alternate representative will become the primary representative. The District must approve any other changes in responsible representative, in advance. The District will have the right to reject other proposed changes in personnel and may consider any other changes in responsible personnel a breach of contract.

Professional Service Agreement

The chosen consultant shall be responsible for completing the specified services in accordance with the District's standard "Professional Services Agreement," which will be prepared by the District. Services specified in this agreement shall be taken directly from the consultant's accepted proposal and from this "Request for Proposal", if applicable. See attached sample.

Insurance Requirements

The District will require employer's liability, comprehensive commercial liability insurance, and errors and omissions insurance coverage for at least \$2,000,000 and comprehensive automobile liability for at least \$1,000,000. The District requires that the District be named as additional insured on the policy and such insurance policy shall not be terminated or canceled without thirty (30) days prior written notice to the District.

District Reimbursements

The District normally reimburses consultants for the actual cost (plus 15%) for all outside expenses, including those for material costs authorized in advance by the District. Other reasonable expenses will be reimbursed where such costs have been advanced by consultant and approved by the District.

The chosen consultant shall not be compensated for use of computers, office equipment, hardware, or software materials. Said costs are not compensated and time expended by consultant's personnel on such equipment is included within the hourly rate as shown on the consultant's fee schedule.

District Responsibilities:

District will provide the following to assist the selected consultant with the project and its completion:

- Geographic information system (GIS) information and topographic surveys as available.
- Reports, plans, and drawings, as available and pertinent to the proposed plan.
- Design criteria, preferred manufacturer's information, and other technical information, as available and pertinent to the project.
- Current operational condition and performance of existing infrastructure pertinent to the proposed plan.

Proposal Due Date:

Please submit one (1) copy of the proposal as a PDF file via e-mail via e-mail by 12:00 pm by July 10, 2020 to dgould@cvwd.com. Send three (3) copies of the proposal to the attention of Mr. David S. Gould, Director of Engineering at Crescenta Valley Water District, 2700 Foothill Boulevard, La Crescenta CA 91214. If you have any questions or comments, contact Mr. Gould at (818) 236-4119.



July 10, 2020

Mr. David S. Gould, Director of Engineering
Crescenta Valley Water District
2700 Foothill Blvd.
La Crescenta, CA 91214
Orange, CA 92869

SUBJECT: RFP M-1004, Professional Consulting Services to Prepare a Local Hazard Mitigation Plan

Dear Mr. Gould and Selection Committee:

Tetra Tech, Inc. (Tetra Tech) appreciates the opportunity to submit this proposal to facilitate and support the development of a local hazard mitigation plan for the Crescenta Valley Water District. We have reviewed the contents of the request for proposal (RFP) and have no issues with the requirements therein. All contents of this proposal are true and correct and shall remain valid for 90 days following the date of this submittal. Tetra Tech is obligated by all addenda to this RFP.

Tetra Tech is a leader in developing and implementing innovative planning, engineering, and risk-modeling tools that have proven to be instrumental in the fields of disaster planning and hazard mitigation. Tetra Tech has extensive experience in developing Disaster Mitigation Act of 2000- (DMA) compliant plans nationwide. Our experience includes working directly with the Federal Emergency Management Agency (FEMA) on the development of hazard mitigation planning tools, such as Hazards U.S. Multi-Hazard (HAZUS-MH), that support an all-hazards approach in planning efforts of varying types nationwide. We have annual sales exceeding \$2.9 billion and provide engineering and resource management services to hundreds of federal, tribal, state, and local clients.

Rob Flaner, CFM, prepared the following proposal and will be your project manager throughout this planning effort working out of our office in Oakland, California. Mr. Flaner is a California native and graduate of University of California, with a long track record of client satisfaction. Prior to joining Tetra Tech, Mr. Flaner was an emergency manager for FEMA, working in FEMA Regions VIII, IX and X. As an experienced project manager, Mr. Flaner has an extensive resume of projects with similar scope and complexity to what is being proposed for this project. This project will be managed out of our Oakland, California office located at **1999 Harrison, Suite 500, Oakland, California 94612**.

We appreciate the opportunity to provide you with this proposal. Please contact either Ed or Rob if you have any questions or require additional information.

Sincerely,

Tetra Tech, Inc.

A handwritten signature in blue ink that reads 'Ed Sussenguth'.

Ed Sussenguth
Operations Manager
(510) 302-6333

Ed.Sussenguth@tetrattech.com

A handwritten signature in blue ink that reads 'Rob Flaner'.

Rob Flaner, CFM
Project Manager
(208) 939-4391

Rob.Flaner@tetrattech.com



TETRA TECH

PROPOSAL



Project M-1004 Professional Consulting Services to Prepare a Local Hazard Mitigation Plan July 10, 2020

Prepared for:

Crescenta Valley Water District
2700 Foothill Boulevard | La Crescenta, CA 91214



Submitted by:

TETRA TECH, INC.

1999 Harrison, Suite 500 | Oakland, CA 94612

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APPENDICES

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Appendix B – Detailed Cost

Consultant Experience



As a firm with 50 years of natural resource planning and environmental experience, Tetra Tech offers the local knowledge and high-quality services required for this project. Tetra Tech has been on the cutting edge of risk analysis, capability assessment, and hazard mitigation planning efforts pursuant to the Disaster Mitigation Act of 2000 (DMA 2000) (Public Law 106-109) since its inception. Tetra Tech is recognized nationally for its subject-matter expertise in the field of hazard mitigation planning pursuant to the federal legislation. Collectively, the experience our team has gained from our many engagements has allowed us to stay on the forefront of developing and delivering innovative approaches and solutions to our client's challenges in the scope of work areas. Our hazard mitigation plans (HMP) are not only well received by our clients; they are well received by the agencies that review them.

Experience in Emergency Planning

Tetra Tech is a leader in homeland security and emergency management preparedness. We have successfully completed hundreds emergency preparedness and response planning projects for local, state, federal and Water District clients. With a strong cadre of professionals spanning all disciplines, Tetra Tech's staff brings previous experience from the public sector and a strong operational background. This understanding of how plans translate into real-world applications is one of the reasons Tetra Tech's clients have repeatedly reengaged us to support their planning efforts. Rather than providing theory-based plans or working strictly from a template, Tetra Tech works with our clients to understand their needs and tailor plans based upon the realities of their operational environment and in accordance with federal and state laws and regulations. Tetra Tech's portfolio contains multiple planning projects for Special Purpose Districts similar to Crescenta Valley Water District, including foundational plans such as emergency operations plans (EOPs) and American Water Infrastructure Act of 2018 (AWIA) plans.

Experience in Hazard Mitigation Planning

Tetra Tech offers complete hazard mitigation planning support services to our clients. Not only do we specialize in developing DMA-compliant mitigation plans and updates, but we also provide additional services directly associated with hazard mitigation. For example, we have completed benefit-cost analysis (BCA) and provided Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance (HMA) grant support for local governments throughout the country wishing to secure funding to implement mitigation actions identified within their local hazard mitigation plans (LHMP). Tetra Tech also provides technical guidance and assistance to communities entering or seeking to achieve higher ratings within the National Flood Insurance Program Community Rating System (NFIP CRS) program. For more than 10 years, we have served as a mission support contractor for FEMA's advancement of Hazards U.S. (HAZUS) the preferred software solution used to conduct risk assessments as part of HMP projects.

Tetra Tech has completed single- and multi-jurisdictional LHMP projects for a broad range of clients and environments, from highly urbanized to predominantly rural, from coastal plains to mountainous watersheds, from cities with vast staffs and resources to villages having few, shared resources. We have completed 217 hazard mitigation plans in 3,000 jurisdictions involving outreach to 74 million residents. We have conducted more than 2,000 benefit-cost analyses to help 100 clients obtain \$350 million in grant funding for projects related to flood, fire, earthquake, and landslide. We have provided Hazard Mitigation Assistance (HMA) grant application support to disaster-stricken communities for projects totaling more than \$380 million. All these success stories have direct relevance to this project because they validate Tetra Tech's approach to LHMP development via a facilitated process with an emphasis of increasing the hazard mitigation capabilities of our clients. Further, they illustrate working with local governments, big and small, with varying degrees of capability, with differing risk exposures. Each one of these projects has refined tools and templates that work in any environment.



Tetra Tech's hazard mitigation planning skills include the ability to successfully manage complex, multi-task, and multidisciplinary projects, often under expedited schedules and tight budgets. We are thoroughly familiar with the mitigation planning and approval process required by DMA 2000, and we understand the evaluation criteria CAOES and FEMA Region IX will use to assess and approve the District's Plan. Tetra Tech already has templates, tools, and resources designed specifically for mitigation planning projects, which will provide the District a streamlined process and time savings. This subject matter expertise will enable us to develop the CVWD LHMP in strict accordance with the requirements and intent of DMA 2000. **Exhibit 1** identifies HMP efforts performed by the proposed Tetra Tech team members that will be engaged for the CVWD project within FEMA Region IX.

Exhibit 1. Relevant Recent TEAM Hazard Mitigation Planning Experience in FEMA Region IX

State	Jurisdiction(s)	FEMA Region
California	County: Contra Costa (Twice), Del Norte (Twice), Humboldt (Three times), Los Angeles (Twice), Tehama, Siskiyou, San Mateo, Santa Clara, Sonoma (on-going) Municipal: City of Roseville (3-times), City of Los Angeles (Twice), Union City/Newark, Dublin/Livermore/ Pleasanton, Pico Rivera Special Purpose District: East Orange County Water District (on-going) Tribal: Yurok Tribe (State-Level Standard Plan), Santa Ynez Band of Chumash Indians	IX
Hawaii	State: State of Hawaii HMP (Standard State Level) County: Maui, Hawaii, Kauai (on-going)	

Hazard Mitigation Program Support

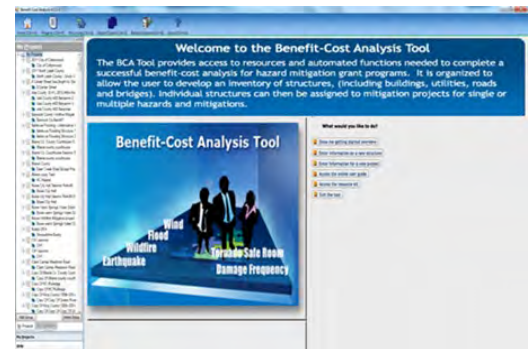
Tetra Tech and HAZUS

Over the past several years, Tetra Tech has served as a mission support contractor for FEMA's advancement of the Hazards U.S. Multi-Hazard (HAZUS-MH) software tool for conducting risk assessments. Tetra Tech quite literally wrote the book ("Using HAZUS-MH for Risk Assessment" FEMA-433). Tetra Tech is a FEMA-certified HAZUS-MH Vendor, which means we can certify local governments as official HAZUS users and develop custom training programs. We have pioneered innovative uses for HAZUS such as the level 2, user defined protocol for general building stock analyses that allows our planners to utilize HAZUS as a powerful public information tool. Our proposed risk assessment lead for this project, Ms. Carol Baumann, is a FEMA certified "Practitioner", the highest certification you can receive from FEMA. She is also an ESRI certified GIS "professional" (GISP). This designation is further testament to her credentials and subject matter expertise. Ms. Baumann's expertise, combined with our proposed project team, makes Tetra Tech highly qualified to not only meet the objectives of the project scope of work identified in the RFP, but exceed them. HAZUS is a tool with the unique capability to support all phases of emergency management. This tool will be constructed during this process and provided to the District upon completion, thus increasing the capability District as a whole.



Tetra Tech and Benefit Cost Analysis (BCA)

Tetra Tech also has a vast amount of experience using the FEMA BCA software in support of hazard mitigation grants. Since 2003, Tetra Tech has provided technical support to our clients in the preparation of hazard mitigation grant program applications that included over 2,000 BCAs and secured over \$350 million in grant funding. Our success rate on these applications exceeds 80%. These analyses covered a variety of projects including: property acquisitions; retrofits; minor flood control; wildfire mitigation; seismic retrofits; and landslide mitigation projects. This support was for both FEMA 404 and 406 mitigation grant funding. Each of these analyses was performed using FEMA approved software sanctioned at the time of the application development.



FEMA has used Tetra Tech's experience in BCAs as a beta tester in the development and advancement of its revised software releases. Tetra Tech's vast expertise in this field has proved to be beneficial to FEMA by providing feedback based on practical experience. Tetra Tech's input during these test phases has resulted in several significant changes and enhancements to the BCA model. Tetra Tech continues to provide input to the BCA helpline on issues identified in the field of measuring cost effectiveness.

Tetra Tech's Baseline Assessment Tool- BAToolSM

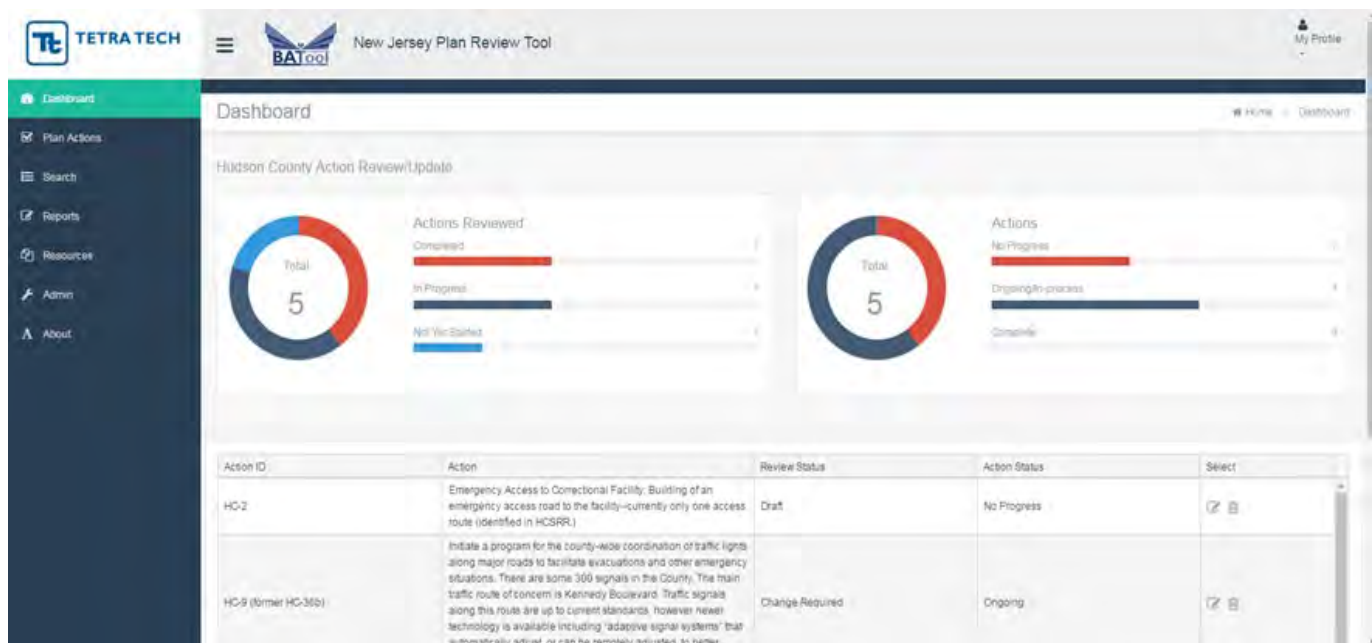
To facilitate the support of implementation of hazard mitigation programs following the completion of a hazard mitigation plan, Tech has developed the Baseline Assessment Tool (BAToolSM) that includes a suite of tools that support the tracking and implementation of local government hazard mitigation programs. The BAToolSM is currently trademarked and copyright pending.



A key component of the BAToolSM is an automated progress reporting tool that was developed to support the implementation of a LHMP maintenance strategy that includes annual progress reporting. For a special purpose district plan like that of the Crescenta Valley Water District (CVWD) plan, monitoring the action plan status can be cumbersome and taxing on limited resources. This tool has been set up to automate that process through a secure, web-based application that creates the platform for data-capture with reporting options. The tool has the flexibility to be adapted for local application with multiple deployment options available to jurisdictions wishing to use the tool. Santa Clara Valley Water District is currently a satisfied BAToolSM user.

Tetra Tech is integrating use of the BAToolTM into its hazard mitigation planning program with the goal of continuing to refine the scope and applicability of the BAToolTM to support integration of mitigation planning, plan maintenance and the overall resilience of a planning area. The principle objective of the BAToolTM suite of products is to provide communities the feedback they need to become more resilient to the impacts of natural hazards. A screenshot of the tool is provided as **Exhibit 2**, below.

Exhibit 2. Home Page for the BAToolTM Progress Reporting Tool



Experience working with Water/Wastewater Districts

Section 201.2 44CFR has defined a “local government” as follows:

*Any county, municipality, city, town, township, public authority, school district, **special district**, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.*

This expanded definition of local governments can create challenges in hazard mitigation planning due to differing core capabilities between taxing district governments and municipal governments. Typically, taxing districts do not have regulatory/permitting authority to regulate new development. Typically, special purpose districts are service providers that own and operate critical facilities and infrastructure within a planning area. While some will view these differences as obstacles to local hazard mitigation planning, Tetra Tech embraces the difference. We understand that special purpose districts are key stakeholders in hazard mitigation planning because of their role as owners/operators of the nation’s critical facilities and infrastructure. Understanding that a principle objective of the DMA 2000 was to make the nation’s critical facilities and infrastructure more resilient to the impacts of natural hazards, it only makes sense to engage these owner/ operators as fully participating planning partners.

The majority of our multi-jurisdictional hazard mitigation plans include special purpose districts as planning partners, including water/wastewater districts. We have tailored our multi-jurisdictional approach to understand the unique differences in core capabilities between municipal governments and taxing district governments. Understanding these differences allows our planners to facilitate a process that is specialized based on core capabilities. We have created tools and templates (district and municipal) specific to each entity’s needs and capabilities. For example, it would make no sense for a special purpose district review and consider mitigation actions that fall outside of their capabilities. They should focus on mitigation actions within their capabilities with an emphasis on maintaining their critical functions. We understand this and our proposed team is well equipped to meet the specialized needs of water/wastewater district planning partners. Our team’s capabilities have been built working with hundreds of special purpose districts across the country. **Exhibit 3** below shows the multi-jurisdictional planning efforts that Tetra Tech has completed that include water/wastewater district planning partners.

