

# **CRESCENTA VALLEY WATER DISTRICT**

**2700 Foothill Boulevard  
La Crescenta, California**

**Agenda for the  
Regular Meeting of the Board of Directors  
of the Crescenta Valley Water District  
to be held on Tuesday, April 12, 2022, at 7:00 p.m.**

**Posted: Thursday, April 7, 2022, at 4:30 p.m.**

## **AUDIO & VIDEO CONFERENCING NOTICE**

**[This meeting will be held by audio & video conference only.]**

**Under AB 361 and District Resolution No. 772, the District will continue to hold Board and Committee meetings by teleconference, due to the continuing State of Emergency for COVID-19 and the ongoing imminent risks to the health or safety of the attendees from COVID-19.**

**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: 859 0516 2962**

**Those members of the public who are able to and would like to additionally participate through computer may access the Zoom audio & video conferencing tool available at the following link:**

**<https://us02web.zoom.us/j/85905162962>**

**Public comment may be made either by emailing comments ahead of the meeting or by speaking over the phone. Emailed comments will be sent to the Board of Directors prior to the meeting and posted on the District's website. Comments may be sent to Christy Colby, Regulatory and Public Affairs Manager, at (818) 248-3925 or [customerservice@cvwd.com](mailto:customerservice@cvwd.com) by 3pm on April 12, 2022.**

**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.**

**Any written materials distributed to the Board in connection with this agenda will be made available at the same time for public inspection at the District office located at the above address and posted on the District's website.**

**Call to Order and Determination of Quorum**

**Pledge of Allegiance**

**Adoption of Agenda**

**Public Comments**

At this time, the public shall have an opportunity to comment on any non-agenda item relevant to the subject matter jurisdiction of the Board. This opportunity is non-transferable, and speakers are limited to one three-minute (3) comment. Under the provisions of the Brown Act, the Board is prohibited from taking action on items not listed on the agenda, except under certain circumstances.

**Foothill Municipal Water District Report**

1. Report on activities at Foothill Municipal Water District.

**Consent Calendar**

1. Consideration and approval of the Minutes of the Adjourned Regular Board Meeting on March 22, 2022.
2. Consideration and approval for continuing to hold meetings by teleconference.

**Action Calendar**

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

1. **Resolution No. 777** – Consideration and motion to adopt an application for grant funding from the U.S. Bureau of Reclamation, Water and Energy Efficiency Grant for 1 ½ & 2-inch meter for Advanced Metering Infrastructure, Project E-1044.
2. **Installation of a New Fire Service for Clark Magnet High School, Project D-21-G2**
  - a. Consideration and motion to authorize the General Manager to award a contract to the lowest responsible bidder, Carney Engineering Group, Inc., for the installation of a new fire service for Clark Magnet High School at a cost of \$135,000 and establish a contingency amount of \$13,500 (10% of contract) to cover the cost of unforeseen or additional work.
  - b. Consideration and motion to authorize the General Manager to enter into an agreement with Wallace & Associates Consulting, Inc. for construction management and inspection services for the fire service installation project at a cost of \$42,626.
3. **Professional Engineering Services for the 2023 Wastewater Master Plan** – Consideration and motion to authorize the General Manager to enter into an agreement with Kennedy/Jenks Consultants, Inc. to provide professional engineering services for said project at a cost of \$285,533 and establish a contingency amount of \$28,553 (10% of contract) to cover the cost of unforeseen or additional work.

**Information Items**

**Written Communications to District/Board of Directors**

**General Manager's Report**

**Attorney Report**

**Reports of Committees**

- Engineering Committee
- Finance Committee
- Employee Relations Committee
- Policy Committee
- Community Relations/Water Conservation Committee
- Emergency Planning Committee
- Technology Committee

**Directors' Oral Reports** – Reports on issues, meetings, or activities attended by Directors.

**Board Members' Request for Future Agenda Items**

**Closed Session** - none

**Adjournment**

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**CRESCENTA VALLEY WATER DISTRICT**  
**ADJOURNED REGULAR MEETING, BOARD OF DIRECTORS**  
**March 22, 2022**

Pursuant to the order of the Board of Directors of the Crescenta Valley Water District made at the Regular Meeting on March 8, 2022, an Adjourned Regular Meeting was held on March 22, 2022, at 7:00 p.m. through audio and video conference. A call-in number was clearly noted on the meeting Agenda, posted in accordance with the Brown Act, due to the COVID-19 pandemic, with President James D. Bodnar presiding.

At roll call, the following Directors and staff members were online:

**Directors:**

**James D. Bodnar**  
**Kerry D. Erickson**  
**Ken R. Putnam**  
**Sharon S. Raghavachary**  
**Judy L. Tejeda**

**Attorney:**

**Thomas Bunn**

**General Manager:**

**Nem Ochoa**

**Director of Finance & Administration:** **James Lee**

**Director of Operations & Engineering:** **David Gould**

**Staff Members:**

**Brook Yared, Engineering Manager**  
**Arturo Montes, Finance & Administration Manager**  
**Darlene Telles, Operations & Maintenance Manager**  
**Kellen Boyce, System & Operations Manager**  
**Adam Sutphin, Analyst**  
**Pam Leddy, Administrative Assistant**

**Guests:**

**Frank Colcord**  
**Tony Ingegneri, ATS**

**PLEDGE OF ALLEGIANCE**

Director Tejeda opened the meeting by leading the Directors and staff in reciting the Pledge of Allegiance.

**ADOPTION OF AGENDA**

It was moved by Director Tejada, seconded by Director Erickson, and carried by a 5-0 roll call vote that the Agenda for the Adjourned Regular Meeting of March 22, 2022, be adopted as presented.