Exhibit 3. Tetra Tech Multijurisdictional Planning Efforts that included Water/Wastewater Districts

Plan	Location	Total # of Planning Partners	# of Water/Wastewater District Planning Partners	Name of Water/Wastewater Districts
Hudson County Multijurisdictional Hazard Mitigation Plan	Hudson County, NJ	19	6	Bayonne Municipal Utility Authority Jersey City Municipal Utility Authority N. Bergen Municipal Utility Authority N. Hudson Municipal Utility Authority Secaucus Municipal Utility Authority Kearney Municipal Utility Authority
Cook County Multi-Jurisdictional Hazard Mitigation Plan	Cook County, IL	135	1	Metropolitan Water Reclamation District of Greater Chicago (MWRD)
Contra Costa County Regional Hazard Mitigation Plan	Contra Costa County, CA	38	6	Contra Costa Water District Diablo Water District Central Contra Costa Sanitary District Ironhouse Sanitary District Dublin/San Ramon Services District Delta Diablo Sanitation District
Del Norte County Operational Area Hazard Mitigation Plan	Del Norte County, CA	7	2	Big Rock Community Services District Smith River Community Services District
Humboldt County Operation Area Hazard Mitigation Plan	Humboldt County, CA	32	12	Briceland Community Service District Humboldt Community Service District Manila Community Service District McKinleyville Community Service District Orick Community Service District Orleans Community Service District Redway Community Service District Weott Community Service District Westhaven Community Service District Willow Creek Community Service District Garberville Sanitary District Humboldt Bay Municipal Water District
Siskiyou County Hazard Mitigation Plan	Siskiyou County, CA	10	2	Lake Shastina Community Services District McCloud Community Services District
San Mateo County Hazard Mitigation Plan	San Mateo County, CA	29	3	Westborough Water District North Coast County Water District Mid-Peninsula Water District
Santa Clara Operational Area	Santa Clara County, CA	18	3	Santa Clara Valley water District

Plan	Location	Total # of Planning Partners	# of Water/Wastewater District Planning Partners	Name of Water/Wastewater Districts
Hazard Mitigation Plan				
Union City/Newark Multijurisdictional Hazard mitigation Plan	Union City and Newark, CA	5	2	Alameda County Water District Union Sanitary District
East Orange County Water District Hazard Mitigation Plan	Orange, CA	1	1	East Orange County Water District
Ada County Multi-Hazard Mitigation Plan	Ada County, ID	20	2	Eagle Sewer District Star Sewer and Water District Boise Warm springs Water District
Clark County regional Natural Hazards Mitigation Plan	Clark County, WA	18	2	Clark County Public Utilities District #1 Clark Regional Wastewater District
King County Regional Hazard Mitigation Plan	King County, WA	55	17	Coal Creek Utility District Covington Water District Highline Water District King County Water District No. 19 King County Water District No. 20 King County Water District No. 90 King County Water District No. 111 King County Water District No. 125 Midway Sewer District North City Water District Ronald Wastewater District Sammamish Plateau Water & Sewer Skyway Water and Sewer District Soos Creek Water & Sewer District Southwest Suburban Sewer District Valley View Sewer District Woodinville Water District
Snohomish County Natural Hazards Mitigation Plan	Snohomish County, WA	35	6	Alderwood Water/Wastewater District Cross Valley Water District Highland Water District Mukilteo Water and Wastewater District Silver Lake Water and Sewer District Snohomish County PUD No. 1
Total			65	

Scope of Work Approach

Project Understanding

For over a decade, Tetra Tech has developed HMPs that are well received by our clients as well as the agencies that review them. This is substantiated by Tetra Tech's unrivalled, high first-pass approval rate of our plans and the fact they are structured to increase the capabilities of our planning partners to support the implementation of mitigation projects to reduce the risk of hazards to their communities. Tetra Tech is a nationally recognized leader in the development of HMPs approved by FEMA. Our planning process has constantly evolved to address changes in federal and state plan development criteria and guidance appropriate for the variety of issues and interests engaging FEMA plan reviewers across 7 of the 10 FEMA regions. This experience translates into an efficient, cost-effective, and comprehensive planning process, and ultimately yields useful results and recommendations to meet the needs and interests of the Crescenta Valley Water District.

Our proposal addresses the requirements of the CVWD request for proposal (RFP) and illustrates that Tetra Tech is best suited to deliver an HMP that will not only meet but exceed the expectations of the District. Based on our review of the RFP and our understanding of hazard mitigation planning issues in California, Tetra Tech understands that the CVWD's objectives for this project are as follows:

- This will be an initial planning effort for the District.
- This will be a single jurisdiction planning effort.
- This project is being funded by a FEMA Hazard Mitigation Assistance planning grant and this planning process must comply with CAOES standards and grant requirements.
- The planning process will be conducted through a Hazard Mitigation Planning Committee that embraces the "whole community" approach
- The primary objective for this project is to develop is to conduct a planning process that meets the FEMA Region IX guidelines for approval.
- Per the performance period of the grant funding this project, the LHMP must be completed by February 20, 2023.

Tetra Tech can do this for you! Our team has the experience working with water/wastewater service providers, capacity, and proven methodology to not only meet, but exceed these objectives. The quality of our plans speaks for themselves. The satisfaction of our customers is evidenced by the fact that they ask us back to do their plan updates after completing their initial plans. Every plan we do is better than the last that we completed. Why? Because we view every planning effort as an opportunity to learn new lessons that we can pass on to the next project, and to develop and refine tools that can streamline future planning processes.

Proposed Technical Approach

Tetra Tech's standard approach is built upon three key principles:

1. To follow a proven process that will increase the capability of all those involved.

2. To develop a plan that has multiple tangible benefits.
3. To create a plan that will be dynamic and have the flexibility to meet changing environments.

The Tetra Tech approach is deeply embedded in the 10-step planning process prescribed by FEMA's Community Rating System (CRS) program. This script is very effective in generating an implementable plan, and guarantees other tangible benefits upon completion, regardless of the applicability of the CRS program to a planning process. It is a script that is proven to be versatile and battle tested. Additionally, we strive to facilitate a planning process that will increase the capability of all those involved to implement the actions identified in the plan and increase the resiliency of their community.

Tetra Tech's work plan is based on a standardized plan update process to ensure we finish on time and within budget; however, we are not offering a cookie-cutter approach. The Los Angeles County planning area stands unique in several circumstances, primarily in its exposure to catastrophic earthquake, flood and wildfire risks. We know this because we have done similar work within the County. Our strategy is to streamline the planning process by using what has already been completed and resetting the planning process to meet FEMA requirements. We have done this before successfully for other clients.

We have reviewed the proposed scope of work contained in the RFP and we are confident that our proposed work plan will exceed your specified objectives. Each phase described in our approach meets or exceeds the requirements of 44 CFR 201.6 and provides our recommended approach to development of the CVWD hazard mitigation plan. Our proposed work plan has seven distinct phases (**Exhibit 4**) that are mirror images to the 7 phases identified in the RFP. Our proposed technical approach is described as follows:

Exhibit 4. Scope of Work Phases



Phase 1: Organize and Review

Under this phase, the Tetra Tech team will identify appropriate resources both internal and external to organize the key components for this planning process. This will include the formation of a Core Planning Team (CPT) and the designation of an oversight Hazard Mitigation Planning Committee (HMPC) to oversee the facilitation of the scope of work. Coordination with other agencies (neighboring jurisdictions; other water/waste-water service providers, resource agencies; businesses; academia; and local, regional, state, or federal agencies) to determine their potential impact and or support of the mitigation plan will also occur under this phase. Also, a review of existing studies, reports, and technical information will be performed to assimilate sources of information into the decision-making process. The tasks to be completed under this phase include:

Task 1A: Organize a Core Planning Team (CPT)- Under this task, a Core Planning Team (CPT) that will consist of designated discipline leads from the Tetra Tech team and appropriate technical staff from the District (i.e. GIS point of Contact, Public Information Officer, District Project Manager) will be organized. The Planning Team will coordinate all elements of this scope of work and will hold biweekly coordination conference calls through the project's completion. The CPT will be responsible for identifying planning milestones and project deliverables that will be presented to the Steering Committee discussed below. The CPT will be responsible for the facilitation of all HMPC meetings and documenting that process.

Task 1B: Organize an Oversight Hazard Mitigation Planning Committee (HMPC)- Under this task, a Hazard Mitigation Planning Committee (HMPC) made up of key stakeholders from within the Los Angeles County Operational Area identified by the CPT will be organized. The makeup of this committee will strive for a "whole community" composition of both governmental and non-governmental stakeholders with a vested interest in the water/wastewater capabilities identified in this plan. This will include but not be limited to; CVWD's Emergency Planning Committee, neighboring communities, citizens, academia, etc. The HMPC will meet periodically (a minimum of 5 times over the performance period) based upon a schedule they will confirm, during the plan update process to review and approve various planning milestones developed by the planning team. The CPT will facilitate each of these meetings according to the ground rules established at the initial HMPC meeting. The CPT will create all agendas and prepare meeting summaries for all meetings. Each meeting will be open to the public and will be advertised as such in compliance with District public notice requirements.

Task 1C: Agency Coordination- Under this task, the CPT on behalf of the District will coordinate with other agencies involved in, or that can impact hazard mitigation actions identified in the plan. These will be entities are not actively participating in the planning process as a member of the HMPC under task 1B of this scope of work. These will include but are not limited to:

- Incorporated Cities within the District's service area
- Los Angeles County Office of Emergency Management
- AWIA coordination agencies
- CA Department of Water Resources
- CAOES, and
- FEMA Region IX.

These agencies will be coordinated with throughout all phases of this proposed scope of services. The CPT will strive to coordinate with any con-current planning effort to promote Regional consistency in hazard mitigation.

Task 1D: Review of Existing Plans, Programs and Studies- Under this task, the CPT will identify existing studies, reports, and technical information that can support or enhance the outcomes of this plan and perform a review to assimilate sources of information into the decision-making process. This will include at a minimum, a comprehensive review of the following documents: general plans in effect within the District's service area, capital improvement plans, continuity of operations plans, emergency operations plan, AWIA Plan (if applicable) and any other relevant documents identified by the Planning Team. Additionally, the planning team and HMPC will perform a comprehensive review of the current California State Hazard Mitigation Plan to assure consistency of

this plan with the goals, objectives and actions of that plan. This is a required step for local hazard mitigation plans under section 201.6 44CFR. The Planning Team will document and record the elements of this phase for incorporation into the plan document.

Phase 2: Identify Hazards/Perform a Risk Assessment

Under this phase, the Tetra Tech team will assist the District in identifying the characteristics and potential consequences of the hazards that may impact or have historically affected the planning area. A thorough assessment of each hazard, as well as the vulnerability of the District's Service Area to each hazard identified, will be accomplished using tools such as GIS/ Hazus-MH, readily available detailed studies, benefit-cost analysis tools, and historical/local knowledge of past occurrences. At a minimum, a map delineating each hazard area, a description of each hazard (including potential depths, velocities, magnitudes, frequencies, etc.), and a discussion of past events will be prepared. Plans and studies identified under Phase 1 (Task 1D) of this scope of work and well at the CA State Hazard mitigation Plan will be the principal tools used to identify the hazards of concern to be addressed by this plan.

For each identified hazard, a vulnerability analysis that will: (1) include an inventory of the number and type of assets at risk; (2) assess the impact on life, safety, and health; (3) evaluate the need and procedures for warning and evacuation; (4) identify District critical facilities and infrastructure and the impact of the hazard on those facilities; and (5) review the development/redevelopment trends projected for the future in each identified hazard area.

Hazard profiles will be created that provide the following information:

- Utilize best available information from local, state, or federal sources
- Geographic Areas of Impact – Maps showing areas of impact
- Previous Occurrences – History of events to date
- Severity – Magnitude or potential intensity and duration, including speed of onset
- Impact – How will, or has, each hazard impacted the District's service area
- Probability of Future Occurrence – What is the likelihood that we will be impacted by the hazard of concern in the future?
- Probable impacts of climate change on the hazard
- Future trends in Development within the District's Service Area

Note regarding Non-Natural Hazards:

The technical approach for this phase will address natural hazards differently than man-made hazards. The natural hazards will be fully assessed in compliance with 44CFR 201.6 (c) (2) based on a definition of risk (probability x impact), while the non-natural hazards (such as: hazardous materials release, power outages, terrorism) will be profiled with an emphasis on consequence. The results of the risk assessment for natural hazards will be used to rank the risk to the City of the impacts from each natural hazard, however, technological and human-caused hazards will not be ranked.

The risk assessment will identify which natural hazards pose the greatest threat to the District by looking at the hazard frequency of occurrence, the severity of the occurrence, and the likelihood that an event will occur. Using an updated asset inventory from the Hazus-MH, Comprehensive Data Management System (CDMS), outputs from our risk assessment process include the following:

- **Vulnerability Analysis** –Based on data input, developed data tabulations and maps that demonstrate vulnerable assets and populations at risk.
- **Functionality or Down Time** – When an incident occurs, how long will critical facilities be impacted?

The tasks to be completed under this phase are described as follows:

Task 2A: Data acquisition, inventory and Format- Under this task, the CPT will utilize data identified under Phase 1 of this scope of work in conjunction with local knowledge, to identify the best available data to support the development of this risk assessment and identify gaps that may limit the options for completing this assessment. The key deliverable for this task will be a detailed inventory of all district assets that includes key data attributes needed to assess the risk and vulnerabilities of District assets. It is important to note that any identified gap in data, could be identified as an action in this plan. The Tetra Tech will document all meta-data following standard meta-data documentation protocol.

Task 2B: Risk and Vulnerability Mapping- Under this task, the CPT will utilize data mined under Task 2A to prepare maps that show the risk and vulnerability of District assets by mapping their location in relation to the extent and location of the hazards of concern addressed by this plan. These maps will be produced and formatted for inclusion in the final plan.

Task 2C: Hazus-MH-MH Analysis- Under this task, the CPT will develop HAZUS-MH runs for the entire planning area using the currently available version of the Hazus-MH model (Hazus-MH version 4.2 or newer). Level 2, user-defined analyses of the dam failure, earthquake, and flood hazards will be conducted. The flood analysis will incorporate the current digital flood insurance rate map (DFIRM) for Los Angeles County as well as any available Light Detection and Ranging (LiDAR) data. For the earthquake analysis, both earthquake soils and liquefaction data will be combined with available earthquake scenario data from USGS and/or CA Geological Survey. The HAZUS-MH model will be populated with updated GIS data provided by the District and mined by the CPT under Task 2A of this scope of work. The outputs from this task will be concentrated looking at the estimated functional downtime for District facilities following hazard events to support the continuity of operation components of this project. *Please note that the Tetra Tech team already has most of the data to support this task due to our extensive resume of recent mitigation planning work in Los Angeles County.*

Task 2D: Prepare Risk Assessment for non-Hazus-MH Hazards- Under this task, the CPT will update the risk assessment for the non-HAZUS-MH hazards (drought, landslide, severe weather and wildfire). This will include a GIS exercise designed to analyze District facility exposure and potential impact utilizing damage functions based on national models. This task will include use of relevant information identified under Tasks 1D and 2A of this scope of work. The outputs from this task will be concentrated looking at the estimated functional downtime for district assets following hazard events to support the continuity of operation components of this project.

Task 2E: Climate Change Analysis and Profile Under this task, the CPT will prepare a qualitative vulnerability assessment of the potential future impacts to the identified hazards of concern pursuant to the requirements of CA-SB379. A climate change profile will be prepared as a stand-alone chapter for the plan so that the District can support full compliance with California Senate Bill (SB-379).

Phase 3: The Public Involvement Strategy

Section 201.6.b of 44 CFR states that “the planning process will include: an opportunity for the public to comment on the plan during the drafting stage and prior to adoption.” It does not stipulate how this public involvement must occur. FEMA guidance documents suggest using multiple media outlets such as the Internet, brochures, fliers, questionnaires, and public meetings. Any or all of these approaches qualify as “public involvement” according to the DMA 2000.

Under this task, the CPT will identify and deploy a public engagement strategy for the District that will utilize existing public outreach capabilities of the district and/or stakeholders engaged with the process. This strategy will evolve out of the HMPC process, identified under Phase 1 of this scope of work. The CPT will perform a public outreach capability assessment which will be presented to the HMPC who will in turn recommend and approve the outreach strategy. The tasks to be completed under this phase are proposed as follows:

Task 3A: Public Meetings Three (3) public meetings will be held at times and places to be determined by the HMPC. The first public meeting will be held to share the findings of the risk assessment with the public. At these meetings, maps and damage assessments will be shared with the public and their opinions in possible actions will be solicited. The additional public meetings will present the final draft plan to the public for their review and comment during a noticed and advertised public comment period. The CPT will facilitate all public meetings conducted under this task.

Task 3B: Hazard Mitigation Survey Under this task, the CPT will develop and deploy a web-based, hazard mitigation survey that can be distributed to District rate payers to gauge their perception of risk and identify their concerns with regards to the District’s continuity of operations following hazard events. The results of this survey will be used to inform the Steering Committee and the CPT on key issues to be addressed by the plan in such as goal setting and action plan development. Survey results will be quantified and summarized for inclusion in the final plan.

Task 3C: Webpage A webpage will be established at the onset of this scope of services. This website will become the principle means for public interaction with this planning process from start to finish. The CPT will produce materials to support the website such as “Frequently asked questions” (FAQ’s), power point presentation from the kickoff meeting, and Steering Committee meeting minutes. Additionally, Tetra tech will prepare a ESRI “Story-Map” that will evolve with new content as the planning process progresses to provide the public interactive access to plan development milestones. Access to the Story-Map will be through this website. This website will remain active following the planning process and will house the final plan. This site will be an integral component of the strategy for continuing public involvement as required for plan maintenance, addressed under phase 5 of this

scope of work. District personnel will be responsible for maintenance of the website and assuring continued public access to pertinent information.

Phase 4: Identify Goals, Objectives, Capabilities and Actions

After the hazard identification and risk assessment documentation have been completed, the CPT will work with the HMPC to identify a vision, goals and objectives for the plan. This will be preceded by a core capability assessment of the District's existing capabilities to implement a mitigation action plan with the key objective of the identification of gaps in capability that may need to be addressed by the mitigation actions identified in the plan. Once goals and objectives have been identified, a range of mitigation alternatives and actions on a hazard-by-hazard basis will be prepared by looking at the strengths, weaknesses, obstacles and opportunities for the District. Preference will be given to those mitigation actions that provide multi-objective risk reduction. The CPT will work with the HMPC to establish priorities to make clear which types of strategies and activities are true mitigation measures and which should be closed out or removed from the list.

Information obtained during the update of the risk assessment and during the public involvement strategy will be used to guide this discussion. The tasks to be completed under this phase are as follows:

Task 4A: Core Capability Assessment Under this task, the CPT will perform a core capability assessment of District capabilities to implement mitigations strategies of the Plan. This assessment will focus on the following core capabilities:

- Legal/Planning Capability
- Technical Capability
- Financial Capability
- Public Education and Outreach Capability
- The District's capability to maintain continuity of operations
- Adaptive capacity to deal with future conditions associated with Climate Change

The key objective for this task is to identify any gap in the District's core capability that should be considered in identifying goals, objectives and actions for the plan.