**AYES:**           **Director Bodnar**  
                     **Director Erickson**  
                     **Director Putnam**  
                     **Director Raghavachary**  
                     **Director Tejada**

**NOES:**           **None**

**PUBLIC COMMENTS** – None

**FOOTHILL MUNICIPAL WATER DISTRICT REPORT** – Mr. Colcord stated that the State Department of Water Resources announced last week that the 15 percent allocation had further been reduced to 5 percent. Mr. Colcord indicated that Foothill Municipal Water District (FMWD) can source water from the Colorado River but agencies to the east and west of that the FMWD service area rely solely on the State Water Project for their imported water may suffer significant burden. Mr. Colcord shared that Metropolitan Water had held a press conference at the Theodore Payne Foundation reminding Southern California residents to continue to reduce their day-to-day water use to meet the Governor's voluntary 15 percent conservation target. Mr. Colcord emphasized that CVWD customers continue to demonstrate their commitment to conservation with cumulative conservation of 9 percent under last year's usage through February and 11 percent from the reference year of 2013/14 rain year. Mr. Colcord announced that FMWD has published its Annual Management Report.

**CONSENT CALENDAR**

It was moved by Director Tejada, seconded by Director Erickson, and carried by a 5-0 roll call vote to approve the Minutes of the Regular Board Meeting held on March 8, 2022, through audio and video conference, ratify the disbursements for February 2022 as presented and to reaffirm Resolution No. 772 to find that (1) Los Angeles County officials have imposed or recommended measures to promote social distancing; and (2) meeting in person would present imminent risks to the health and safety of attendees.

Payment of demands against the Crescenta Valley Water District on or before February 2022, the same having been approved by the General Manager, and heretofore paid, are to be ratified and approved subject to audit, in the aggregate sum of One Million, Eleven Thousand, Two-Hundred Eighteen Dollars and Fifty-Two Cents (1,011,218.52), which is composed of the individual items set forth herein.

**AYES:**           **Director Bodnar**  
                     **Director Erickson**  
                     **Director Putnam**  
                     **Director Raghavachary**  
                     **Director Tejada**

**NOES:**           **None**

### **ACTION CALENDAR**

**Public Hearing** – Director Bodnar opened the Public Hearing at 7:28 p.m. to hear comments from the public relating to the consideration and possible adjustment of Board compensation and meeting limits. There being no comments from members of the public, the Public Hearing was closed at 7:29 p.m.

**Director Compensation and Compensated Meeting Limits** – Mr. Ochoa announced that at the January 11, 2022 Board meeting, the Board supported a motion to issue a public notice to potentially adjust the compensation and/or compensated meeting limits of the Board of Directors. Mr. Ochoa shared that two (2) notices have been posted in the CV Weekly newspaper, once on March 10<sup>th</sup> and a second time on March 17<sup>th</sup> as required by law.

Following discussion:

**It was moved by Director Putnam, seconded by Director Raghavachary, and carried by 5-0 roll call vote to amend Section 4:04 of the District's Rules and Regulations adjusting the Board of Directors daily compensation for attending meetings and authorized days of service to \$125, for a maximum of 10 days per month.**

**AYES:**           **Director Bodnar  
Director Erickson  
Director Putnam  
Director Raghavachary  
Director Tejeda**

**NOES:**           **None**

**Policy and Procedures for Commercial Facilities Located on District Properties** – Mr. Lee presented information on the possibility of facilitating cellular site leases on District properties that would represent a cost-efficiency measure for the District by developing a new sources of revenue. Mr. Lee indicated that the year-long process would begin by adopting a Policy and Procedure for Commercial Facilities located on District properties. Mr. Lee introduced Mr. Tony Ingegneri from ATS Communications, whose company specializes in evaluating and marketing the District's various sites to cellular companies which specialize in public water agencies.

Following discussion:

**It was moved by Director Putnam, seconded by Director Tejeda, and carried by 5-0 roll call vote to refer the adoption of an Appendix pertaining to the Policy and Procedures for Commercial Communications Facilities located on District properties to the District's Rules and Regulations to the Technology Committee for further discussion.**

**AYES:**           **Director Bodnar  
Director Erickson  
Director Putnam  
Director Raghavachary  
Director Tejeda**

**NOES:           None**

**Arrearages Program** – Mr. Montes announced that the California State Water Board authorized funds for its Arrearages Program to mitigate the impact of Executive Order N-42-40 issued by the Governor, which prohibited water service providers from shutting water services off during the pandemic. Mr. Montes stated that CVWD was recently awarded \$138K for the water enterprise and expects to receive \$24K for the wastewater enterprise. Mr. Montes explained that the funds are eligible to be applied to unpaid bills accumulated between March 2020 and July 2021, and if bills have since been paid, a portion of the awarded funds will be returned to the State.

**INFORMATION ITEMS** – None

**WRITTEN COMMUNICATIONS TO DISTRICT** – None

**REPORTS OF PERSONNEL** – None

**GENERAL MANAGER** – Mr. Ochoa recognized staff for multiple cost saving programs to generate passive income and/or save the District money and maintain financial viability. Ms. Telles provided highlights of the Maintenance and Operations Report for the month of February 2022. Mr. Lee provided highlights of the Finance and Administration Report for the month of February 2022.

**ATTORNEY** – No report

**REPORTS OF COMMITTEES**

**Engineering Committee** – Director Erickson reported that the Committee had met not met; however, an audio/video conference meeting is scheduled on April 7, 2022.

**Finance Committee** – Director Bodnar reported that the Committee had met on March 15, 2022. An audio/video conference meeting will be scheduled as needed.

**Employee Relations Committee** – Director Erickson reported that the Committee had not met; however, an audio/video conference will be scheduled as needed.

**Policy Committee** – Director Putnam reported that the Committee had not met; however, an audio/video conference will be scheduled as needed.

**Community Relations/Water Conservation Committee** – Director Tejeda reported that the Committee had met on March 15, 2022. An audio/video conference will be scheduled as needed.

**Emergency Planning Committee** – Director Putnam reported that the Committee had not met; however, an audio/video conference meeting will be scheduled as needed.

**Technology Committee** – Director Raghavachary reported that the Committee had not met; however, an audio/video conference meeting will be scheduled as needed.

**Executive Committee** – Director Bodnar reported that the Committee had not met; however, an audio/video conference meeting will be scheduled as needed.

**DIRECTORS' ORAL REPORTS**

**Director Raghavachary** – Shared that during her recent visit to Sedona, Arizona the Colorado River water level appeared to be relatively low. Director Raghavachary said that fire issues are a concern in the Midwest due to the lack of snowfall.

**Director Bodnar** – Announced that he would not be available to attend the April 12, 2022 Board meeting.

**Director Erickson** – Stated that with the State of California tightening water allocation and possibly mandating water restrictions, AMI will become a very important service available to CVWD customers.

**Director Putnam** – No report

**Director Tejeda** – No report

**BOARD MEMBERS' REQUESTS FOR FUTURE AGENDA ITEMS** – None

**CLOSED SESSION** – None

**ADJOURNMENT**

There being no other business to come before the Board, at 8:47 p.m., the meeting was adjourned to April 12, 2022, at 7:00 p.m.

**APPROVED**

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James D. Bodnar  
President

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James Lee  
Director of Finance & Administration



# **CRESCENTA VALLEY WATER DISTRICT**

## **BOARD OF DIRECTORS – STAFF REPORT**

**To:** Honorable President and Members of the Board of Directors  
**From:** Thomas Bunn – General Counsel  
**Subject:** **Approve continuation of remote meetings as described in AB 361 and make required findings**

### **DISCUSSION :**

At the September 28, 2021 Board meeting, pursuant to AB 361, the Board of Directors adopted Resolution No. 772, which authorized the Board to continue to have remote meetings based upon the continued state of emergency for COVID-19, and made findings that (1) Los Angeles County officials have imposed or recommended measures to promote social distancing; and (2) meeting in person would present imminent risks to the health and safety of attendees. In order to continue to have remote meetings, AB 361 requires that the Board reaffirm one or both of those findings within 30 days after the first remote meeting, and every 30 days thereafter, provided that a state of emergency continues to be in place.

At the time this report was prepared, there is a continued state of emergency for COVID-19. This item is on the agenda for the Board to consider whether to reaffirm the resolution and make the required findings to continue to have remote meetings for an additional 30 days. The resolution authorizes the Board to extend the resolution by motion.

### **FINANCIAL CONSIDERATIONS**

None.

### **RECOMMENDATION**

The Board of Directors reaffirm Resolution No. 772 and find that (1) Los Angeles County officials have imposed or recommended measures to promote social distancing; and (2) meeting in person would present imminent risks to the health and safety of attendees.

# CRESCENTA VALLEY WATER DISTRICT

## BOARD OF DIRECTORS - STAFF REPORT

Action Item No. 1

April 12, 2022

**To:** Honorable President and Members of the Board of Directors

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

**Subject:** **Resolution No. 777 – Authorizing and Approving Submission for a USBR Small-Scale Water Efficiency Projects Grant Program, Project E-1044**

### **ACTION ITEM**

**Resolution No. 777** – Consideration and motion to adopt an application for grant funding from the U.S. Bureau of Reclamation, Water and Energy Efficiency Grant for 1 ½ & 2-inch meter for Advanced Metering Infrastructure, Project E-1044.

### **BACKGROUND:**

The U.S. Bureau of Reclamation (USBR) is making grant funding available through its 2022 WaterSMART Program for Small-Scale Water Efficiency Grant, which will provide 50/50 cost share funding to irrigation and water districts, tribes, states and other entities with water or power delivery authority for small water efficiency improvements. Projects eligible for funding include installation of flow measurement or automation in a specific part of a water delivery system, lining of a section of a canal to address seepage, or other similar projects that are limited in scope. The notice of funding opportunity is available on grants.gov by searching for opportunity number R22AS00195. Applications are due on April 28, 2022, at 4 pm. In 2021, USBR provided over \$5.5M to 82 projects in 16 states in the West for WaterSMART grants for small-scale water efficiency improvements with each project getting up to \$75,000 in grant funding. CVWD received a grant for its Large Water AMI Replacement Project.

### **DISCUSSION:**

Staff reviewed CVWD's AMI program for similar projects that could be eligible for Small-Scale Water Efficiency project grant program and concluded that replacement of the District's 1½-inch and 2-inch water displacement meters with new and more efficient "Smart Meters" would meet the grant requirements.

### **1½-inch and 2-inch Meter Replacement Project**

CVWD has 152 1½-inch meters and 64 2-inch meters that are located at large apartment and condominium complexes, restaurants, commercial buildings senior living apartments, parks and traffic medians as irrigation meters and other locations with large water use. These meters were scheduled to be replaced in FY 22/23 & FY 23/24 at an estimated cost of \$495,000 that includes new meters with smart points, new meter box lids, and piping upgrades. The work will be performed either by an outside contractor or CVWD's crews to the extent possible. The USBR grant will afford CVWD the operational benefits of accelerating the large meter upgrades to "Smart Meters", monitoring water use and reducing the amount of unaccountable water (i.e., from low flows) through the older meters. Financial benefits include reduced cost to the overall AMI effort and reduced revenue loss from unaccountable water. The 2022 USBR grant requirements for funding has a maximum project limit of \$225,000 and a maximum USBR contribution of \$100,000 with a 50/50 cost share funding. The following table shows the proposed cost breakdown for the grant application.