Task 4B: Vision, Goals and Objectives Under this task, the CPT will facilitate the confirmation of a vision, goals, and objectives for the plan. These will be linear planning components in that each component will be independent, and not a sub-set of there. Each component will be selected based on its ability to meet multiple aspects of the higher-tier component. For example, goals will be selected based on their ability to support the vision. Objectives will be selected that meet multiple goals. And, actions will be prioritized based on their ability to meet multiple objectives.

Task 4C: Strengths, Weaknesses, Obstacles and Opportunities (SWOO) Under this task, the CPT will facilitate the identification of a comprehensive range of mitigation alternatives through a facilitated look at strengths, weaknesses, obstacles and opportunities within the District's Service area. This "SWOO" session will be conducted

with the HMPC and other identified stakeholders. The opportunities identified under this session will be the basis for the mitigation catalog discusses under task 4D.

Task 4D: Catalog of Mitigation Best-Management-Practices Appropriate for the District: Under this task, the CPT will assemble a catalog of District appropriate mitigation best-management-practices, based on the opportunities identified under Task 4C, and the core capabilities identified under Task 4A. This mitigation catalog will represent the comprehensive range of alternatives considered by the District, as required under section which is a statutory requirement under the DMA.

Task 4E: Mitigation Action Plan: Utilizing the results of all tasks above, the CPT will facilitate the identification and prioritization of a mitigation action plan for the District. This action plan will be identified with the following objectives:

- Must be implementable within the Districts core capabilities
- Must be able to quantify how each action will reduce risk
- Must be able to identify how the District will measure success

An action plan will be developed that identifies hazards addressed, lead agency, objectives met, how it will be paid for, and an estimated timeline for completion. Following the identification of the action plan, each action will be prioritized based on a methodology that emphasizes multiple objective actions and the cost-effectiveness of each action.

Phase 5: Develop Plan for Monitoring, Evaluating, and Updating the Plan

This is a singular task phase. Under this phase, the CPT will work with the Steering Committee to confirm a plan maintenance strategy for the updated plan. This strategy will include:

- Recommendations for Steering Committee involvement
- Monitoring, Evaluating, and Updating the Plan
- Monitoring Progress of Mitigation Activities
- Incorporation into Existing Planning Mechanisms
- Continued Public Involvement

Phase 6: Assemble the Plan

Under this phase, the CPT will assemble the plan. The assembly will utilize all updated or enhanced data generated in Phases 1 through 5. Plan will be assembled in full compliance with FEMA's Plan Review Tool for FEMA Region IX which crosswalks the Plan's content to the requirements of section 201.6, 44CFR. The tasks to be completed under this phase are as follows:

Task 6A: Author the updated plan text: Under this task, the draft updated plan will be authored and assembled by the CPT. Coordinating with the HMPC, the CPT will format the plan layout to meet the objectives established for the planning process. The key elements to be delivered under this task include:

- Coordinating with the HMPC, the Planning Team will format the plan layout to meet the objectives established for the update process and for ease in use by District personnel in development of any additional planning efforts which occur after this planning process.
- Brief introduction, including context for and description of the need for the mitigation plan. This will include a description of the planning process followed in the development of the mitigation plan and document all public involvement.
- Description of the District's mission, goals, programs, and policies, and an analysis of its capabilities to carry them out.
- Brief description of the history, physical setting, land-use patterns, and development trends of the area to be covered by the mitigation plan.
- A profile chapter on Climate Change and the possible impacts of climate change on the identified hazards of concern addressed by the plan.
- List and assessment of the hazards and risks to which the District is vulnerable.
- Summary of current federal, state, and local programs and policies that address the identified risks. The plan will also include a prioritized list of recommended strategies, programs, policies, and actions to address identified hazards and risks. The review of mitigation activity alternatives will be conducted for each hazard. Additionally, the plan will identify those persons responsible for implementing recommendations, approximate cost of and potential funding sources for implementing recommendations, cost effectiveness of recommendations, and suggested timeline for implementing recommendations.
- Strategy for evaluating, adopting, and implementing the mitigation plan. The draft Action Plan will identify agencies and departments responsible for implementation, targeted timeframe for implementation, and possible funding mechanisms.
- Other descriptions, documentation, and mitigation plan elements as required for FEMA approval.
- Summary of how the District will monitor progress of the mitigation plan and activities and an established timeline for future updates, including an Annual Evaluation Report.

Task 6B: Technical Edit/Format: Once the initial draft including all annexes has been developed, the draft plan will be submitted for a technical/format edit to prepare the final draft plan that will be presented to the District service area for public review and comment and provided to FEMA for pre-adoption review and approval.

Phase 7: Plan Review and Adoption

Under this phase, the CPT will facilitate the review and adoption of the plan. This will include presentation of draft versions of the plan to the Steering Committee, preparation of a "Service Area Public Review Draft", completion of the plan review crosswalk, support of the adoption process and submittal of final plan package to FEMA for review and approval. The tasks to be completed under this phase are as follows:

Task 7A: Complete Local Plan Review Crosswalk: Once the final draft plan has been prepared, and all public, stakeholder and HMPC comments have been incorporated into the final draft, the CPT will complete a FEMA plan

review crosswalk to illustrate the plan's compliance with 44 CFR Section 201.6. A draft plan will then be forwarded along with the completed crosswalk to FEMA with a request for "pre-adoption" review and approval.

Task 7B: Plan Adoption Support Once "Approval pending Adoption" has been granted by FEMA region IX, the adoption phase of the planning process will begin. The District will invoke its standard political process for adoption of documents and provide adoption documentation to FEMA. Under this task, the CPT will support the District as needed through the adoption process. This support could include but not be limited to:

- Preparation of an executive summary of the plan for presentation to the District Board
- Preparation of presentation materials
- Preparation of a Board resolution adopting the plan
- A physical presentation to the Board
- Processing of adoption documentation to CAOES and FEMA Region IX

Assumptions and Limitations

This proposal is further based on the following assumptions and limitations:

- Tetra Tech assumes performance of the work under mutually agreeable contractual terms and conditions.
- At the onset of the project, Tetra Tech shall provide the CVWD with a specific list of data needs required for development of a Local Hazard Mitigation Plan. CVWD shall provide as much of these data as possible to Tetra Tech at the start of this project. These data include relevant local government planning documents and GIS shapefiles/geodatabases as well as participating agencies general plans, capital improvement plans, emergency operations plans, Wells and Pipeline, Seismic Assessment Report and any other relevant documents identified by the CPT. Tetra Tech will provide the CVWD with all GIS datasets (shapefile or geo-database format) generated for this project.
- During this planning effort, except for use of HAZUS-MH, Tetra Tech will be using only GIS and other data provided by the CVWD, and publicly available data (County GIS, State GIS, etc.). Tetra Tech shall not be responsible for providing metadata for data provided by others, other than providing any metadata that may have been included with those datasets and amending same if these data are modified by Tetra Tech.
- If there is a need for development by Tetra Tech of any GIS and other spatial datasets, either from paper map sources or otherwise, these shall be created at accuracy levels suitable for the levels of analysis and presentation required to meet the requirements of DMA 2000 planning.
- Tetra Tech assumes that digital floodplain mapping is readily available in formats suitable for direct incorporation and analysis using HAZUS-MH, and that this mapping will be provided to Tetra Tech at no charge.
- Notwithstanding the above assumptions and limitations, Tetra Tech assumes that it will not be responsible for development of GIS datasets not currently publicly available. Tetra Tech will be responsible only for use, manipulation, editing, and/or enhancement of existing GIS datasets.

- Throughout the data collection and risk assessment process, the District shall be expected to obtain and provide data, as available, in a timely fashion.
- It is understood that comments regarding the Draft Plan, Final Draft Plan, and Final Plan may be offered by committees or others at any time throughout the process, and Tetra Tech will make every reasonable attempt to address these comments in the plan documents. However, in the interest of schedule and budget, it shall remain the discretion of Tetra Tech to consider and address comments offered after mutually agreed-upon review/response deadlines.
- It is assumed that the CVWD shall provide facilities for all meetings at no cost to Tetra Tech.
- Tetra Tech assumes that the CVWD will fully support announcement of meetings via available media channels pursuant to DMA requirements.
- Tetra Tech assumes that CVWD will be responsible for any requests for resources to achieve Americans with Disabilities Act compliance for all meetings.
- **Story Map:** The ESRI AEC Project Delivery annual subscription cost is included in our proposal. The advantage of this service is that it provides a collaborative environment during the development, as well as the deployment of the deliverable. All data and applications are hosted by ESRI within their cloud-based environment. The enclosed scope and budget do not include CVWD hosting the application or eliminating the second authentication. ESRI is responsible for all data security, privacy, and compliance for their software. CVWD will have a choice of Story Map templates that are available through the AEC Project Delivery; additional requested functionality and visualization will be at an additional cost.

Tetra Tech will be using the ESRI AEC Project Delivery subscription which includes 2 creator user roles and 1,000 credits between the two users. One user will be the Tetra Tech Creator and the other login will be for CVWD to log in and see the development of the Story Map. Additional users and credits can be added for an additional cost.

The Story Map deliverable will be available for one year beginning with the contract start date. If CVWD would like to take over the subscription and continue managing the ArcGIS Online environment beyond Tetra Tech's contract, this transition can be made by working directly with ESRI. Tetra Tech will develop the Story Map to be a link on the District's HMP website using the AEC Project Delivery. The Story Map will only be available during the planning process and subject to additional fees to remain online after Tetra Tech's contract. However, if the District would like Tetra Tech to develop the Story Map using their ESRI account, this can be arranged to ensure the Story Map continues to be managed and owned by the County. The proposed scope and budget include one round of review and revisions from the District and provided to Tetra Tech from the District Project Manager in one document. Credits, widgets, layout templates and functionality of any mapping (viewer or interactive) will be managed and limited by Tetra Tech as per their AEC Project Delivery subscription.

Should the District prefer to host the Story Map an alias account will need to be provided to Tetra Tech to develop the Story Map and host/store data and manage the application.

Project Schedule

Based on our recent experience, Tetra Tech has found that a DMA-compliant multi-jurisdictional hazard mitigation plan can take in excess of 12 months to complete, depending on the number of participating Planning Partners. This includes the time required for CAOES and FEMA Region IX to review the plan. We have seen some cases where the time during which the plan was being reviewed exceeded the time to develop the plan. Our scheduling approach outlined below is to set aggressive deadlines for completing project elements within the time frame specified by the RFP. To plan ahead for schedule delays, our deadlines assume time considerations for unforeseen and uncontrollable circumstances. Steering Committee meeting scheduling and plan approval times are a major cause of unforeseen delays.

The RFP stated that the District needs for this project to be completed within the timeline specified under the grant that is funding this project (February 20, 2023). FEMA local planning guidance suggest that both the State and FEMA should strive to turn around plan reviews in 45 days each respectively. This would equal up to 90 days for plan review and approval. Additionally, the CAOES has established the protocol that all plans shall be submitted prior to adoption for pre-adoption review and approval. So, with all of these factors in mind, the target month for pre-adoption plan submittal to CAOES should be August 1, 2021, well in advance of the closure of the grant performance period. The following timeline does show tasks to be completed after September of 2020, because these are tasks to be completed after receiving "approval pending adoption" (APA) from FEMA. For this timeline, "FEMA Approval" has been interpreted to mean APA.

Our project schedule is outlined below and includes approximate target dates and delivery milestones for the CVWD Hazard Mitigation Plan. If this project will commence by September 3, 2020, Tetra Tech recommends the following schedule (**Exhibit 5**).

Exhibit 5. Proposed Schedule

Notes:

* Schedule assumes that website will continue to house the final plan after process completion

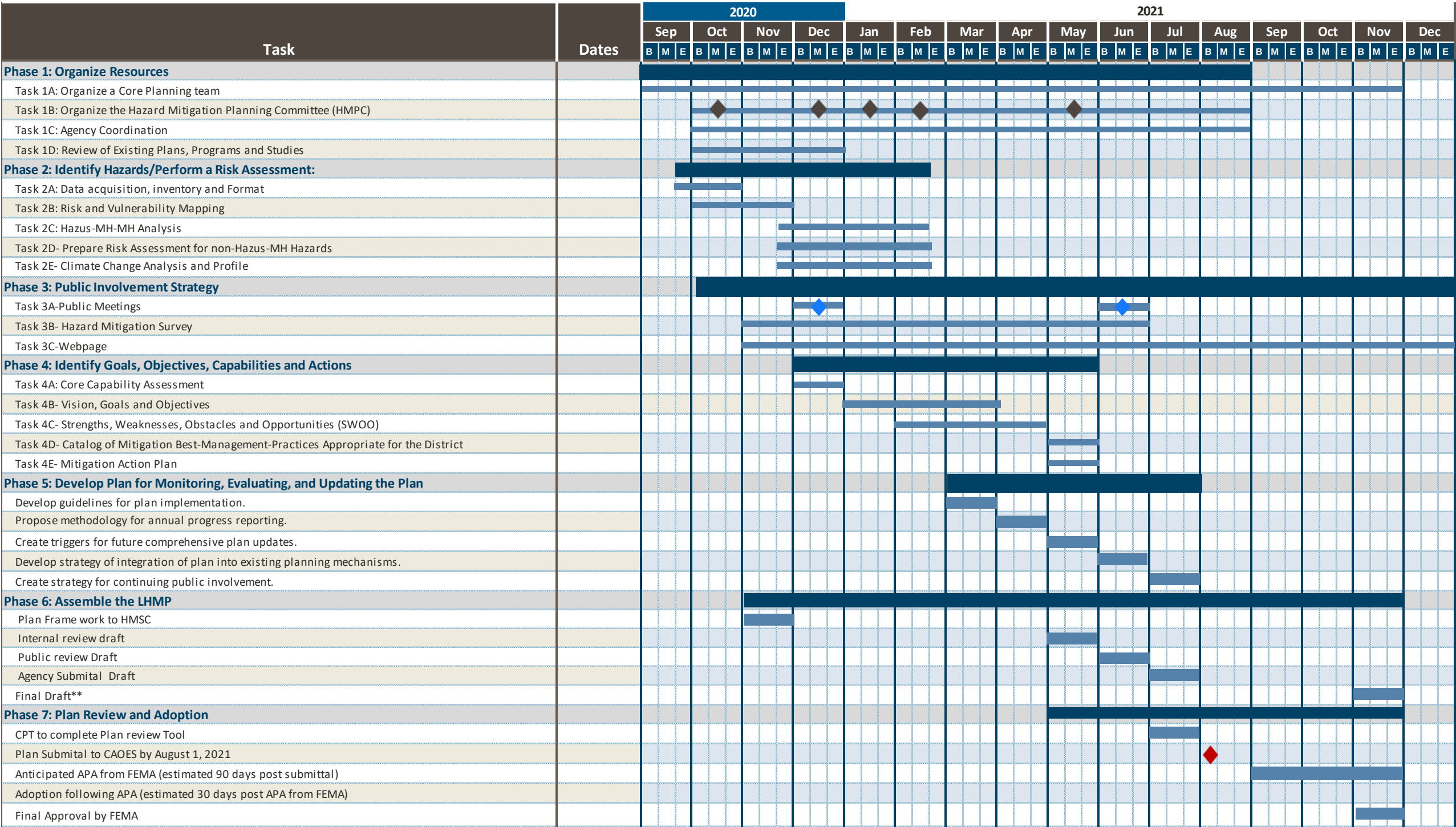
** Contingent on FEMA approval time frame

Steering Committee Meeting

Public Meeting

Plan Submittal to CAOES

HAZARD MITIGATION PLAN TIMELINE



Project Personnel

We have assembled a team for this project that has over 100 years of combined experience in the industry of emergency management and mitigation planning, including direct project work within Los Angeles County. Our development of hazard mitigation plans at the state and local levels is regarded as a model for plan development with consistent first-pass approval through both state and FEMA compliance review levels, as evidenced in the narrative, below. We have also been able to leverage this planning experience with our clients to help them succeed in the grant arena, thereby assuring the successful implementation of the plans we have helped to create. Tetra Tech is recognized as a national source for subject matter expertise in mitigation plan development, grant application development, and BCAs. The opportunity to update the County's LHMP is important to us.

Tetra Tech's primary strength is our people and their ability to effectively integrate our technical experience, planning expertise, and commitment to ensuring projects progress in an efficient and timely fashion - precisely the skill sets that CVWD requires for this contract. Tetra Tech offers a multi-disciplinary group of practitioners and experts in their field, all of whom have worked together on similar planning projects. Additionally, the cross-functionality of Tetra Tech's proposed staff provides CVWD with an opportunity to benefit from a variety of subject matter expertise including, but not limited to, climate change, community resiliency, human services, cyber security, and emergency operations planning. This depth of expertise can only serve to further enhance the success of the LHMP by proactively integrating the LHMP with other planning mechanisms from project initiation.

In House Services

All team members are employees of Tetra Tech; we will not use any subcontractors on this project. Our experience working with the State of California, and directly with FEMA Region IX at a programmatic level, ensures familiarity with the technical and regulatory requirements driving this project, as evidenced by our exceptional record for "first-pass" FEMA reviews on LHMPs.