| Grant Budget - 1-1/2 & 2-inch Meters |          |           |                   |
|--------------------------------------|----------|-----------|-------------------|
| Task                                 | Quantity | Unit Cost | Cost              |
| New 1-1/2" meters                    | 20       | \$ 1,590  | \$ 31,800         |
| New 2" Meters                        | 64       | \$ 1,335  | \$ 85,440         |
| New Meter Boxes with Lids            | 64       | \$ 65     | \$ 4,160          |
| Piping & Valve Upgrades              | 84       | \$ 60     | \$ 5,040          |
| New "Smart Points"                   | 64       | \$ 215    | \$ 13,760         |
| Construction - Outside Contractor    | 1        | \$ 35,000 | \$ 35,000         |
| Consultant Services                  | 1        | \$ 6,618  | \$ 6,618          |
| Subtotal                             |          |           | \$ 181,818        |
| Contingency                          | 10%      |           | \$ 18,182         |
| <b>Total</b>                         |          |           | <b>\$ 200,000</b> |
| Grant - USBR                         |          |           | \$ 100,000        |
| Grant - CVWD                         |          |           | \$ 100,000        |

**Grant Application:**

Staff will work with John Robinson Consulting (JRC), who has assisted the District with securing previous grants opportunities, to prepare the USBR grant application for CVWD's 1½-inch and 2-inch Meter Replacement Program that will request a \$100,000 grant from USBR with the intent of \$100,000 cost match from CVWD.

As part of the process, USBR is requesting that a resolution be approved by the Board of Directors to certify that CVWD: 1) has the legal authority to enter into an agreement with USBR; 2) has reviewed and supports the application submitted; 3) has the capability to provide the amount of funding and/or in-kind contributions specified in the application funding plan; 4) will work with the Bureau of Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

**RECOMMENDATION:**

It is staff's recommendation to adopt Resolution No. 777, such that CVWD can continue with preparation and submittal of a USBR grant application for the 1½-inch and 2-inch Meter for Advanced Metering Infrastructure Project.

**ENVIRONMENTAL REVIEW:**

N/A

**FUNDING AVAILABILITY:**

N/A

Prepared & Submitted by:



David S. Gould, P.E.

Director of Engineering & Operations

Attachment:

1. Resolution No. 777

## **RESOLUTION NO. 777**

### **RESOLUTION OF THE BOARD OF DIRECTORS OF CRESCENTA VALLEY WATER DISTRICT**

#### **AUTHORIZING AND APPROVING SUBMISSION FOR A UNITED STATES BUREAU OF RECLAMATION SMALL-SCALE WATER EFFICIENCY PROJECTS GRANT**

**WHEREAS**, the United States Department of the Interior provides financial assistance through WaterSMART; Small-Scale Water Efficiency Projects for entities to undertake projects that result in quantifiable and sustained water savings and support broader water reliability benefits; and

**WHEREAS**, the Board of Directors of Crescenta Valley Water District desires to submit an application for grant funds from said program; and

**WHEREAS**, the Bureau of Reclamation has been delegated the responsibility of the administration of this grant program and establishing necessary procedures; and

**WHEREAS**, said procedures established by the Bureau of Reclamation require the applicant to certify by resolution the identity of the official with legal authority to enter into an agreement; that the appropriate official or governing body has reviewed and supports the application submitted; the capability of the applicant to provide the amount of funding and/or in-kind contributions specified in the application funding plan; and that the applicant will work with the Bureau of Reclamation to meet established deadlines for entering into a grant or cooperative agreement; and

**NOW, THEREFORE**, that the Board of Directors of the Crescenta Valley Water District resolves as follows:

Section 1. The Board of Directors of Crescenta Valley Water District appoints the General Manager, or his designee, to act as agent with legal authority to enter into grant or cooperative agreement, conduct all negotiations, execute and submit all documents for the Consideration and motion to adopt an application for grant funding from the U.S. Bureau of Reclamation, Water and Energy Efficiency Grant for 1-½ & 2-inch Meters for Advanced Metering Infrastructure, Project E-1044 including, but not limited to, applications, agreements, payment requests and any other grant required correspondence with may be necessary for the completion of the grant program.

Section 2. The Board certifies that Crescenta Valley Water District has sufficient funds available to provide the amount of funding specified in the funding plan as matching funds/in-kind contributions.

Section 3. The Board certifies that Crescenta Valley Water District will work with the US Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement.

Section 4. This Resolution shall take effect immediately upon its adoption by the Board, and the Secretary to the Board shall certify the vote adopting this Resolution.

**PASSED, APPROVED, AND ADOPTED** at a Regular Meeting of the Board of Directors of Crescenta Valley Water District held on April 12, 2022, Resolution No. 777 was adopted by the following vote:

**AYES:**

**Director Bodnar  
Director Erickson  
Director Putnam  
Director Raghavachary  
Director Tejeda**

**NOES:**

**None**

**ATTEST:**

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**President, Board of Directors  
Crescenta Valley Water District**

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**Secretary of the Board of Directors**

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**Secretary of the Board of Directors of  
Crescenta Valley Water District**

# CRESCENTA VALLEY WATER DISTRICT

## BOARD OF DIRECTORS - STAFF REPORT

Action Item No. 2

April 12, 2022

**To:** Honorable President and Members of the Board of Directors  
**From:** Brook Yared, M.S., P.E. – Engineering Manager  
**Subject:** **Award of Contract - Installation of New Fire Service for Clark Magnet High School, Project D-21-G2**

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### **ACTION ITEM:**

#### **Installation of New Fire Service for Clark Magnet High School, Project D-21-G2 –**

- a. Consideration and motion to authorize the General Manager to award a contract to the lowest responsible bidder, Carney Engineering Group, Inc. for the installation of a new fire service for Clark Magnet High School at a cost of \$135,000 and establish a contingency amount of \$13,500 (10% of contract) to cover the cost of unforeseen or additional work.
- b. Consideration and motion to authorize the General Manager to enter into an agreement with Wallace & Associates Consulting, Inc. for construction management and inspection services for the fire service installation project at a cost of \$43,626.