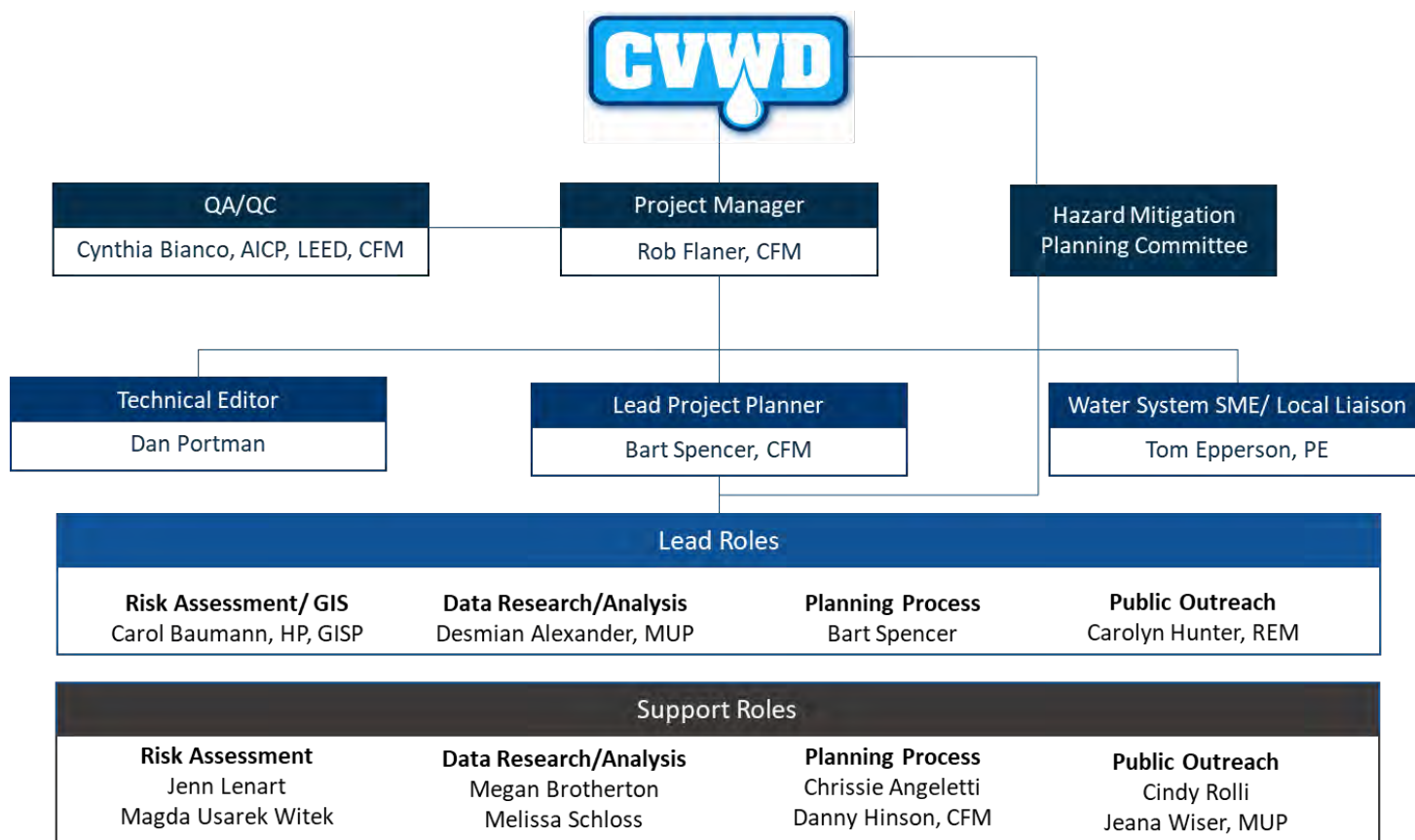
Unified Management Approach

Our proposed Project Manager (PM), Mr. Rob Flaner, CFM, will coordinate and oversee the successful completion of all portions of this project. Mr. Flaner will provide a consistent point of contact for CVWD and has the overall authority to direct the team on all technical and financial aspects of the contract. Mr. Bart Spencer, CEM, will be the lead project planner. As the lead project planner, Mr. Spencer will essentially serve as the face of this project through direct response and interaction with CVWD and its stakeholders. Tetra Tech understands the importance of having local mitigation and emergency management specialists easily accessible to the PM and to the District for maintaining the highest level of quality and cross-functionality in each phase. Our team will also be augmented by the expertise of Mr. Tom Epperson, P.E, that will provide valuable Drinking Water System subject matter expertise to our team.

As illustrated in the organizational chart below, Mr. Flaner has selected a team of experienced planners and practitioners to complete this project. This includes discipline leads and support staff as well as water system subject matter expertise. All staff represented are available to support this project as scoped. The project team

will also be fully supported by Tetra Tech's corporate financial management professionals, procurement specialists, and Quality Assurance/Quality Control (QA/QC) team, while having the capability and authority to engage additional company resources. Our resources include more than 200 staff members with experience in emergency management and hazard mitigation, and additional Tetra Tech staff with technical expertise in a multitude of disciplines.

Exhibit 6. Project Organization Chart



The following presents a description of the qualifications for the Project Manager, Technical Advisors, and Staff Leads. Resumes of key personnel are provided in **Appendix A** to this proposal. All of these personnel are available to support this project and have the capacity to support multiple projects for the County id requested.

Project Manager

A California native, **Rob Flaner, CFM**, has more than 30 years of experience in hazard mitigation in direct support of FEMA. For decades, Mr. Flaner was responsible for implementing FEMA's CRS program in nine western states covering three FEMA Regional offices, including Region IX. The CRS program reviews and analyzes community plans and hazard mitigation activities to provide discounts on NFIP rates. As a result, Mr. Flaner is intimately familiar with all aspects of mitigating natural hazards, especially federal mandates under DMA. In fact, Mr. Flaner has been trained and certified by FEMA as a Disaster Assistance Employee (DAE) to review hazard mitigations

plans for DMA compliance. As a direct result, Mr. Flaner recently completed a lead role in developing the largest multi-jurisdictional HMP in the country for Cook County, Illinois (135 local governments). Mr. Flaner's extensive resume of hazard mitigation projects include managing the following California hazard mitigation planning efforts: City of Roseville, Contra Costa County, Humboldt County, City of Los Angeles, Los Angeles County, Del Norte County, Siskiyou County, and Tehama County. The LHMP developed by Mr. Flaner for the City of Roseville has become the benchmark standard for all LHMPs in California and nationally. Mr. Flaner has played an integral role in evolving the Tetra Tech methodology for incorporating special purpose districts into multijurisdictional hazard mitigation plans that include a long list of water/wastewater utility service providers shown in exhibit 3 of this proposal. Mr. Flaner is currently leading the Planning effort for East Orange County Water District.

Lead Project Planner

Bart Spencer, CEM will serve as the lead project planner for this project responsible for the facilitation of all phases of the proposed scope of work. Mr. Spencer brings a high level of subject matter expertise. As the former Emergency Services Coordinator for Central County Fire Department in San Mateo County, he has experience and expertise from a fire department perspective that give him a unique insight to hazard mitigation planning, especially in the context of wildfire hazards. Mr. Spencer is very familiar with Tetra Tech's mitigation planning process, as he was the project manager and Steering Committee chair for Tetra Tech's planning effort for San Mateo County in 2016. He also held a seat on the Steering Committee for the Santa Clara County planning effort, also led by Tetra Tech. With over 18 years' experience in emergency management, Mr. Spencer offers the cross-functionality that is the cornerstone of the Tetra Tech mitigation program practice. This will be a direct benefit to CVWD and its stakeholders. Mr. Spencer is currently serving this same role for the multi-jurisdictional planning effort for Sonoma County, CA as well as the planning effort for East Orange County Water District and leads Tetra Tech's preparedness practice for the state of California and Pacific Northwest.

Risk Assessment – GIS/HAZUS Lead

Carol Baumann, GISP, is a Senior GIS Analyst with 21 years of experience working for public and private sector clients. She has been involved in multiple aspects of GIS projects, including technical project management, data acquisition and integration, data conversion, database design, metadata documentation, application development, software customization, and map design and production. Ms. Baumann has served as the risk assessment lead in multiple LHMPs, where she facilitated detailed analyses of the impact of multiple hazards (including flood, earthquake, dam failure, wildland fire, and tsunami) in the following jurisdictions: City of Los Angeles (California), Los Angeles County (California), King County (Washington), Fremont County (Colorado), El Paso County (Colorado), Maui County (Hawaii), Kootenai County (Washington), Spokane County (Washington), City of Covington (Washington), Humboldt County (California), Park County (Idaho), and Cook County (Illinois). As part of her risk assessment lead responsibilities, Ms. Baumann uses tools such as HAZUS-MH and ArcGIS to analyze current hazards data, general building stock, and critical facilities, to calculate structure exposure and loss estimates. Where feasible, she updates the HAZUS-MH default general building stock data with current tax assessor information and critical facilities identified by jurisdictions. Ms. Baumann is currently the risk assessment lead for the East Orange County Water District planning effort.

Data Research/Analysis Lead

Desmian Alexander, MUP, MPP; will lead the data research, acquisition and analysis phases of this project with the responsibility of creating the hazard profiles that form the backbone of the risk assessment portion of any local hazard mitigation plan. Ms. Alexander recently completed a Master's in Urban Planning as well as a Master's in Public Policy from the University of Southern California (USC). Ms. Alexander created an impressive resume of course support work during her academic tenure that translates well to the emergency management and community resilience practice. Her skills as a data researcher and analyst will prove to be an asset to the team in the roles she is proposed. Ms. Alexander started her career with Tetra Tech in May of 2020, and in her role as the lead for data research, acquisition and analysis will be fully committed to this assignment.

Public Outreach Lead

Carolyn Hunter, REM is a community involvement manager with media relations, risk communication, event planning expertise, and project management experience and will serve as the public outreach lead for this project. Ms. Hunter has provided community involvement support to a variety of internal and external project teams in the development of community involvement plans, fact sheets, newsletters, press releases and public notices. In addition, Ms. Hunter has managed on-site community involvement for high profile emergency response projects, with tasks including assisting with formation of a community advisory group, website updates, communication and media debriefs, and managing outreach for on-scene staff. Ms. Hunter has organized and executed an array of diverse community outreach events, including an award-winning Kids Day at Hunters Point Shipyard and is also knowledgeable on writing and designing effective visual aids for presentations and educational tools. Ms. Hunter has used her versatile project coordination and management skills to assist a range of project teams, which include multiple contractors and clients and has more than 14 years' experience as a community involvement manager.

Water System SMA/Local Liaison

Tom Epperson, P.E. will provide water system subject matter expertise to the team and act as a local liaison to CVWD as needed during this project. Mr. Epperson has more than 40 years of professional experience in water, wastewater, and reclaimed water engineering. Mr. Epperson has been responsible for the preparation of water, wastewater, and reclaimed water master plans; project design reports for various water, wastewater, and reclaimed water facilities; and the planning and design of water, wastewater, and reclaimed water pipelines, along with pump stations and reservoirs. He has been responsible for completing the design, bidding, and construction management of over 200 miles of water/reclaimed water/sewer mains, 36 water/reclaimed water pump stations, 15 well-head facilities, 12 sewer lift stations and 25 water/reclaimed water storage reservoirs throughout Southern California.

QA/QC Lead

Cynthia Addonizio-Bianco, AICP, CFM will serve as the quality assurance manager. She brings more than 25 years' expertise in hazard mitigation and community resilience. Her professional and technical experience includes post-disaster planning, hazard mitigation planning, resiliency planning, and public participation/stakeholder involvement. Over the past decade, Cynthia has worked with over 150 communities to help reduce the effects of natural hazards, including flooding, and to support hazard mitigation as a standard for

community operations. Her recent experience in the field of community reconstruction has underscored her commitment to supporting the resilience of communities using traditional mitigation as well as community-based economic resiliency planning. Ms. Bianco's role on this project will be to apply the detailed Tetra Tech quality assurance protocol to all deliverables for this project to assure the highest level of quality for the CVWD. Client references are not provided for this role in that the procedures are internal to Tetra Tech. All projects referenced above can be considered references to our quality assurance program.

Cost Proposal

Our stated costs are organized by work plan phase and are fully inclusive of all labor and direct reimbursable charges. Our hourly rates are widely accepted by our clients and the FEMA hazard mitigation grant program. Estimates are based on our recent and relevant experience working with similar agencies in the west and beyond. In fact, we have yet to underbid a project as to not complete the contracted scope of work with our assigned budget.

Our estimates are different than our competitors' in that we include time for plan implementation guidance and mentorship. Furthermore, our planning experts come with a suite of tools that have been honed over the past 15 years of developing plans for areas throughout the United States. These resources will be available to CVWD during the plan update process. We support the success of your plan in the federal and state grant arena and we judge our success on the planning partnership's success. Most importantly, we are willing to work with the CVWD and your available funds. We are always willing to adjust our proposed budget by adjusting our scope of work. We do this during the contracting process and are happy to work within the CVWD's funding parameters.

In the tables below, we have broken down the costs by task, hours per task, hours per personnel classification, and a total cost for the entire project, as depicted below:

Personnel Classification	Total Hours
Project Manager	110
Lead Project Planner	160
Public Outreach Lead	64
GIS/HAZUS Lead	116
Data Research/Analysis Lead	220
Planners	48
GIS Analysts	160
Technical Editor/Illustrator	100
Financial Manager	8
Total	986

Phase/Task	Hours/Task	Cost
Phase1: Organize and Review	144	\$18,670
Phase 2: Identify Hazards/Update the Risk Assessment	228	\$26,260
Phase 3: Develop Public Information Strategy	148	\$17,860
Phase 4: Confirm Goals, Objectives, Actions and Capabilities	88	\$10,360
Phase 5: Develop a Plan for Monitoring, Evaluating and Updating the Plan	52	\$6,400

Phase/Task	Hours/Task	Cost
Phase 6: Assemble the Updated Plan	262	\$29,918
Phase 7: Plan Review and Adoption	40	\$6,320
Project Management and Billing/Invoicing	24	\$3,920
Total	986	\$119,708
Reimbursable Expenses		\$3,001
Project Total		\$122,709

A detailed breakdown of the costs reflected above can be found in **Appendix B** to this proposal.

References

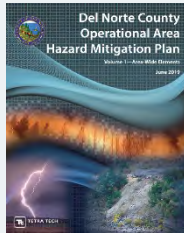
The Tetra Tech team is proud of our record of past performance which will provide a strong basis for our successful development of the plan. We bring to this contract the local knowledge, corporate reliability, cross-functionality, and subject-matter expertise to successfully meet the demands of the Crescenta Valley Water District and its stakeholders. Provided below is information on past performance and points of contact for three projects similar in size and scope to this project. Further, these are engagements on which the members of the proposed team have worked. We have selected contracts relevant to the scope of this project that demonstrate our clients' high level of satisfaction with our services. Please note that each of these references are for multijurisdictional plans that included water/wastewater district planning partners. For each overall plan reference, we have listed a water/wastewater point of contact as well. We encourage the county to contact any of these individuals, who can attest to the quality of our performance. We are confident they will provide positive input, allowing a fair evaluation of the quality, timeliness, cost-effectiveness, and overall performance of Tetra Tech for similar planning services.

East Orange County Water District Hazard Mitigation Plan	
Organization Name/Address:	East Orange County Water District 185 N. McPherson Rd. Orange, CA 92869
Technical Representative:	Lisa Ohlund, General Manager P: 714-538-5815 Email: lohlund@eocwd.com
	Tetra Tech is just completing the initial hazard mitigation planning effort for the East Orange County Water District. This planning effort is unique in that it is being facilitated in concert with the Districts AWIA planning effort, which is utilizing data generated by the hazard mitigation planning effort with an objective of fully integrating the 2 plans. The focal point for this planning effort is a comprehensive risk assessment of 6 natural hazards of concern (dam failure, drought, earthquake, flood, landslide and severe weather) looking at the impacts of these hazards on district assets and critical functions. The planning effort is being facilitated through a 6-member stakeholder steering committee that have provided the district valuable input on a vision and goals for the plan, a public engagement strategy and actions to be included in the plan. This planning effort is on time and on budget with a target for completion in August of 2020.
Project Web Link:	https://www.eocwd.com/hazardmitigationplan
Period of Performance:	September 2019 to current
Project Status:	Target for plan submittal to CAOES is August 2020

Contra Costa County Hazard Mitigation Plan-Update	
Organization Name/Address:	Contra Costa County, CA Office of Emergency Services 50 Glacier Dr. Martinez, CA 94553-4825
Technical Representative:	Marcelle Indelicato, Senior Emergency Planner, Office of Emergency Services

	925-313-9609 minde@so.cccounty.us
Water/Wastewater Reference	Central Contra Costa Sanitary District Ms. Shari Deutsch, Risk Manager 925-229-7320 sdeutsch@centralsan.org
 Tetra Tech has a long-standing relationship with Contra Costa County, CA in support of its hazard mitigation programs. Tetra Tech facilitated a comprehensive update of the County's initial plan in 2011 that included the formation of planning partnership consisting of 38 local governments within the operational area. That relationship was extended in 2016 when the County once again selected Tetra Tech to facilitate the 5-year update to the 2011 plan. Building off of the success of the 2011 planning effort, Tetra Tech was once again selected by the County to perform the 5-year update of the 2011 plan pursuant to FEMA planning requirements. This plan update provided DMA compliance to 35 Local Governments within the Contra Costa Operational Area and was completed in 14 months that included over 90 days for state and FEMA plan review. This plan assessed 9 hazards of concern (Tsunami was added based on new available data) and identified and prioritized over 500 action. This planning effort included 6 water, wastewater and flood control, special purpose district planning partners.	
Project Web Link:	http://www.cocosherriff.org/bureaus/support_services/emergency.htm
Period of Performance:	November 2016 to January 2018
Project Status:	Plan approved by FEMA region IX January 31, 2018

Del Norte County Hazard Mitigation Plan Update

Organization Name/Address:	Del Norte County Office of Emergency Services 981 H Street, Suite 210, Crescent City, CA 95531
Technical Representative:	Mr. Jay Sarina, Director of Emergency Services and County Administrative Officer 707.465.0430 ext. 1135 jsarina@co.del-norte.ca.us
Water/Waste Water Reference	Big Rock Community Services District Craig Bradford, District Manager 707.464.7769 craigsbradford@gmail.com
Tetra Tech Facilitated the development of the initial planning effort for Del Norte County and its planning partners in 2011, and the subsequent update to this plan in 2017. This was a multi-jurisdictional planning effort that included the County, Crescent City, the Elk Valley Rancheria and eight (8) special purpose district planning partners. Five of the districts were Community Services Districts with water/wastewater service responsibility. That plan assessed and ranked 9 natural hazards of concern and identified and prioritized 139 actions. This plan update effort included two (2) Community Services District with responsibility for water supply to the planning area. Mr. Craig Bradford from the Big Rock Community Services District was the Chair of the Steering Committee that oversaw this plan update process. 	
Project Web Link:	http://www.co.del-norte.ca.us/HMP/documents
Period of Performance:	June 2017 to December 2018
Project Status:	Plan approval December 21, 2018