### **BACKGROUND:**

Crescenta Valley Water District (CVWD) has been assisting Glendale Unified School District's (GUSD) on the construction of a new building at Anderson W. Clark Magnet High School (Clark) and the installation of a new fire service line. During the planning process and as requested by GUSD's design team, CVWD investigated the possibility of providing fire service protection to the new building and found that a critical portion of the existing water distribution system in the area could not provide adequate water pressure and flow for fire protection. After utilizing the hydraulic model to determine the pipe sizing, the District contracted with MKN Associates to perform the design work and assist in awarding the Contract.

### **DISCUSSION:**

On February 8, 2022, the Board authorized the General Manager to advertise for bids for the subject project. A mandatory pre-bid meeting was held on March 30, 2022 and was attended by five (5) contractors. CVWD's specifications indicate that only contractors who attend this meeting are allowed to bid on the project.

On April 6, 2022, at 2:00 PM, the District opened and read the following bid proposals:

|     | <b><u>Bidder</u></b>            | <b><u>Total Bid Amount</u></b> |
|-----|---------------------------------|--------------------------------|
| Low | Carney Engineering Construction | \$135,000                      |
| 2   | Robert Brkich Construction      | \$166,000                      |
| 3   | CEM Construction                | \$225,960                      |
| 4   | Mike Bubalo Construction        | \$391,600                      |
| 5   | Toro Enterprises                | Declined to Bid                |

Staff reviewed the bids received and Carney Engineering Construction, Inc. from Torrance, CA was the apparent lowest responsible bidder for the project. The engineer's estimate was \$151,000, and the low bid was \$135,000 or 11% less than the engineer's estimate.

Staff has worked with Bill Carney of Carney Engineering Construction, Inc. in the past when he was the Project Manager for E&R construction. All responses from Carney Engineering Construction's references have been very positive.

This project work and construction is being performed on behalf of GUSD and GUSD has agreed to reimburse CVWD for design, inspection and construction costs. CVWD submitted the first cost reimbursement claim to GUSD for the cost for engineering and design services to date of \$48,864.87. At this time, Staff has not received the reimbursement check. However, GUSD's governing body has approved the payment and payment is expected within the next two week. Staff intends to continue to submit claims to GUSD as costs for construction and inspection are incurred.

**Construction Management & Inspection Services:**

Staff requested proposals from the preselected construction management and inspection support (CM&I) consultants to provide CM&I services for this project. The proposal was based on the proposed construction schedule and CVWD's need for full-time inspection services. Wallace & Associates Consulting, Inc.'s proposed fee for the project was \$43,626, which covers the construction period from February 2022 to July 2022. These CM&I costs will also be included in future reimbursement claims to GUSD.

**RECOMMENDATION:**

It is staff's recommendation to award the contract for the subject project to the lowest responsible bidder, Carney Engineering Construction, at a cost of \$135,000 and establish a 10% contingency fund of \$13,500. Staff also recommends awarding a contract to Wallace & Associates Consulting, Inc. at a cost of \$43,626 for CM&I services.

A pre-construction meeting will be set as soon as the contract is awarded, the agreement is signed, permits have been established, and insurance documents have been delivered. Mr. Brook Yared will be the project manager, with assistance from Ms. Jennifer Bautista, and Wallace & Associates Consulting, Inc. will provide field inspection and construction management.

Staff will also hold a community meeting for the residents on the 4800 block of Cloudsdale Ave. prior to construction. The Community Meeting announcement with the dates and times will be sent to the residents and posted on CVWD's website, [www.cvwd.com](http://www.cvwd.com).

**ENVIRONMENTAL REVIEW:**

This project was previously approved to be exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15301 of the CEQA Guidelines.

**FUNDING AVAILABILITY:**

Sufficient funds have been set aside for the initial cost of this project. All costs will be reimbursed by GUSD at a later date:

| Account Description                                     | Amount           |
|---------------------------------------------------------|------------------|
| Original Estimate (Provided to GUSD)                    | <b>\$372,800</b> |
| D-21-G2 – Design and Hydraulic Modeling                 | (\$55,000)       |
| D-21-G2 – Construction Management & Inspection Services | (\$43,626)       |
| D-21-G2 – Materials & Construction                      | (\$226,000)      |
| Total Cost Estimate                                     | (\$324,626)      |
| Amount Remaining from Original Estimate                 | <b>\$48,174</b>  |

Prepared by:



Jennifer Bautista  
Project Coordinator

Submitted by:



Brook Yared, M.S., P.E.  
Engineering Manager

Attachments:

1. Bid Summary
2. Project Location Map



# CRESCENTA VALLEY WATER DISTRICT

Title: Construction of the Anderson W. Clark Magnet High School Fire Service Line

BID LOCATION:

CVWD's Office

D-Job No: \_\_\_\_\_ D-21-G2

TIME: \_\_\_\_\_ 2:00 PM

Engineer's Estimate: \$151,000

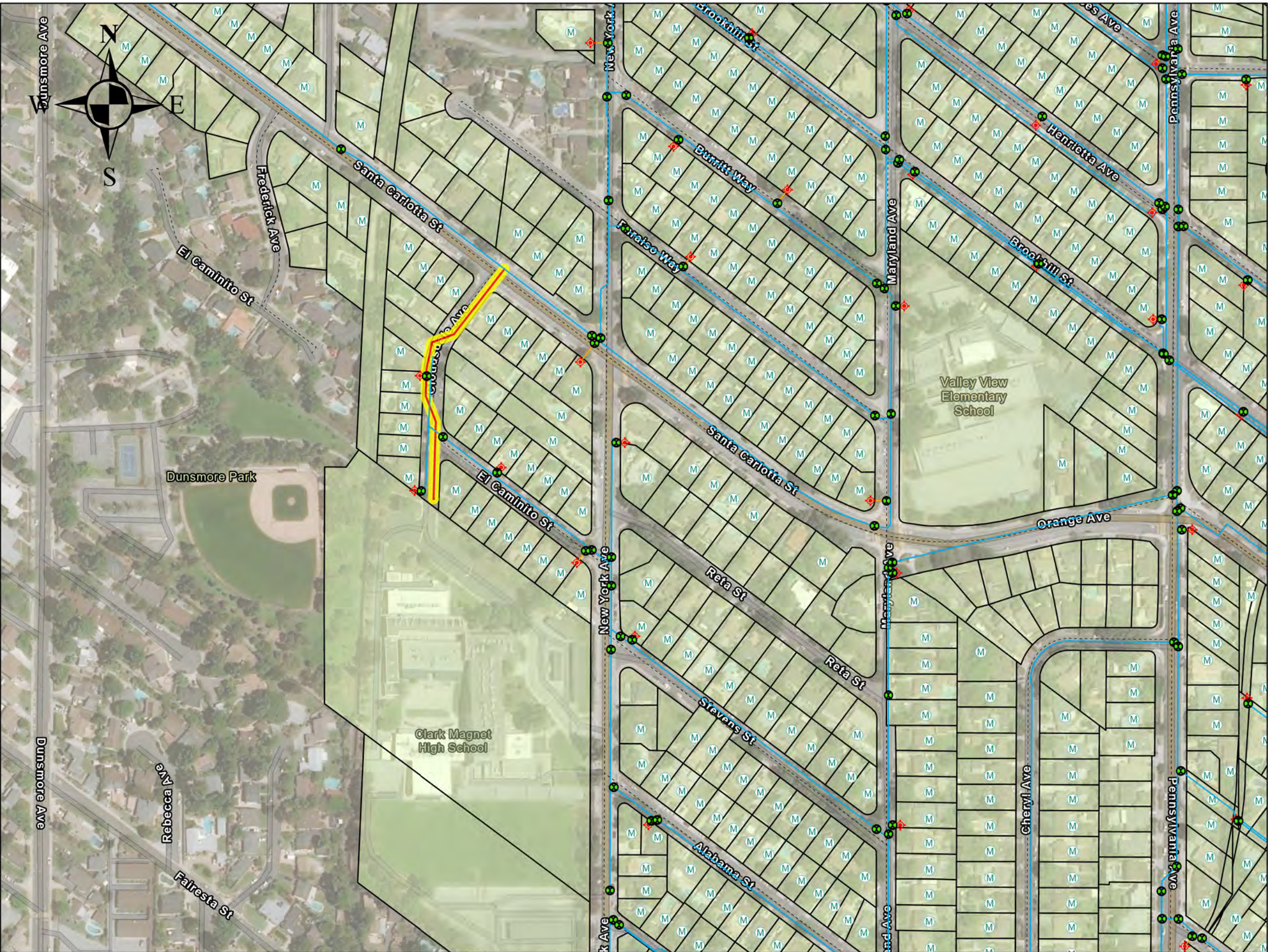
DATE: \_\_\_\_\_ 4/6/22

Project Manager: Brook Yared

BY: BY CHECKED: DSG

|      |                                                                                    |            | Engineers Estimate |              | Carney Engineering Construction |              | Robert Brkich |              | CEM Construction |              | Mike Bubalo Construction |              |
|------|------------------------------------------------------------------------------------|------------|--------------------|--------------|---------------------------------|--------------|---------------|--------------|------------------|--------------|--------------------------|--------------|
| ITEM | DESCRIPTION                                                                        | QUANTITY   | UNIT               | AMOUNT       | UNIT                            | AMOUNT       | UNIT          | AMOUNT       | UNIT             | AMOUNT       | UNIT                     | AMOUNT       |
| 1    | Excavation and backfill (pipeline, laterals & appurtenances)                       | 620 LF     | \$50.81            | \$31,500.00  | \$79.00                         | \$48,980.00  | \$140.00      | \$86,800.00  | \$80.00          | \$49,600.00  | \$60.00                  | \$37,200.00  |
| 2    | Resurfacing Trench                                                                 | 2,480 SF   | \$17.78            | \$44,100.00  | \$14.50                         | \$35,960.00  | \$20.00       | \$49,600.00  | \$13.50          | \$33,480.00  | \$40.00                  | \$99,200.00  |
| 3    | Install 8" CML & CMC steel water pipeline and appurtenant construction*            | 620 LF     | \$76.13            | \$47,200.00  | \$56.50                         | \$35,030.00  | \$30.00       | \$18,600.00  | \$199.00         | \$123,380.00 | \$360.00                 | \$223,200.00 |
| 4    | Install 6" Fire Hydrant and steel water pipe lateral and appurtenant construction* | 1 EA       | \$14,400.00        | \$14,400.00  | \$4,500.00                      | \$4,500.00   | \$3,500.00    | \$3,500.00   | \$7,000.00       | \$7,000.00   | \$15,000.00              | \$15,000.00  |
| 5    | Install 1" Air Release Assembly and appurtenant construction*                      | 1 LS       | \$8,800.00         | \$8,800.00   | \$6,400.00                      | \$6,400.00   | \$4,500.00    | \$4,500.00   | \$5,000.00       | \$5,000.00   | \$7,000.00               | \$7,000.00   |
| 6    | Provide traffic control for the Project                                            | 1 Lump Sum | \$5,000.00         | \$5,000.00   | \$4,130.00                      | \$4,130.00   | \$3,000.00    | \$3,000.00   | \$7,500.00       | \$7,500.00   | \$10,000.00              | \$10,000.00  |
|      |                                                                                    |            | EE                 | \$151,000.00 | LOW                             | \$135,000.00 | 2ND           | \$166,000.00 | 3RD              | \$225,960.00 | 4TH                      | \$391,600.00 |





Legend

Existing System:

- wsvalve
- whyd
- wmain
- wlatline
- GIS\_Services
- Service\_Area
- StreetCenterline