FIXED PRICE COST PROPOSAL

Crescenta Valley Water District
Hazard Mitigation Plan
July 10, 2020

			Phase 1: Organice Resources		Phase 2: Update the Risk Assessment		Phase 3: Public Engagement		Phase 4: Confirm Mission, Goals, Objectives, Capabilities and Actions		Phase 5: Plan Maintenance Strategy		Phase 6: Assemble the Updated Plan		Phase 7: Plan review and Adoption		Phase 8: Project Management			
Staff Name	Labor Classification	Labor Rate	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost			Project Total	
Rob Flaner	Project Manager	\$170.00	30	\$5,100.00	8	\$1,360.00	8	\$1,360.00	8	\$1,360.00	8	\$1,360.00	16	\$2,720.00	16	\$2,720.00	16	\$2,720.00	110	\$18,700.00
Cynthia Bianco	QA/QC	\$185.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	4	\$740.00		\$0.00	4	\$740.00
Chrissie Angeletti	Principal Planner	\$175.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	4	\$700.00		\$0.00	4	\$700.00
Bart Spencer	Senior Planner	\$135.00	40	\$5,400.00		\$0.00	20	\$2,700.00	40	\$5,400.00	24	\$3,240.00	20	\$2,700.00	16	\$2,160.00		\$0.00	160	\$21,600.00
Cindy Rolli	Planner III	\$110.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	16	\$1,760.00		\$0.00		\$0.00	16	\$1,760.00
Megan Brotherton	Planner I	\$66.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	8	\$528.00		\$0.00		\$0.00	8	\$528.00
Danny Hinson	Planner III	\$120.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	8	\$960.00		\$0.00		\$0.00	8	\$960.00
Desmian Alexander	Planner II	\$90.00	40	\$3,600.00		\$0.00	40	\$3,600.00	40	\$3,600.00	20	\$1,800.00	80	\$7,200.00		\$0.00		\$0.00	220	\$19,800.00
Melissa Schloss	Planner I	\$80.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	8	\$640.00		\$0.00		\$0.00	8	\$640.00
Carolyn Hunter	Public Outreach Lead	\$145.00	16	\$2,320.00		\$0.00	40	\$5,800.00		\$0.00		\$0.00	8	\$1,160.00		\$0.00		\$0.00	64	\$9,280.00
Carol Baumann	Risk Assessment lead	\$125.00	8	\$1,000.00	100	\$12,500.00		\$0.00		\$0.00		\$0.00	8	\$1,000.00		\$0.00		\$0.00	116	\$14,500.00
Magda UsarekWitek	Gis Analyst II	\$110.00		\$0.00	40	\$4,400.00	40	\$4,400.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	80	\$8,800.00
Jenn Lenart	GIS Analyst I	\$100.00		\$0.00	40	\$4,000.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	40	\$4,000.00
Liz Mamer-Barrett	GIS Analyst I	\$100.00		\$0.00	40	\$4,000.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	40	\$4,000.00
Dan Portman	Technical/Format Editor	\$125.00	10	\$1,250.00		\$0.00		\$0.00		\$0.00		\$0.00	90	\$11,250.00		\$0.00		\$0.00	100	\$12,500.00
Maricar Cabrera	Financial Manager	\$150.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	8	\$1,200.00	8	\$1,200.00
Total			144	\$18,670.00	228	\$26,260.00	148	\$17,860.00	88	\$10,360.00	52	\$6,400.00	262	\$29,918.00	40	\$6,320.0	24	\$3,920.00	986	\$119,708.00
Travel		Rate	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost
Airfare		\$200.00	4	\$800.00		\$0.00		\$0.00	2	\$400.00		\$0.00		\$0.00		\$0.00		\$0.00	6	\$1,200.00
Per Diem		\$66.00	4	\$264.00		\$0.00		\$0.00	2	\$132.00		\$0.00		\$0.00		\$0.00		\$0.00	6	\$396.00
Gas		\$40.00	4	\$160.00		\$0.00		\$0.00	2	\$80.00		\$0.00		\$0.00		\$0.00		\$0.00	6	\$240.00
Parking		\$20.00	4	\$80.00		\$0.00		\$0.00	2	\$40.00		\$0.00		\$0.00		\$0.00		\$0.00	6	\$120.00
Lodging		\$140.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	0	\$0.00
Car Rental		\$66.00	4	\$264.00		\$0.00		\$0.00	2	\$132.00		\$0.00		\$0.00		\$0.00		\$0.00	6	\$396.00
Travel G&A (16.01%)				\$251.04		\$0.00		\$0.00		\$125.52		\$0.00		\$0.00		\$0.00		\$0.00		\$376.56
Fee (10%)				\$181.90		\$0.00		\$0.00		\$90.95		\$0.00		\$0.00		\$0.00		\$0.00		\$272.86
Travel Sub-Total				\$2,000.94		\$0.00		\$0.00		\$1,000.47		\$0.00		\$0.00		\$0.00		\$0.00		\$3,001.41
Project Total by Phase			\$20,670.94		\$26,260.00		\$17,860.00		\$11,360.47		\$6,400.00		\$29,918.00		\$6,320.00		\$3,920.00		Project Total	\$122,709

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 2
August 5, 2020

To: Engineering Committee
From: David S. Gould, P.E. – Director of Engineering
Subject: Professional Consulting Services for procurement and installation of AMI Communications Network, Project E-1020

INFORMATION ITEM:

Request for Proposal for Professional Consulting Services for procurement and installation of AMI Communications Network, Project E-1020.

BACKGROUND:

UtiliWorks Consulting, Inc. (UtiliWorks) previously presented an AMI business case study in April 2019 to the Board of Directors for the installation and implementation of a full-scale AMI program. The Board at that time requested that the overall project be phased in over the next 5-years and that staff proceed with preparing a Request for Quote (RFQ) for the procurement and installation of AMI communication network.

Staff worked with UtiliWorks on the development of an RFQ to solicit vendors that can provide an AMI communications network that meets the needs of the District and this was completed in August 2019. The AMI project was put on hold until there was capital funding available to proceed with the next phase of the project.

DISCUSSION:

When staff and UtiliWorks were preparing the RFQ in August 2019, the intent at that time was for CVWD to perform most of the project administration, field testing and IT coordination with the customer service billing software (Springbrook).

With the intent to pursue bond financing and staff's and board's concurrence to streamline project delivery by outsourcing programs and project management, and to meet project schedule expectations set by bond requirements; CVWD staff requested a proposal from UtiliWorks to perform these tasks to meet the goal of installation of the AMI communication network within the next 12 months.

The proposal from UtiliWorks (see attached) layouts the following tasks for the AMI Communication Network:

- | | |
|--|--|
| 1) Finalizing the RFQ | 2) Update the 2019 cost estimate |
| 3) Updating the project schedule | 4) Project coordination & proof of concept |
| 5) Review RFQ & negotiations with the vendor | 6) Reviewing project submittals |
| 7) Field inspection and testing | 8) Project close out |

UtiliWorks' proposal for the project was \$104,600 and states that whenever possible, UtiliWorks will assign personnel that are local to Southern California. Staff reviewed the proposal and it was higher than original anticipated during the budget process. Staff is investigating a way to reduce the proposal by having UtiliWorks train CVWD's staff on field inspection and testing, which could reduce the amount of time spent by UtiliWorks's staff in the field.

Project Costs:

Staff reviewed the budget amount allocated for AMI for FY 20/21, which was \$50,000 for new meters and \$150,000 for the AMI communications network, for a total of 200,000. As shown in the table below, the overall project costs are more than budgeted for this project by about \$170,000 and includes costs from Highroad IT.

Summary FY 20/21				
Task	Quality	Unit Cost	Cost	Comments
AMI Network Communication System	1	\$140,700	\$140,700	Estimate - RFQ, award, integration, installation, testing including Project Management from Vendor
Project Management - UtiliWorks	1	\$104,600	\$104,600	Project Management for AMI Communication Network & Proof of Concept
Proof of Concept - 100 meters	100	\$175	\$17,500	Alpha & Beta Testing - 100 meters for testing - Lids & connectors, equipment only
Meters - 3/4"	400	\$160	\$64,000	Meter Replacement - Zones 1, 2 & 3; Ordered 300 meters; add 100 more meters, end Jan 16, 2021
Meters - 1"	100	\$225	\$22,500	Meter Replacement - Zones 1, 2 & 3; Ordered 50 meters; add 50 more meters, end Jan 16, 2021
Project Management - Highroad IT	240	\$85	\$20,400	Assistance with AMI Network
Total			\$369,700	
			Budget	\$200,000

To be able to meet our goal of installation of the AMI Communication Network in FY 20/21, staff has put together three (3) options for discussion with the Engineering Committee.

Option 1:

Staff to monitor and report the overall FY 20/21 CIP budget of \$5M and adjust each project costs separately during the planning, design, and construction phases to ensure that the overall CIP budget does not exceed \$5M.

Option 2:

Staff request a budget adjustment for this project of \$170,000 and decrease the amount available for next year's (FY 21/22) CIP budget.

Option 3:

Revised UtiliWorks scope of work such that they provide guidance and review of submittals to CVWD and its staff during the implementation of the AMI Communication Network. The bulk of the work such as project coordination, proof of concept and field testing will be done by CVWD.

SUMMARY:

It is staff's recommendation to move forward with the AMI Communication Network project by utilizing UtiliWorks and to move forward with Option 1 to address the project costs. Staff is recommending that the award of contract for UtiliWorks be placed on the agenda at the next Board meeting on August 11, 2020.

Prepared & Submitted by:

A handwritten signature in blue ink, appearing to read 'D. Gould', is written over a horizontal line.

David S. Gould, P.E.
District Engineer

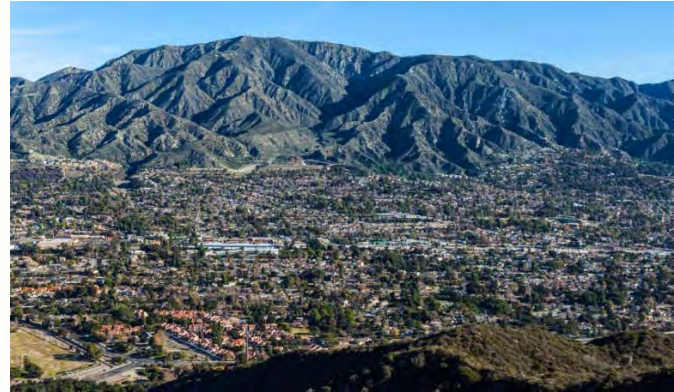
Attachments:

1. UtiliWorks Consulting Proposal for Procurement and Deployment Support dated July 28, 2020



**UtiliWorks Consulting Proposal
Procurement & Deployment Support**

**Crescenta Valley Water District
AMI Communications Network, Project E-1020**



Deliver to:

David S. Gould, P.E
District Engineer
Crescenta Valley Water District
2700 Foothill Blvd.
La Crescenta, CA 91214

UtiliWorks Consulting, LLC.
2351 Energy Dr. STE 1010
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UtiliWorks™

Strategic Utility Consulting

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Transmittal Letter

UtiliWorks Consulting, LLC (“UtiliWorks”) appreciates the opportunity to submit this proposal to the Crescenta Valley Water District (“CVWD”) seeking services for the procurement and deployment of AMI infrastructure within the District. UtiliWorks understands that CVWD is interested in Sensus/Xylem technology and is expecting testing and verification of meter reads from the meter to the Billing System/CIS (Springbrook).

UtiliWorks is prepared to begin working on this project as soon as possible, upon the issuance of a Notice to Proceed. Our team has expertise in performing all tasks requested by CVWD and is included herein in our proposed Scope of Work. We are confident in our ability to meet the time schedules and complete the work for a budget that is acceptable to CVWD.

UtiliWorks is enthusiastic about the opportunity to continue its work with CVWD. In summary, we believe that UtiliWorks is an excellent fit for the work requested. We are confident that our team will connect with your utility in a cost-effective way that will yield great results.

As the President of UtiliWorks Consulting, I am authorized to submit this proposal on behalf of UtiliWorks Consulting, LLC. Our proposed Project Manager will be Bret Vonder Reith and will act as the point of contact once the project commences.

Thank you for your consideration.

Respectfully submitted,



Dale Pennington
President
UtiliWorks Consulting, LLC

2351 Energy Drive Suite 1010
Baton Rouge, LA 70808
P (225) 766-4188

Section 1 - Firm Profile

UtiliWorks is a wholly owned subsidiary of E Source. Since our founding in 2005, we have provided services for over 100 clients with a core focus on AMI/Smart Metering technology. UtiliWorks has a clear understanding of the benefits derived from AMI and other associated technology solutions for utilities, as well as the operational impacts of deploying such technology. Additionally, UtiliWorks has performed program management oversight of all major vendors. A profile of our services and areas of expertise is outlined in the table below.

UtiliWorks Consulting, LLC		
Contact Information	2351 Energy Drive Suite 1010 Baton Rouge, Louisiana 70808 Website: www.utiliworks.com	Contact: Dale Pennington Phone: (631) 807-4063 Fax: (225) 612-6404 Email: dpennington@utiliworks.com
Business Focus, Attributes	· Utility-focused professional services firm · Advanced metering and associated technology design and deployment · Project management and implementation support	
Company Information	Founded: 2005 Limited Liability Company	FEIN: 20-4402870 DUNS: 825164713
Services	· Feasibility Studies · Strategic Planning · Financial Modeling and Data Analytics · RFP Development and Procurement · Business Process Improvement · Systems Design and Integration · Program Management · Communications · Grant Writing and Reporting · Field Surveys · Change Management · Deployment Strategy Development · Utility Technology Vision and Roadmap Development	
Company Mission	Together with our clients, UtiliWorks advances business and technology solutions which strategically enhance utility operations. We focus on the delivery of your technology system and the requisite business process changes that will drive performance throughout your organization.	
Location	· Corporate Headquarters in Boulder, Colorado · UtiliWorks Divisional Office in Baton Rouge, Louisiana · Associate offices in Colorado, California, Florida, Illinois, Indiana, Kansas, Minnesota, New York, North Carolina, Virginia, Oregon, Tennessee, Texas, Washington, and Alberta, Canada	
Banking	Chase Bank 1125 17 th Street, Floor 03; Denver, CO 80202 Attention: Sean Smythe Phone: (303) 244 -3269	
Insurance and Bonding	RBN Insurance Services 303 E. Wacker Drive, Suite 650, Chicago IL 60601 Attn: Telisa Gibson tgibson@rbninsurance.com Phone: (312) 801-8085	

Legal	Fairfield & Woods, P.C. 1801 California Street, Suite 2600 Denver, CO 80202 Attention: Peter Edwards Email: pedwards@fwlaw.com Phone: (303) 830-2400; Fax: (303) 830-1033
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Section 2 - Scope of Work

Task 1 - Finalize RFQ

UtiliWorks will review and update the previously prepared Request for Quote (RFQ) to ensure it reflects current objectives, strategies, and timelines; requirements workbook to reflect any changes identified by CVWD; and, the cost proposal workbook.

Deliverables:

- *Publish-ready RFQ (*.doc) including finalized Requirements Workbook(s) (*.xls), and finalized Cost Proposal Workbook (*.xls)*

Task 2 - Update Cost Estimate

The original cost estimate from the approved business case will be updated based on UtiliWorks' current understanding of vendor pricing. This information will be delivered to CVWD so they may present those numbers to the Board in advance of publishing the RFQ. UtiliWorks will reference our comprehensive cost database that includes current pricing for AMI and supporting technology specific to Sensus/Xylem AMI offerings as well as information and data gathered via UtiliWorks' industry experience.

Deliverables:

- *Updated capital and operational expenditure estimates (*.xls)*

Task 3 - Project Schedule

UtiliWorks will work with CVWD to review the project schedule that was included in the draft RFQ and update with current timelines. The updated schedule will reflect the project implementation approach and dependencies between tasks.

Deliverables:

- *Updated Project timeline (*.xls or .vsd)*

Task 4 - Project Coordination

UtiliWorks will provide implementation management oversight and subject matter expertise to support deployment of the CVWD's AMI Project. Key project participants are Operations, Customer Service, Highroad IT, Aquametric/Sensus and Springbrook. The project will have two (2) primary phases: Program Planning and Proof of Concept (POC).

Task 4.1 - Proof of Concept (POC) Planning

UtiliWorks will initiate the proof of concept phase with a kickoff presentation. The presentation will introduce the project participants, objectives and timeline for the POC. The intent of the POC phase is to demonstrate full system functionality through a limited deployment. The POC will establish the necessary foundation and maximize the learning and

training of the back-office processes that will benefit the utility in a large-scale roll-out. The overall POC strategy will be documented and distributed to establish expectations for the project stakeholders.

Deliverables:

- *Project Kickoff Presentation (.ppt)*
- *Proof of Concept Strategy (*.doc)*

Task 4.2 - Support Proof of Concept Deployment

UtiliWorks will work with CVWD's project team, the AMI vendor, and Highroad IT to execute the POC Strategy, provide overall project management oversight, and provide subject matter expertise. As is often the case during any large project, activities, tasks, and timing may shift from the original plan. UtiliWorks will work with the project team to capture changes and adjust the plan accordingly. Throughout the POC, UtiliWorks will involve SMEs as required to support the numerous activities to be undertaken during this phase.

Project management activities to support the POC phase will include:

- Working with all project participants to monitor progress and adjust the work plan as needed to stay on schedule
- Facilitating regular project progress and other meetings
- Creating project status reports as required with input from CVWD
- Working with CVWD to monitor the scope of work of each vendor
- Identifying, reporting, and tracking open action items, project issues and risks, potential change orders, and project budget
- Maintaining SharePoint as a project workspace and document repository

Deliverables:

- *Microsoft SharePoint Site Administration*
- *Facilitate periodic project status meetings*
- *Periodic project status reports (*.doc)*

Task 5 - Review RFQ & Negotiations

UtiliWorks will provide guidance to CVWD during contract negotiations with the selected vendor. Our experts will review and provide editorial for the proposed vendor contract and SOW from the RFQ response, determine whether the SOW complies with CVWD requirements/contract, and advise on terms that are as favorable as possible to CVWD. It is expected that this task will be executed immediately following Task 1 and the receipt of the single source proposal.

Assumptions:

- *The duration of vendor contract negotiations does not exceed four (4) weeks and 20 hours of UtiliWorks support.*
- *CVWD will be responsible for all terms and conditions outlined in the final agreement with vendor(s). UtiliWorks will provide input on certain terms and conditions but will not provide legal review or opinion.*

Deliverables:

- *Draft edits to vendor's SOW(s)*

Task 6 - RFQ Submittal Review

UtiliWorks will review the RFQ response evaluating its conformance to the project scope laid out in the RFQ and provide appropriate feedback to CVWD. Any gaps in the information provided will be identified so that the information can be obtained from the vendor. Additionally, we will analyze the cost proposal as compared to similar proposals.

Deliverables:

- *Consolidated proposal clarifications, notes, review schedule and/or questions (*.doc)*

Task 7 - Field Inspection & Testing

Task 7.1 - Field Inspection

UtiliWorks will provide deployment and field inspection support to CVWD for the AMI project. Specifically, we will:

- Assist CVWD with the identification of the POC meters and locations
- Identify data quality assurance and audit procedures and processes
- Provide a field review and inspection of the meters
- Walk through the entire process from meter installation to bill production to validate for correctness

Deliverables:

- *Field inspection results (*.xls)*

Task 7.2 - Support System Testing

UtiliWorks will provide advisory support for integration and testing of the AMI solution with CVWD, Aquametric (Sensus/Xylem), Highroad IT and Springbrook. We are knowledgeable of

the topics that should be discussed, the level of detail needed to achieve success and verification tactics necessary to assure the system is deployed correctly.