New 8-inch main to be installed for fire service

Total Length - 620 ft  
Diameter New Pipeline - 8-inch  
Material - CMLxCMC, 10 ga. Steel

Clark Magnet High School  
New Fire Service Pipeline  
D-G2-21



Project Location Map



# CRESCENTA VALLEY WATER DISTRICT

## BOARD OF DIRECTORS - STAFF REPORT

Action Item No. 3  
April 12, 2022

**To:** Engineering Committee  
**From:** David S. Gould, P.E. – Director of Engineering & Operations  
**Subject:** Award of Contract - 2023 Wastewater Master Plan – Project M-1037A

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### **ACTION ITEM:**

**Professional Engineering Services for the 2023 Wastewater Master Plan** – Consideration and motion to authorize the General Manager to enter into an agreement with Kennedy/Jenks Consultants, Inc. to provide professional engineering services for said project at a cost of \$285,533 and establish a contingency amount of \$28,553 (10% of contract) to cover the cost of unforeseen or additional work.

### **BACKGROUND:**

Staff solicited request for proposals (RFPs) for professional engineering services to prepare CVWD's 2023 Wastewater Master Plan (WWMP), which will be the District's first WWMP since the collection system was installed in the 1980's. Industry best management practice recommends completing a master plan update every five years. The primary purpose of the WWMP is to evaluate CVWD's wastewater system, assess current and future system reliability, and prioritize recommended system improvements, accomplished by completing the following scope of work:

- Review system-wide sewer flow characteristics, evaluate the existing condition, and assess the existing hydraulic capacity of the system utilizing CVWD's GIS information and as-builts.
- Estimate future sewer flow based on population projections and potential development projects utilizing the Los Angeles County and City of La Canada Flintridge Future Land Use Map, General Plan and Housing Plan.
- Develop a flow monitoring program that will be implemented by CVWD including:
  - o Identify appropriate locations/stations for flow monitoring within the collection system to collect flow monitoring data under wet and dry weather conditions, to determine existing capacities and wastewater hydraulic modeling calibration.
  - o Provide a recommendation for design and installation of flow monitoring stations.
- Create and run a wastewater hydraulic computer model based on existing information and field data on an agreed-upon software platform that can be easily updated by staff.
- Determine potential pipeline replacement, size upgrades and/or rehabilitation needs based on the hydraulic model and future sewer flows.
- Create a prioritized 10-Year CIP sewer plan with potential funding approaches.

The Master Plan will identify and prioritize CIP projects needed to repair, replace, and/or upgrade CVWD's aging infrastructure to increase system operating efficiencies and reliability while improving cost predictability and minimizing occurrence of sewer overflow events due to system deficiencies.

### **DISCUSSION:**

In February 2022, staff sent out the RFP to twelve (12) consulting engineering firms to prepare the 2023 Wastewater Master plan. Each firm has prior experience with preparing similar wastewater master plans within Southern California. Attached for reference is CVWD's RFP that included the scope of work and other project parameters. A pre-proposal meeting was held on March 1, 2022, and it was attended by six (6) firms. Proposals were received on March 29, 2022, and CVWD received two (2) proposals.

Staff reviewed each proposal and ranked them with respect to the following categories and weighted percentages: 1) Proposal, Project Concept & Scope of Work– 35%, 2) Project Experience – 25%, 3) Project Team Qualifications – 20%, 4) Coordination with agencies – 10%, and 5) Consultant’s Fee – 10%.

As shown on the attached summary, staff ranked Kennedy Jenks as the highest ranked firm as shown on the table below.

| <b>2023 Wastewater Master Plan</b>                                                                                                                                                                                                                  |                         |                      |                       |                   |                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------|-----------------------|-------------------|-----------------------|
| <b>Consultant Ranking Summary</b>                                                                                                                                                                                                                   |                         |                      |                       |                   |                       |
| <b>Category</b>                                                                                                                                                                                                                                     | <b>Weighted Percent</b> | <b>Kennedy Jenks</b> |                       | <b>Cannon</b>     |                       |
|                                                                                                                                                                                                                                                     |                         | <b>Avg. Score</b>    | <b>Weighted Score</b> | <b>Avg. Score</b> | <b>Weighted Score</b> |
| <b>Proposal - Project Concept &amp; Scope of Work</b>                                                                                                                                                                                               | <b>35%</b>              | 4.2                  | 1.46                  | 4.2               | 1.46                  |
| <b>Project Experience</b>                                                                                                                                                                                                                           | <b>25%</b>              | 4.7                  | 1.17                  | 4.0               | 1.00                  |
| <b>Project Team Qualifications</b>                                                                                                                                                                                                                  | <b>20%</b>              | 4.5                  | 0.90                  | 4.2               | 0.83                  |
| <b>Coordination with Agencies</b>                                                                                                                                                                                                                   | <b>10%</b>              | 3.3                  | 0.33                  | 4.0               | 0.40                  |
| <b>Consultant's Fee</b>                                                                                                                                                                                                                             | <b>10%</b>              | 4.0                  | 0.40                  | 3.5               | 0.35                  |
| <b>Final Weighted Score</b>                                                                                                                                                                                                                         | <b>100%</b>             |                      | <b>4.26</b>           |                   | <b>4.04</b>           |
| <b>Proposal Cost</b>                                                                                                                                                                                                                                |                         |                      | <b>\$285,553</b>      |                   | <b>\$314,541</b>      |
| <b>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.</b>                  |                         |                      |                       |                   |                       |
| <b>Categories:</b>                                                                                                                                                                                                                                  |                         |                      |                       |                   |                       |
| <b><u>Project Concept &amp; Scope of Work</u></b> - How well the consultant's proposal addressed the needs of the District as outlined in the request for proposal & how well the consultant showed how its firm would complete the requested tasks |                         |                      |                       |                   |                       |
| <b><u>Project Experience</u></b> - How much previous experience has the consultant on projects similar to this project                                                                                                                              |                         |                      |                       |                   |                       |
| <b><u>Project Team Qualifications</u></b> - How did the consultant's proposal use its staff and the experience of the individual people involved                                                                                                    |                         |                      |                       |                   |                       |
| <b><u>Coordination with Agencies</u></b> – How much previous experience has the consultant with coordinating with other agencies                                                                                                                    |                         |                      |                       |                   |                       |
| <b><u>Consultants Fee</u></b> - How well the consultant's proposal utilized their staff and the costs associated with the proposal                                                                                                                  |                         |                      |                       |                   |                       |