Specifically, UtiliWorks will:

- Review and provide feedback on vendor and utility test plans and cases to identify potential gaps, and supplement accordingly
- Identify the interfaces needed for the POC
- Provide advisory support for the test team

Assumptions:

- *UtiliWorks will advise CVWD personnel during testing but will not act as “testers.”*
- *UtiliWorks will not compose detailed test scripts but will support CVWD in their efforts.*

Deliverables:

- *Review/edit vendor and utility test plan(s)*

Task 8 - Project Close Out

Following the conclusion of the Proof of Concept phase, UtiliWorks will support project closure activities and transition to the post-POC support phase. This is anticipated to take place in the May/June 2021 timeframe. Project closeout tasks will include, but are not limited to:

- Confirm final acceptance criteria have been satisfied and formal system acceptance by CVWD has been executed
- Review and confirm status of all outstanding Action Items identified on SharePoint
- Confirm CVWD receipt of all project deliverables
- Confirm CVWD formal acceptance of all project deliverables
- Compare project budget vs. actual spend

Deliverables:

- *Project Closeout Checklist (*.doc)*

Assumptions

UtiliWorks created this scope considering the following assumptions:

- CVWD will assign a Project Manager to participate in regularly scheduled status calls with the UtiliWorks Project Manager, to review open issues, and to remove barriers to progress.
- CVWD will designate the necessary Subject Matter Experts (SMEs) from all functional teams to actively participate throughout all phases of the project.
- CVWD will have reasonable responsiveness to data requests, document/deliverable reviews, and meeting requests.

- Work will be performed by UtiliWorks resources either on-site or off-site in the completion of SOW deliverables.
- During on-site sessions, CVWD will provide meeting space, teleconference line, projector, and wireless Internet connection for all relevant participants for all meetings.
- CVWD will contract as necessary with the applicable Customer Information System (CIS) vendor, or third-party integrator for purposes of integration design and development with the AMI/MDMS systems. The billing/CIS vendor or integrator will participate in reoccurring meetings and/or status calls as needed.

Fees and Schedule

UtiliWorks has developed a fixed fee, not to exceed structure for this project based on level of effort (hours) and average billable rate. All tasks will be invoiced monthly based on level of effort expended. The fees are aligned with the scope of work and are structured to include estimated travel and expense budget as well as a 10% contingency.

CVWD AMI Communications Network, Project E-1020 Pricing			
Name	Hours	Average Billable Rate	Total
Task 1 - Finalize RFQ	16	\$ 200.00	\$ 3,200.00
Task 2 - Estimate Cost Estimate	10	\$ 200.00	\$ 2,000.00
Task 3 - Project Schedule	8	\$ 200.00	\$ 1,600.00
Task 4 - Project Coordination	192	\$ 200.00	\$ 38,400.00
Task 5 - Review RFQ & Negotiations	20	\$ 200.00	\$ 4,000.00
Task 6 - Submittal Review	40	\$ 200.00	\$ 8,000.00
Task 7 - Field Inspection & Testing	120	\$ 200.00	\$ 24,000.00
Task 8 - Project Close Out	24	\$ 200.00	\$ 4,800.00
Contingency (10%)			\$ 8,600.00
Travel and Expenses Estimate	10-Person Trips		\$ 10,000.00
			\$ 104,600.00

Note that the billable rate is an average or 'blended rate' of the resources that will be assigned to the project.

Schedule

<u>Phase</u>	<u>Duration</u>	<u>Start</u>	<u>End</u>
Task 1 - Finalize RFQ	4 weeks	Aug-20	Sep-20
Task 2 - Estimate Cost Estimate	2 weeks	Aug-20	Aug-20
Task 3 - Project Schedule	3 weeks	Aug-20	Sep-20
Task 4 - Project Coordination	6 months	Dec-20	May-21
Task 5 - Review RFQ & Negotiations	4 weeks	Nov-20	Nov-20
Task 6 - Submittal Review	6 weeks	Sep-20	Nov-20
Task 7 - Field Inspection and Testing	6 months	Dec-20	May-21
Task 8 - Project Close Out	2 weeks	May-21	Jun-21

Fee and Schedule Assumptions

UtiliWorks created this document considering the following assumptions:

- Task 4 (Project Coordination) is estimated at 32 hours per month for 6 months.
- Task 7 (Field Inspection and Testing) is estimated at 20 hours per month for 6 months.
- Any use of contingency funds must be approved in advance by CVWD and will be based on a request by UtiliWorks to cover unforeseeable variables that increase the estimated level of effort or extend the project beyond the project duration.
- The travel and expense budget is an estimated allowance; all expenses will be billed at cost.
- The expense limit by task is calculated based on an estimated number of person-trips at \$1,000 each.
- It is understood that where California based resources can be used that they will be in order to minimize travel costs.

Optional Services

Task 9 - AMI Program Business Process Design

UtiliWorks will lead CVWD through a series of workshops to baseline current state business processes impacted by core AMI functionality. After baseline processes are defined, we move into the design of future state processes. As part of the business process design effort, the UtiliWorks team will work to identify redundancies in business processes as well as uncover potential for streamlining processes.

Task 9.1 - Current State Business Process Definition

UtiliWorks begins with a workshop to gain understanding of how utility operations currently function. The team will work with CVWD to document current state business processes as part of a cross-functional workshop, which includes a designated session for each business process. Supporting materials and demonstration of systems may be incorporated into the workshop agenda (for example, a walk-through of billing exception reporting in the CIS).

Assumptions:

- *The following core business processes will comprise the current state workshops: Billing & Read Validation; Customer Inquiry; Meter Exchange/Retrofit; Move-In/Move-Out; Non-Pay Disconnect/Reconnect; and System Events and Alerts.*
- *CVWD will identify pertinent team members that are most appropriate to participate in discussion of process change, along with other key personnel for participation in each workshop.*

Deliverables:

- *PowerPoint slides incorporating all CVWD notes, decisions, and open items from workshop (*.ppt)*
- *Final current state process diagrams (*.vsd)*

Task 9.2 - Future State Business Process Definition

This review of each business process will focus on the development of the future state, building upon what was developed in current state, and utilizing the new business applications (AMI headend and AMI meters, as applicable) and the interfaces that will be deployed (AMI/CIS, etc.). The Future State workshops typically follows all CVWD training during POC in order to incorporate final design decisions into future state design.

Assumptions:

- *The processes covered in Future State will be the same processes that were covered in Current State, excepting relevant sub-processes which will occur in the future but cannot be performed due to technological limitations in the current state.*

Deliverables:

- *PowerPoint process slides incorporating all CVWD business process decisions and workshop updates (*.ppt)*
- *Final future state process diagrams (*.vsd)*

Task 10 - Awareness and Education Campaign

UtiliWorks will work with CVWD on Campaign Design, strategy, internal communications and customer communications. Assist with webpage content development as well as a brochure and door hanger. Internal presentation will be made to educate District employees and create a consistent message to be used by the District.

Task 10.1 - Awareness and Education Campaign Design

UtiliWorks will develop an awareness and education campaign (AEC)/communications campaign that is in lockstep with the AMI POC schedule. The program will enhance internal project communications for all utility departments and will foster proactive communications with utility customers and other external stakeholders. UtiliWorks will schedule a discovery session with CVWD to outline goals, objectives, and risks associated with the AEC program.

Deliverables:

- *AEC Program Strategy (*.doc)*

Task 10.2 - Organizational Awareness

UtiliWorks will work with CVWD to identify the key topics that will drive the content of the utility organizational awareness presentation. Topics may include:

- AMI project benefits and information sharing
- Areas of concern, including radio frequency (RF), privacy, cybersecurity, etc.

UtiliWorks will also support CVWD in its effort to present this information to staff and field questions accordingly.

Deliverables:

- *Internal education/awareness presentation (*.ppt)*

Task 10.3 - Customer Communications

UtiliWorks will work with CVWD to develop the content for the following three (3) customer-facing materials: door hanger, brochure, and webpage. UtiliWorks will advise CVWD on the timing of releasing the information pieces to the customer base.

Assumptions:

- *CVWD will employ a graphic designer to assist with visual layouts and design.*
- *The printing, shipment, and dissemination of materials will be managed by CVWD.*

Deliverables:

- *Door hanger content*
- *Webpage content*
- *Brochure content*

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 3

August 5, 2020

To: Engineering Committee

From: David S. Gould, P.E. – Director of Engineering

Subject: Request for Proposal - Professional Engineering Services for Design of FY 20/21 Pipeline Replacement Projects, Project E-1021 & E-1022

BACKGROUND:

Crescenta Valley Water District (CVWD) is embarking on its FY 20/21 capital improvement project program to replace old and undersized steel pipelines within its water distribution system. The District's goal is to replace all pipelines 50-yrs & older within the next 85-years. Currently, about 45% of CVWD's pipelines meet this criterion. To meet this goal, CVWD would have to replace about 1.5 miles of pipe per year for the next 20-years. The specific pipelines to be replaced are based on age of pipeline, pipe size, pipe material and number of previous leaks. The pipelines are also grouped within a specific area of the District for ease of construction.

CVWD's Board approved the FY 20/21 Water Budget in June 2020, and the approved budget showed \$2.3M available for CIP projects with no water rate increase. The Board also agreed to pursue refinancing CVWD's existing bond debt and requesting additional funding, totaling \$5M with the understanding that the bond proceeds must be spent within 3-years of issuance of the bond. If the bond funding is approved, CVWD plans to accelerate the pipeline replacement schedule from ¼ mile to 1 mile in FY 20/21.

CVWD has been replacing approximately ½ mile of pipeline per year. However, over the last few years, we have seen an increase in water main breaks on pipelines, typically those installed in the 1940s and 1950s. CVWD's Engineering Department historically performs the following tasks in-house: the planning, design, preparing specifications, ordering material, bidding, community outreach, construction administration and inspection for the pipeline projects.

For CVWD to meet the accelerated pipeline replacement schedule, we will need the assistance of a consulting engineering firm to prepare design plans and specifications for Projects 3 & 4 as shown in the table below. CVWD staff has completed the design for the 2400 & 2500 Blocks of Janet Lee (Project 1) and started on the design of the 4300 Block of Rosemont (Project 2).

Project No.	Street Name	Block No.	Year Const.	Age of Pipe (yrs)	Pipe Size (in)	Pipe Length (ft)	Pipe Material	No. Leaks	Contractor Cost Estimate	Materials, Permits, CVWD Labor etc.	Consultant (Design, Soils Testing, CM)	Total Cost Estimate	Cost/LF
1	Janet Lee	2400	1954	66	6	690	STD	2					
	Janet Lee	2500	1954	66	6	600	STD	2	\$425,700	\$109,000	\$3,000	\$537,700	\$417
2	Rosemont	4300	1929	91	8	650	STD	3	\$208,000	\$92,000	\$3,500	\$303,500	\$467
3	Encinal	3400	1932	88	10	810	STD	0					
	Encinal	3500	1932	88	10	790	STD	1	\$607,700	\$130,000	\$158,500	\$896,200	\$560
4	Paraiso Way	2700	1946	74	2	180	STD	3					
	Dyer	4800	1946	74	2	380	STD	0					
	El Caminito	2800	1946	74	4	900	CL&W	0					
	Glenwood	4800	1960	60	6	300	CL&W	0					
	Stevens	2800	1958	62	6	125	STD	1	\$630,000	\$141,000	\$204,800	\$975,800	\$518
Total						5,425			\$1,871,400	\$472,000	\$369,800	\$2,713,200	\$500

Project 3 is replacement of 1,600 LF of 10-inch steel water main on the 3400 & 3500 Blocks of Encinal Ave that was installed in 1932 (see attached exhibit) within the City of Glendale. Encinal Ave is a narrow residential street with limited parking, a channel crossing (owned by Los Angeles County) and numerous oak trees. The pipeline replacement includes replacing six (6) fire hydrants, 34 water service laterals, four (4) 10-inch gates valves, and reconnection of new service laterals to existing water mains.

Project 4 is the replacement of 2-inch, 4-inch and 6-inch steel water mains with 1,900 LF of 8-inch water mains that were installed between 1946 and 1960 (see attached exhibit) located within the unincorporated area of Los Angeles County. The streets are all narrow residential streets with limited parking. The pipeline replacement includes installation of at least six (6) new fire hydrants, 39 water service laterals, eight (8) 8-inch gates valves and reconnection of new service laterals to existing water mains.

CVWD is planning to bid out Projects 3 & 4 as separate items such that both projects will be under construction during the same period and completed before June 30, 2021.

DISCUSSION:

In July 2020, staff sent out a request for proposal (RFP) to five (5) consulting engineering firms to prepare design plans and specifications for Projects 3 & 4. Each firm has prior experience with professional services specific to pipeline replacement projects. Attached for your review is the RFP that included the scope of work and other project parameters. On July 30, 2020, staff held a pre-proposal teleconference meeting with the consulting firms and provide information about CVWD, the scope of work and proposed schedule. The proposals were due on August 4, 2020, and CVWD received five (5) proposals.

Staff reviewed each proposal and ranked them in accordance to the following categories and weighted percentages: 1) Proposal, Project Concept & Scope of Work– 30%, 2) Previous work experience – 30%, 3) Expertise of project staff on similar projects – 20%, 4) Coordination with agencies – 10%, and 5) Costs of service – 10%.

Civiltec Engineering (Civiltec) was the highest ranked consultant as shown on the attached consultant ranking table. Civiltec's proposal addressed the critical design issues such as the channel crossing on Encinal Ave, coordination with Glendale and Los Angeles County, the alignment of the new pipelines, meeting the District's project schedule, and their proposed costs are within CVWD's budget for this project. Civiltec's team members have completed a number of similar projects within Los Angeles County and have previously provided consulting services to CVWD for the Ocean View Piping and Chloramination Project, the Well 15 groundwater project, and the 2007 Water master plan.

RECOMMENDATION:

It is staff's recommendation to the Engineering Committee to award a consulting contract to Civiltec Engineering for \$106,320 to prepare design plans and specifications as they provide a cost-effective proposal to meet the District's needs.

Prepared & Submitted by:



David S. Gould, P.E.
Director of Engineering

Attachments:

1. Project Location Maps
2. Request for Proposal
3. Consultant Ranking Table

Crescenta Valley Water District

Professional Engineering Services for Design of FY 20/21 Pipeline Replacement Projects, Project E-1021 & E-1022 Consultant Ranking

Ranking	Weighted Percent	Civiltec Engineering		Cannon		DMc Engineering		SA Associates		Tetra Tech (Declined)	
		Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Proposal - Project Concept & Scope of Work	30%	4.3	1.30	4.0	1.20	4.2	1.25	3.5	1.05		0.00
Project Experience	30%	4.5	1.35	4.3	1.30	4.3	1.30	4.5	1.35		0.00
Project Team Qualifications	20%	4.7	0.93	4.2	0.83	4.5	0.90	4.5	0.90		0.00
Coordination with Agencies	10%	4.3	0.87	4.2	0.83	3.8	0.77	3.7	0.73		0.00
Consultant's Fee	10%	4.2	0.42	4.2	0.42	3.2	0.32	3.3	0.33		0.00
Final Weighted Score	100%		4.87		4.58		4.53		4.37		0.00
Proposal Cost - Project 3			\$49,820		\$40,751		\$64,040		\$69,000		
Proposal Cost - Project 4			\$56,500		\$46,672		\$80,800		\$0		
Total			\$106,320		\$87,423		\$144,840		\$69,000		\$0

Each consultant's proposal rated 1 - 5 (5 outstanding - 3 average - 1 unsatisfactory) on each category above. Each rating is multiplied by the weighted average for each category and totaled for the final weighted score.

Categories:

Project Concept & Scope of Work - How well the consultant's proposal addressed the needs of the District as outlined in the request for proposal & how well the consultant showed

Project Experience - How much previous experience has the consultant on projects similar to this project

Project Team Qualifications - How did the consultant's proposal use its staff and the experience of the individual people involved

Consultants Fee - How well the consultant's proposal utilized their staff and the costs associated with the proposal

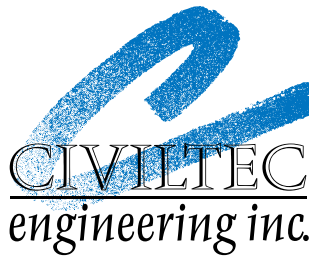
CVWD Estimate - Project 3 = \$71,500 & Project 4 = \$80,520 for a total of \$152,020



**Proposal for Design of FY 20/21
Pipeline Replacement Projects
Projects E-1021 and E-1022**

Submitted By:


CIVILTEC
engineering inc.
www.civiltec.com
August 4, 2020



Civil, Water, Wastewater, Drainage, Transportation and
Electrical/Controls Engineering • Construction Management • Surveying
California • Arizona

Crescenta Valley Water District
2700 Foothill Boulevard
La Crescenta, CA 91214

August 4, 2020

Attention: David Gould, PE | Director of Engineering

Subject: Proposal for Design of FY 20/21 Pipeline Replacement Projects
Project E-1021 and E-1022

Dear Mr. Gould:

Crescenta Valley Water District (District) is working to replace all 50+ year old pipelines based on age, size, material and number of leaks. As part of the Fiscal Year (FY) 2020-2021 capital improvement program (CIP) the District is constructing four pipeline projects. Projects 1 and 2 are being designed in house. A consultant will design Projects 3 and 4 to be bid as two separate projects. Project 3 will replace 1,660 linear feet (LF) of 10-inch steel water main on the 3400 and 3500 blocks of Encinal Avenue in Glendale, California. This segment also includes crossing of the Los Angeles County Flood Control District's (LACFCD) Dunsmuir Channel. Project 4 will replace 1,840 LF of 2-, 4- and 6-inch steel mains in unincorporated Los Angeles County with 8-inch steel water main. Both streets are narrow, residential areas with limited parking. Other project tasks include finding the centerline due to property encroachment, oak tree coordination, changing out meter boxes, replacing and/or installing 12 fire hydrants, replacing 73 water service laterals, replacing 12 gate valves and reconnection of existing water mains.

Civiltec engineering, inc. (Civiltec) has planned and designed more than 400,000 LF of pipelines during the past 5+ years, working with water agencies and public entities throughout Southern California. Our proposed team has years of experience handling the permitting processes with Glendale and unincorporated areas of Los Angeles where these residential pipelines need replacement. **Civiltec** practices constructability in all aspects of our designs to save you money and avoid potential issues. We understand water engineering activities, water system planning and water system evaluations for municipal, district and private water purveyors.

We work closely with our clients to meet the dynamic demands of the real world and to cultivate long-term relationships. We are confident that we are the right firm to complete your pipeline replacement projects. Feel free to contact me (626) 357-0588 with any comments or questions.

Sincerely,

David Song, PE | Principal, Senior Project Manager

W:\Proposals\2020 Proposals\Monrovia Proposals\PM20118.00-CVWD-FY 20-21 Pipeline Replacement Projects\Draft Proposal\PM20118 Draft.docx



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SCOPE OF WORK

Project Understanding

In the FY 2020/21 CIP, the District plans to replace old and undersized water distribution mains. The goal is to prepare plans, specifications and engineer's construction cost estimate for construction bidding. Construction will be complete by June 30, 2021. Projects 3 and 4 will bid as two separate bidding packages. Project 3 will replace approximately 1,660 LF of existing 10-inch water main with new 10-inch steel pipe. Project 4 will replace approximately 1,840 LF of existing 2-inch, 4-inch and 6-inch water mains with new 8-inch steel pipe. Both projects will also include replacement and/or new installation of hydrants, water service laterals, gate valves and connections back to the existing system.

Key Challenges / Solutions

Pipeline Alignment

Design of the pipeline alignment will focus on three main factors: the presence of existing utilities, traffic lane disruption, and providing ingress and egress access to the affected residents. The presence of existing utilities will serve as a guide in the placement of the proposed main to promote the least impact to existing utilities.

The pipeline alignment will take into consideration the construction impact of the narrow traffic lanes on commuter and pedestrian traffic and associated costs due to temporary traffic control measures. The alignment goal is to minimize inconvenience to the adjacent residences and provide ingress and egress access within the project areas.

Related high and low points in the alignments will also be evaluated for the addition of air release valves and blow-offs. **Civiltec** will present alternate alignments for consideration.

Permitting

Project 3 and 4 are within the Glendale and unincorporated Los Angeles County jurisdictions. Additionally, the proposed pipeline in Project 3 will cross the LACFCD Dunsmuir Channel. Permits will be pursued until obtained from each agency for construction. We have performed preliminary research on the permit process. **Civiltec** will obtain an encroachment permit application and plan check requirements for Project 3 from Narine Pogosyan (npogosyan@glendaleca.gov) with Glendale. It is understood that the Dunsmuir Channel crossing must also be permitted by the US Army Corps of Engineers and CVWD will request a separate proposal for permitting.

A road construction permit and flood access permit are required for construction of the pipeline in Project 4 and the channel crossing in Project 3, respectively. Permits will be applied for online via the EPIC-LA, Los Angeles County online permit management system (epicla.lacounty.gov). Contact with each agency will be made early in the design phase to obtain requirements for trench and pavement replacement, channel crossing, water discharge activities and potential traffic control plan submittal. We understand that a separate proposal will be requested if a traffic control plan must be prepared for permit issuance.

LACFCD Dunsmuir Channel Crossing

Project 3 includes crossing an existing LACFCD channel on Encinal Avenue approximately mid-block between Dunsmore Avenue and New York Avenue. The first approach will be to pothole the street over the channel to determine if there is sufficient space to install the mainline over the channel. If this is not adequate, we propose installing a 10-inch steel main over the channel supported by concrete pedestals. The pedestals will extend near the bottom of the channel so that loads from the

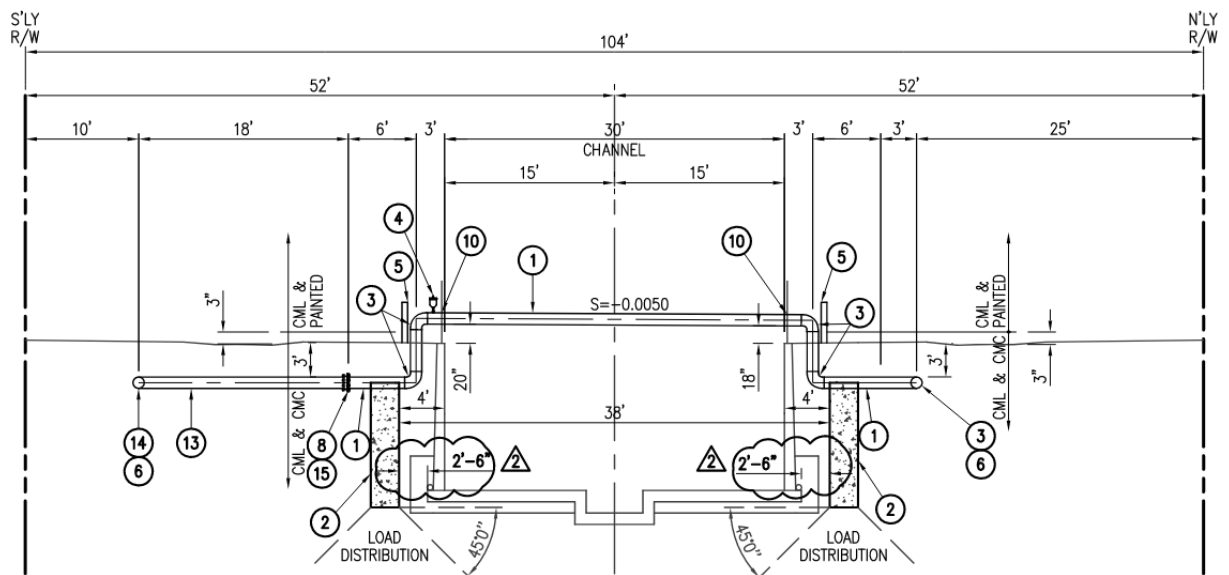


Figure 1 – Channel Crossing Example

mainline are not transferred to the channel side walls as shown in Figure 1.

Proposed Scope of Work

Based on our project understanding and professional experience, we have identified the following scope of work services.

Phase 1 – Preliminary Engineering

Task 1 - Design Meetings

Civiltec will schedule a kick-off meeting with the District to discuss project information, goals, schedules, potential conflicts and requirements. We will request District record drawings of all streets affected by the new mains installation.

Meetings with the District will occur to review comments and questions related to 50%, 100% and final design submittals. **Civiltec** will provide an agenda and meeting minutes to the District.

Task 2 - Utility and Records Research

Civiltec will conduct complete utility research and contact each utility company to request verification of location, size and depth of facilities within the project limits. We have

utilized DigAlert's design lookup online database for contacts from each utility company that has facilities within each project limit (see below).

Project 3 – Utility Contacts

AT&T - Distribution After Hours |
Rebecca Guevara | rz1893@att.com

SC Gas - Glendale After Hours | Engineering |
northwestdistributionutilityrequests@semprautilities.com

Spectrum - Irwindale After Hours | Engineering |
dl-socal-charter-engineering@charter

Utiliquest for SCE - Dist. Metro East REG After Hours | Michael Hinton | maprequests@sce.com

Project 4 – Utility Contacts

AT&T - Distribution After Hours |
Ron Zorn | rz2131@att.com

SC Gas - Glendale After Hours | Engineering |
northwestdistributionutilityrequests@semprautilities.com

Spectrum - Irwindale After Hours | Engineering |
dl-socal-charter-engineering@charter

Utiliquiest for SCE - Dist. Metro East REG After Hours | Michael Hinton | maprequests@sce.com

Utility research may include, but is not limited to, existing water, sewer, storm drain, gas, telephone, electrical, cable TV, fiber optic and



oil. We will perform a record and data search of survey information (assessor maps, parcel maps, records of survey, right-of-way maps, easement documents, etc.) obtained as a part of the research efforts. **Civiltec** will prepare a project base map utilizing information received from the utility and records research.

Task 3 - Topographic Survey and Field Investigations

Civiltec will prepare a topographic survey of the project limits. We will establish the control survey points using accepted benchmark and centerline tie information. We will take field shots of manholes, water valve covers, water meter boxes, fire hydrants, drainage features, poles, edge of pavement, curb and gutter, sidewalk, trees, parkways, catch basins and other visible aboveground facilities within the street right-of-way. **Civiltec** will dip the sewer manholes and storm drain catch basins and record inverts. For greater accuracy of the base plans, **Civiltec** will document utility markings made as part of the potholing efforts. Additionally, we will perform a site field walk to confirm facilities identified by the topographic survey and review any site constraints to aid in the selection of the preliminary pipeline alignments.

Task 4 - Preliminary Engineering Design (50%)

Civiltec will prepare a preliminary alignment design for review and approval by the District. A comprehensive utility base map compiled from record mapping, utility record drawings and field investigation will be the basis for the preliminary pipeline alignments. Drawings will be in AutoCAD Version 2019, on 24-inch by 36-inch plan only sheets with a 1-inch equals 40-foot horizontal scale and colorized in accordance with the District's standards.

The 50% submittal will include preliminary plan design sheets, preliminary bidding schedule and engineer's construction cost estimate. The design sheets will also include the District's standard title block, public right-of-

way, street centerlines, property lines, jurisdictional boundaries, easements, relevant dimensions, topographic information, lot addresses, utilities and utility callouts.

Design Deliverables

50% Submittal. Preliminary alignment design, preliminary bidding schedule and engineer's construction cost estimate as a PDF via email for review by the District.

Task 5 - Pothole Plan

Following approval of the preliminary alignments, we will prepare a pothole plan to identify proposed pothole locations. The District will complete potholing services. At a minimum, potholing will occur crossing the LACFCD Dunsmuir Channel on Encinal Avenue, at utility crossings and at connection points to the existing system. Other possible pothole locations include where existing records do not provide sufficient information to ascertain the depth and location of a utility.

Design Deliverables

Pothole Plan. The pothole plan will be submitted as a PDF via email for review and approval by the District.

Phase 2 – Final Engineering Design

Task 1 - 100% and Final Design

Civiltec will prepare detailed design plans for construction based on comments from the preliminary alignment designs. We will submit 100% and final design drawings for review and approval by the District. Plans will include construction callouts, standard drawings, trench and pavement restoration details in accordance with Glendale and Los Angeles County (as applicable). **Civiltec** will develop large-scale details and/or sections for necessary tie-in locations and critical utility crossing.





To ensure permitting, **Civiltec** will prepare special design plans and details to adequately cross the LACFCD Dunsmuir Channel in compliance with Los Angeles County requirements.

The 100% and final design submittal will also include the bidding schedule and engineer's construction cost estimate. The District will provide the front-end specifications and sample special and technical sections. We will tailor these documents for each project and include additional sections as necessary. The final package will be construction ready bidding documents. **Each project will have separate bidding packages.**

Design Deliverables
100% Submittal. The 100% submittal will include complete construction drawings (with revisions based on comments from the 50% submittal review), specifications, bid schedule and engineer's construction cost estimate. We will submit a PDF copy of the plans via email for the District to review and approve.
Final Submittal. The final submittal will address comments from the 100% submittal, if necessary. Civiltec will submit two (2) bond sets of the plans, one (1) Mylar print of construction drawings, hard copy set of specification package and engineer's construction cost estimate, and final drawing and document files in PDF, Microsoft Excel and AutoCAD formats. A California Registered Civil Engineer will sign and stamp all plans.

Task 2 - Permit Procurement

Civiltec will complete encroachment/excavation permit applications and 100% construction drawings for permitting through Glendale, Los Angeles County and LACFCD. Design will be revised, as necessary, based on comments from the permit agencies. We will pursue the process until encroachment/excavation permits submittals are approved. We will meet with agency staff as necessary to discuss the project and provide information for

final permit approval. The District will pay permit and inspection fees.

Design Deliverables
Permit Applications. Appropriate agency permit applications will be completed, and additional pertinent documents, forms and plans submitted for permit processing.

Phase 3 – Bidding and Construction Support Services

Task 1 - Bidding Support

Civiltec will respond to requests for information (RFIs) and issue addendums with review and concurrence by the District during the bidding phase. We will prepare necessary sketches of design details to clarify any issues during bidding. We will attend a pre-bid meeting to assist with any questions that may arise during the meeting with the bidders and project stakeholders.

Task 2 - Construction Support

Civiltec will review shop drawing submittals for conformance to the plans and specifications. Shop drawing submittals will include any necessary comments and provide recommendation to the District to approve as submitted, approve as noted, revise and resubmit or reject as appropriate with final concurrence by the District.





PROPOSAL FEE SCHEDULE

Civiltec proposes to provide the scope of services previously described on a time and materials not to exceed the total budgets below without prior authorization from the District. The District will be responsible for any permit or plan check fees.

FY 20/21 Pipeline Replacement Projects
Project 3 (City of Glendale)
Time and Fee Estimate

	HOURS BY SrPM	HOURS BY Sr. D	HOURS BY D	HOURS BY CADT	HOURS BY PT	HOURS BY 2MS	HOURS BY SM	REIMB. EXPENSES	TOTAL COST
Scope of Work	\$ 220.00	\$ 185.00	\$ 140.00	\$ 105.00	\$ 110.00	\$ 240.00	\$ 180.00		
Phase 1 - Preliminary Engineering									\$ 26,630.00
Task 1 - Design Meetings	4								\$ 880.00
Task 2 - Utility and Records Research					16				\$ 1,760.00
Task 3 - Topographic Survey and Field Investigations	4		8	8		20	9	\$ 250.00	\$ 9,510.00
Task 4 - Preliminary Engineering Design (50%)	12	6	32	46					\$ 13,060.00
Task 5 - Pothole Plan	2		4	4					\$ 1,420.00
Phase 2 - Final Engineering Design									\$ 19,670.00
Task 1 - 100% and Final Design	12	6	32	46				\$ 250.00	\$ 13,310.00
Task 2 - Permit Procurement	12		8	8	16				\$ 6,360.00
Phase 3 - Bidding and Construction Support Services									\$ 3,520.00
Task 1 - Bidding Support	8								\$ 1,760.00
Task 2 - Construction Support	8								\$ 1,760.00
HOURS	62	12	84	112	32	20	9		331
BUDGET	\$13,640.00	\$2,220.00	\$ 11,760.00	\$11,760.00	\$3,520.00	\$4,800.00	\$1,620.00	\$ 500.00	\$ 49,820.00

FY 20/21 Pipeline Replacement Projects
Project 4 (unincorporated Los Angeles County)
Time and Fee Estimate

	HOURS BY SrPM	HOURS BY Sr. D	HOURS BY D	HOURS BY CADT	HOURS BY PT	HOURS BY 2MS	HOURS BY SM	REIMB. EXPENSES	TOTAL COST
Scope of Work	\$ 220.00	\$ 185.00	\$ 140.00	\$ 105.00	\$ 110.00	\$ 240.00	\$ 180.00		
Phase 1 - Preliminary Engineering									\$ 31,560.00
Task 1 - Design Meetings	4								\$ 880.00
Task 2 - Utility and Records Research					16				\$ 1,760.00
Task 3 - Topographic Survey and Field Investigations	4		12	12		24	11	\$ 250.00	\$ 11,810.00
Task 4 - Preliminary Engineering Design (50%)	16	6	40	52					\$ 15,690.00
Task 5 - Pothole Plan	2		4	4					\$ 1,420.00
Phase 2 - Final Engineering Design									\$ 21,420.00
Task 1 - 100% and Final Design	16	6	40	52				\$ 250.00	\$ 15,940.00
Task 2 - Permit Procurement	8		8	8	16				\$ 5,480.00
Phase 3 - Bidding and Construction Support Services									\$ 3,520.00
Task 1 - Bidding Support	8								\$ 1,760.00
Task 2 - Construction Support	8								\$ 1,760.00
HOURS	66	12	104	128	32	24	11		377
BUDGET	\$14,520.00	\$2,220.00	\$14,560.00	\$13,440.00	\$3,520.00	\$5,760.00	\$1,980.00	\$ 500.00	\$ 56,500.00

SrPM = Sr. Project Manager
PT = Planning Technician

SrD = Sr. Designer
2MS = Two Person Survey Crew

D = Designer
SM = Survey Manager

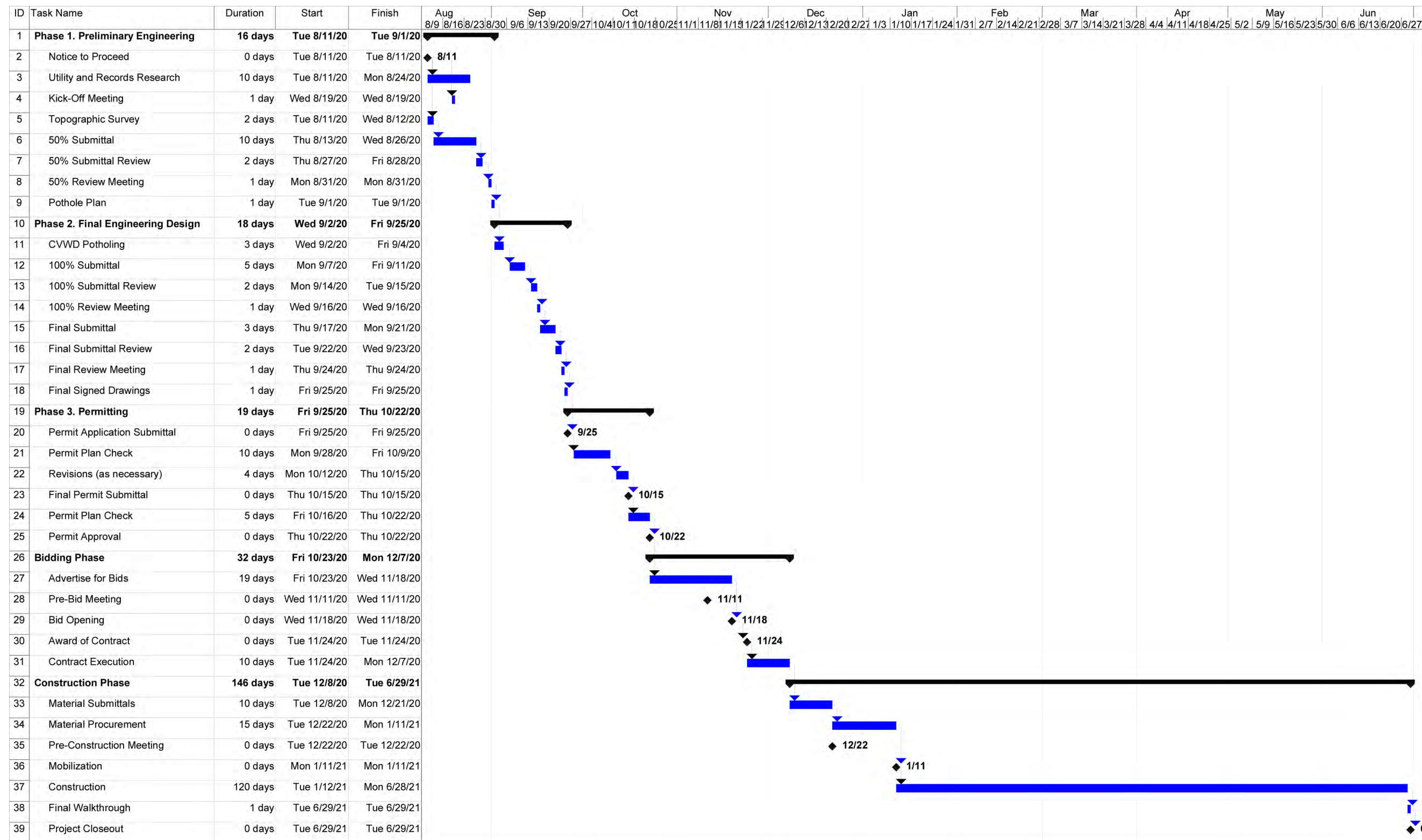
CADT = CAD Technician





SCHEDULE

Below is the preliminary schedule for design and construction for the project to be completed by June 30, 2021. Critical path items include permit/plan check times from the respective agencies. The design schedule will require expedited District reviews of each submittal to ensure the overall schedule is met. Schedules will be updated accordingly throughout the life of the project.





PROJECT EXPERIENCE

Civiltec enjoys developing strong working relationships with our clients. Throughout the last 5 years, we averaged 200+ new projects annually in California. Projects range in size from small to large and have included design of various sized pipelines, along with construction management to ensure the project runs smoothly. In 2019, more than 90% of our work was with public type agencies and 78% was for repeat clients.

Our reputation and the quality of our work is paramount to us. Feel free to contact any of the references included with our select relevant project experience to verify our dedication to providing innovative, cost-effective solutions on every project.

Water Main Relocation and Replacement Projects

Client: La Cañada Irrigation District (LCID)

Location: La Cañada Flintridge, CA

Reference: Douglas Caister, General Manager | 1443 Foothill Boulevard, La Cañada, CA 91012 | (e) Lacanadaid@earthlink.net | (p) 818.790.2489

Professional Service Dates: September 2016 – Ongoing

Construction Dates: September 2017 – July 2018

Civiltec relocated and replaced approximately 5,450 LF of 12-inch steel pipe in La Cañada Flintridge, California. LCID was concerned about the condition of the aging pipeline infrastructure and opted for full replacement. The mains run throughout residential streets and required permitting with La Cañada Flintridge and consistent, transparent communication with affected residents. The

projects included preparation of traffic control plans, permitting, plans, specifications and estimates including bidding support, construction management and inspection services.

Duarte Small Mains Replacement

Client: California American Water (CAW)

Location: Duarte, CA | Unincorporated Los Angeles County

Reference: Dante Alday, PE, Senior Construction Manager | 655 W. Broadway Suite 1410, San Diego, CA 92101 | (e) dante.alday@amwater.com | (p) 856.381.3391

Professional Service Dates: January 2019 - November 2019

Construction Dates: October 2019 – March 2020

Civiltec replaced approximately 14,100 LF of pipeline due to aging infrastructure, poor condition and poor fire flows that attributed to inadequate pipe sizes. These replacements were identified based on findings in a Conditions Based Assessment (CBA) from 2011. This project included replacing all 4- to 12-inch pipes with 8- to 12-inch ductile iron pipes (DIP), replacing all fire hydrants and acquiring an easement at a private driveway on Woodlyn Lane. The project was broken up into two separate bid packages.

Key issues included pipelines within private property that were either required to be abandoned in place or easement acquisition was needed for construction, ingress/egress and maintenance of the new main. One existing main was located on a private road with a culvert and two shallow storm drain pipelines. Due to this constraint, the pipeline was placed above the existing grade on the west side of the culvert. The pipelines there needed to be encased to protect across the culvert area. The existing water mains in need of replacement were all predominantly in residential and narrow streets. Plans and specifications included provisions for phasing to optimize construction sequencing.





CIP Water Main Replacements

Client: Valley County Water District

Location: Baldwin Park, Irwindale, Azusa, West Covina

Reference: Tom Mortenson, Operations and Maintenance Manager
14521 Ramona Blvd., Baldwin Park, CA 91706 | (e)
tmortenson@vcwd.org | (p) 626.856.5990

Professional Service Dates: August 2018 – September 2019

Construction Dates: December 2019 – Present

Civiltec completed the design and construction of more than 16,500 LF of 8-inch and 12-inch DIP replacement with service connections, fire hydrants and street improvements. **Civiltec** continues to enjoy a healthy working relationship with Valley County Water District as their sole-sourced civil engineer. **Civiltec** also serves in a district engineer role for Valley County Water District and has provided them with on-call, as-needed civil engineering services since 1998. Projects have included potable water pipelines, pump stations, wells, reservoirs, water master planning and hydraulic modeling and analysis.

CONSULTANT'S REPRESENTATIVE

Personnel in our Monrovia office are experienced surveyors, public works engineers, construction managers and qualified observation staff with combined 345+ years of technical experience. All work assigned to us will be managed out of this office. Key staff proposed will not be reassigned or replaced without your prior written authorization. **Civiltec** is committed to building the right team for each project, tailored to your specific needs.

Additional staff will be assigned to the project as needed and may include Gretel Ochoa, EIT (Staff Engineer), Dan Busqué (Senior Designer), Jorge Martinez (Designer), Charles Devine (Staff Engineer), Jenny Tsan (Designer), Omner Meza (Designer), Gray Garrison, EIT (Staff Engineer), Jeromy Gurule (Drafter), Michael Malcom (Drafter) and Sara Canché (Planning Technician). There is tremendous flexibility in our team organization to allow for primary team members and backups.

Key Team Members

David Song, PE – Project Manager (Responsible Representative)



Education: B.S., Civil Engineering, University of California, Los Angeles, 2004

Registration: Professional Civil Engineer, California No. 76613

Mr. Song has 15+ years (13+ with **Civiltec**) of engineering experience. His expertise is in potable water infrastructure design, engineering and management. Mr. Song's typical responsibilities include project management and supervision of design staff, client correspondence, management of project budgets and schedules, technical writing and planning, hydraulic analysis and modeling, developing contract bid documentation, preparing specifications and cost estimates, construction management and performing project plan checks. Mr. Song has been responsible for the design and project management of more than 250,000 LF of distribution and transmission pipelines and construction traffic control plans.

W. David Byrum, PE – Principal-in-Charge (Resp. for Contract Negotiations)



Education: B.S., Mechanical Engineering, University of California, Los Angeles, 1977

Registration: Professional Civil Engineer, California No. 43296

Mr. Byrum has 40+ years (27+ with **Civiltec**) of experience as a systems planner, design engineer, project manager, principal engineer and construction manager. He is an expert in the planning and design of water distribution and transmission pipelines and street improvement projects. His experience includes 150,000 LF of various sized pipelines for Golden State Water Company, 7,000 LF of 24-inch pipeline for the San Gabriel County Water District; 35,000 LF of pipeline for California Domestic Water Company; and 7,000 LF of 42-inch pipeline for Covina Irrigating Company, among others.





Terry Kerger, PE – QA/QC Manager



Education: B.S., Mechanical Engineering,
University of California, Los Angeles, 1977
Registration: Professional Civil Engineer,
California No. 43296

Mr. Kerger has 45+ years (15+ with **Civiltec**) of experience in project management, design and construction of civil engineering projects. He has designed pipelines for the cities of Arcadia, Alhambra, Ontario, Huntington Park, Manhattan Beach, Cerritos, El Monte and Industry as well as Kinneloa Irrigation District, Orchard Dale Water District and Rowland Water District. He has been responsible for the design and project administration of over 100,000 LF of distribution and transmission pipelines that included construction traffic control design. He has also secured permits with public agencies and cities located in Los Angeles, Orange and Ventura Counties and with the California Department of Public Health and Caltrans.

Greg Ripperger, PE – Project Engineer



Education: B.S., Civil Engineering, Oklahoma
State University, 2008
Registration: Professional Civil Engineer;
California No. 79499
Water Audit Validator Certified, California-
Nevada Section, American Water Works Assoc.

Mr. Ripperger has 11+ years (6+ with **Civiltec**) of experience in water engineering and construction management. His water experience includes hydraulic modeling, water system simulation, master planning, pipelines booster stations, surge protection and water distribution planning for large development projects. Mr. Ripperger's ability to quickly understand a water system and solve system problems with simple solutions makes him an excellent asset to the team. He has extensive hydraulic modeling experience using InfoWater, HEC-RAS, H2ONET and several other software platforms. He has designed and/or managed more than 100,000+ LF of pipeline and can serve as project manager if Mr. Song becomes unavailable.

Chris Duncan, PLS - Survey



Education: Extension Courses, Field
Surveying, Cal State Univ. of Los Angeles
Registration: Professional Land Surveying,
California No. 7745

Mr. Duncan has been an active field and office land surveyor for 37+ years (7+ with **Civiltec**). He has performed all aspects of surveying throughout California and Arizona, including construction staking, boundary surveys, control surveys and topographic surveys. He excels at major hillside subdivision work and is a member of the American Congress on Surveying and Mapping. Mr. Duncan's software/equipment experience includes global positioning system (GPS), Total Station and Trimble VRS RTX GPS.

PROFESSIONAL SRVC. AGREEMENT

Civiltec accepts the services specified in accordance with the District's standard Professional Service Agreement.

INSURANCE REQUIREMENTS

Civiltec maintains one million dollars (\$1,000,000) combined single limit personal injury and property damage insurance with a five million-dollar (\$5,000,000) umbrella which names the client as additionally insured and professional liability insurance in the amount of five million dollars (\$5,000,000) which provides coverage for any damages or losses suffered by the client as a result of any error, omission, or neglect by our company. We also maintain worker's compensation insurance in compliance with state law and automobile liability insurance in the amount of one million dollars (\$1,000,000).

DISTRICT REIMBURSEMENT

Civiltec understands that the District reimburses for all outside expenses, and all other reasonable expenses. We understand that we will not be compensated for use of office equipment, hardware or software materials.



Civil, Water, Wastewater, Drainage, Transportation and
Electrical/Controls Engineering • Construction Management • Surveying
California • Arizona



CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Action Item No. 4
August 5, 2020

To: Engineering Committee
From: David S. Gould, P.E. – Director of Engineering
Subject: Project Update – August 2020 - FY 20/21 Water Capital Improvement Program

BACKGROUND:

The Board approved the FY 20/21 Water Budget at the June 9, 2020 meeting with \$2.3M available for CIP projects. The Board also agreed to pursue refinancing CVWD's existing bond debt and requesting additional funding, totaling \$5M available for FY 20/21 CIP.

Staff presented a CIP Program, at a previous Engineering Committee meeting, comparing the \$5M Bond and PayGo funding scenarios for discussion. The information indicated that the amount of expenditures required between July 2020 and December 2020 for consultants and construction would be below \$1M for both funding scenarios.

DISCUSSION:

The following is the **August 2020 status** update of the FY 20/21 CIP projects:

1. **Steel Reservoir Rehabilitation – Rosemont Reservoir** – This project is for the structural repairs and re-coating of the reservoir interior to maintain the District's water storage capacity and to increase the life expectancy of the steel tank. Harper and Associates Engineering (Harper) and staff have completed the plans, specifications, construction cost estimate. The following is an updated project schedule:
 - July 28, 2020 - Approval to advertise for bids - Complete
 - August 19, 2020 - Pre-Bid Meeting
 - September 2, 2020 - Bid Opening
 - September 8, 2020 - Award of Contract
 - Construction to begin in November 2020 and be completed in February 2021.
2. **Annual Pipeline Replacement** – This project is for the replacement of steel pipelines that are at least 50-years old or more in a timely manner.

Project 1 & 2: Staff has completed the design for the 2400 & 2500 Blocks of Janet Lee (Project 1), proceeding with the design of the 4300 Block of Rosemont (Project 2), and the following is an updated project schedule:

- September 22, 2020 - Approval to advertise for bids
- October 21, 2020 - Bid Opening
- October 27, 2020 - Award of Contract
- Construction to begin in November 2020 and be completed by February 2021.

Projects 3 & 4: Staff sent a request for proposal (RFP) to five (5) consulting firms to provide engineering services for the pipeline replacement on the 3400 & 3500 Blocks of Encinal (Project 3) and the 4800 Block of Dyer, 2800 Block of El Caminito, 4800 Block of Glenwood, 2800 Block of Stevens and 2700 Block of Paraiso Way (Project 4). The following is an updated project schedule:

- August 4, 2020 - RFP Due
- August 11, 2020 - Award of Consulting Contract
- November 10, 2020 - Approval to advertise for bids
- December 8, 2020 - Award of Contract
- Construction to begin in January 2021 and be completed by July 2021

3. **Groundwater Well Rehabilitation** – This project is for the rehabilitation of Well 9, which was last rehabilitated in 2014. The design will be completed by Mr. Yared, and the following is an updated project schedule:

- October 2020 – Prepare plans and specification
- November 10, 2020 - Approval to advertise for bids
- December 8, 2020 - Award of Contract
- Construction to begin in February 2021 and be completed by April 2021

4. **New Pressure Reducing Station & Upgrade Ramsdell Mixing Station** – This project is for the installation of a new PRV station near the intersection of Mayfield Ave and Ramsdell Ave. to provide water from Zone 2 to Zone 1 when Encinal Reservoir is out of service during construction of the upgrades to the Ramsdell/Mayfield Mixing Station (Mixing Station).

Staff is working on the design with additional assistance from DMc Engineering for topographic and right-of-way survey, Cannon for the electrical design, and APEX for SCADA programing and integration. The following is an updated project schedule:

- September 22, 2020 - Approval to advertise for bids
- November 10, 2020 - Award of Contract
- Construction to begin in February 2021 and be completed by July 2021

5. **Replacement of Supervisory Control and Data Acquisition (SCADA) System Upgrade** – CVWD has an existing SCADA system with RTU/PLCs installed at each of the District's facilities that provides information on the status of the system, controls for booster pump operation, and alarms to the System Operators. Staff is working on the design to upgraded SCADA system such that the equipment, programing and integration are based on industry standards and can be installed, repaired, and/or replaced by various companies.

Staff is currently working on an assessment of the current equipment and programing to prepare a request for proposal with a scope of work for a consulting firm. Staff will do a presentation at a future Engineering Committee meeting to discuss possible options and preliminary construction costs.

6. **Replacement of SCADA Communication Radio Network** – CVWD has an existing radio communication network that operates on the 900 MHz radio frequency. In the past year, the radio system has seen interference with other communication devices and the equipment, which was installed 6 years ago, is nearing the end of its useful life, and has been malfunctioning.

Staff is currently working on an assessment of the current equipment and reviewing options with respect to available radio frequencies or a licensed frequency. This information will be used for a presentation at a future Engineering Committee meeting and possible that this scope will be included in the SCADA system upgrades.

7. **Local Hazard Mitigation Plan** - CVWD was awarded a grant from Cal OES and FEMA to prepare a Local Hazard Mitigation Plan (LHMP) to address high priority hazards related to its water and sewer systems during a drought, energy shortage/outage, wildfire, earthquake, terrorism and cyber-attack. The total grant amount to prepare a local hazard mitigation plan is \$165,000, with \$125,000 grant funding from FEMA and \$40,000 funding from CVWD.

The proposal will be reviewed with the Engineering Committee at the August meeting and the following is an updated project schedule.

- August 11, 2020 - Award of Consulting Contract
- Kickoff Meeting – September 3, 2020 with the Emergency Planning Committee
- LHMP to begin in September 2020 and be completed by October 2021

8. **Annual Booster Pump Replacement** – This project is for the replace Markridge Booster 25, one (1) of CVWD's 34 booster pumps. Mr. Yared will be preparing the design specifications that will include replacing the existing motor will be with premium efficiency motors to decrease power costs and increase the "water to wire" efficiency and the following is an updated project schedule:
- October 27, 2020 - Award of Contract
 - Construction to begin in January 2021 and be completed by March 2021
9. **Advanced Metering Infrastructure (AMI) Program** – This project has two (2) components, 1) replacement of ¾" & 1" meters with new Sensus iPERL "Smart Meters" in Pressure Zones 1 & 2, and 2) installation of the AMI network communication system. Field crews have resumed replacing meters, and this will continue through January 2021.

Staff met with UtiliWorks Consulting to review the request for quote (RFQ) for the AMI network communication system that was completed last year. Staff also requested a proposal from UtiliWorks for assistance with the project that will be discussed further. The following is an updated project schedule:

- August 11, 2020 – Approve consultant contract with UtiliWorks
 - September 22, 2020 – Approval to advertise for bids
 - November 10, 2020 – Award of Contract
 - Installation to begin in January 2021 and be completed by May 2021
10. **Stormwater Recharge Program** - Stormwater Recharge Project at Crescenta Valley County Park (CVC Park) includes the design and installation of a stormwater infiltration system within CVC Park that will direct stormwater from the Verdugo Wash into infiltration galleries for groundwater recharge.

The focus for the next two (2) months will be meeting and coordinating with the City of Los Angeles on stormwater rights. Staff will be working with John Robinson Consulting and Mr. Bunn from Lagerlof on an agreement with the City of Los Angeles. The draft agreement will be presented at a future Engineering Committee meeting.

11. **Facility Improvement Program** – This project is for the installation of a new roof on the existing 70 ft diameter concrete reservoir at Encinal for material and equipment storage. Staff will be preparing an RFP for a consulting firm to perform the structural design of the new roof. The following is an updated project schedule:
- August 31, 2020 – RFP Due
 - September 8, 2020 - Award of Consulting Contract
 - November 10, 2020 - Approval to advertise for bids
 - January 12, 2021 - Award of Contract
 - Construction to begin in February 2021 and be completed by July 2021
12. **Rehabilitation Surge Tank at Glenwood** – This project is the rehabilitation of the surge tank at the Glenwood plant. Staff has a preliminary design completed, and the next step will be completing the design and specifications for a specialty contractor to perform the repairs. The project will be awarded for construction in January 2021 and construction completed by April 2021. The schedule will be as follows:
- December 8, 2020 - Award of Contract
 - Construction to begin in January 2021 and be completed by March 2021

SUMMARY:

In summary, staff is underway with the design of several CIP projects and wanted to provide updated information to the Engineering Committee about the project schedule and future Board action items.

Prepared & Submitted by:



David S. Gould, P.E.
Director of Engineering

Preliminary Board Meeting Action Items - CIP Program	
Date	Agenda
7/28/2020	Advertise for Bid - Rosemont Reservoir
8/11/2020	Award of Contract - Study - Local Hazard Mitg. Plan
	Award of Contract - Design Contract - Project 3 & 4 Pipeline
	Award of Contract - AMI - UtiliWorks
8/25/2020	Presentation - Mills Plant
9/8/2020	Advertise for Bid - Sewer Lift Station
	Award of Contract - Rosemont Reservoir
	Award of Contract - Design - New Roof - Old Encinal
9/22/2020	Advertise for Bid - Ramsdell Mixing Station
	Advertise for Bid - AMI Network Communication
	Advertise for Bid - Janet Lee & Rosemont Pipeline
10/13/2020	Award of Contract - Construction Management Services
	Award of Contract - Sewer Lift Station
10/27/2020	Award of Contract - Booster Pump
	Award of Contract - Janet Lee & Rosemont Pipeline
11/10/2020	Advertise for Bid - Well 9 Rehab
	Award of Contract - Ramsdell Mixing Station
	Award of Contract - AMI Network Communication
	Advertise for Bid - New Roof - Old Encinal
	Advertise for Bid - Encinal & Dyer St Pipeline
11/24/2020	
12/8/2020	Award of Contract - Well 9 Rehab
	Award of Contract - Encinal & Dyer St Pipeline
	Award of Contract - Surge Tank - Glenwood
12/22/2020	NO MEETING
1/12/2021	Award of Contract- New Roof - Old Encinal
1/26/2021	