Kennedy Jenks’s proposal (see attached) highlighted items such as working with CVWD’s billing data to develop detailed analysis of existing water demands and land uses to develop sewer flow return ratios specific to CVWD’s customers, identifying future land use and development trends consistent with regional trends, recent zoning and housing legislation, developing and calibrating a hydraulic model to determine system capacities, and analyzing and prioritizing short- and long-term CIP projects that will provide CVWD with the best return on investment.

Kennedy Jenks’s team has a great deal of planning experience, and they are well respected in the water/wastewater industry. Kennedy Jenks’s team included Mr. Paul Chau, who has over 15-years of experience and was the project manager for the recently completed City of South Gate Integrated Master Plan. Also included on the team is Mr. Ed Yang, who has over 32 years of experience, including work with Eastern Municipal Water District, Inland Empire Utility Agency, Los Angeles Bureau of Sanitation, and the Metropolitan Water District of Southern California.

**ENVIRONMENTAL REVIEW:**

N/A

**RECOMMENDATION:**

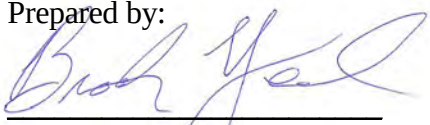
It is staff's recommendation to authorize the General Manager to enter into an agreement with Kennedy/Jenks Consultants, Inc to provide professional engineering services for said project at a cost of \$285,533 and establish a contingency amount of \$28,553 (10% of contract) to cover the cost of unforeseen or additional work.

**FUNDING AVAILABILITY:**

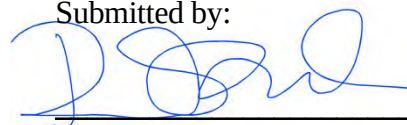
There are sufficient funds available in the following account for the project:

| <b>Account Description</b>                                 | <b>Amount</b>      |
|------------------------------------------------------------|--------------------|
| FY 21/22 Wastewater Budget – Administrative Consultants    | <b>\$81,250</b>    |
| FY 22/23 Wastewater Budget – Administrative Consultants    | <b>\$243,750</b>   |
| Total funding Available                                    | <b>\$325,000</b>   |
| Consultant Contract                                        | <b>(\$285,533)</b> |
| 10% Contingency                                            | <b>(\$28,553)</b>  |
| Total Contract                                             | <b>(\$314,086)</b> |
| Amount Remaining in Wastewater – Administration Consultant | <b>\$10,914</b>    |

Prepared by:

  
\_\_\_\_\_  
Brook Yared, P.E.  
Engineering Manager

Submitted by:

  
\_\_\_\_\_  
David S. Gould, P.E.  
Director of Engineering & Operations

Attachments:

1. RFP – 2023 Wastewater Master Plan
2. Kennedy/Jenks proposal dated 3/29/22



# **2022 WASTEWATER MASTER PLAN**

**Project M-1037**

## **Request for Proposal**

**Proposal Delivery Due Date:**

Wednesday, March 29, 2022

12:00 PM PST

**Delivery Address:**

Crescenta Valley Water District  
Attn: David Gould, Director of Engineering & Operations  
2700 Foothill Blvd  
La Crescenta, CA 91214

## **1. INTRODUCTION:**

Crescenta Valley Water District (CVWD) is seeking proposals from qualified consultants to provide engineering services to prepare CVWD's 2022 Wastewater Master Plan (WWMP), which will be the District's first WWMP since the collection system was installed in the early 1980's.

The WWMP's goal is to evaluate the system-wide flow characteristics, assess existing hydraulic capacity of the collection system, force mains, and a lift station, evaluate pipeline and lift station conditions, determine potential replacement and/or rehabilitation needs, and create a prioritized 10-Year Capital Improvement Program (CIP) plan with a funding approach to allow a sustainable level of service to the District's customers. The Master Plan will help determine the CIP projects needed to repair, replace, and/or upgrade CVWD's aging infrastructure, to increase system operating efficiencies and reliability, while improving cost predictability and maintaining a high level of customer satisfaction into the future.

### **A. Proposal Requirements:**

Prospective firms are required to provide team qualification, proposed work plan, proposed schedule, and other related items as described in this Request for Proposal (RFP). All services provided by the consultant shall be performed by individuals who meet the qualifications, education, and certification/licensing requirements for a WWMP.

Qualified firms that submit a proposal will be evaluated in accordance with the requirements defined within this RFP. The selected firm will provide professional services for the Wastewater Master Plan as described in this RFP.

A virtual pre-proposal meeting is scheduled for March 1, 2022, at 10:00 am via a Zoom Meeting.

All communications and questions relative to this RFP shall be directed in writing by email to David Gould at [dgould@cvwd.com](mailto:dgould@cvwd.com) and shall be received no later than March 8, 2022, 12:00 p.m. Questions submitted after this date will not receive a response. CVWD will respond in writing to each question and include the pre-proposal meetings notes by March 14, 2022.

Please submit one (1) copy of the proposal as a PDF file via e-mail by 12:00 pm on March 29, 2022, to [dgould@cvwd.com](mailto:dgould@cvwd.com). Send three (3) copies of the proposal to the attention of Mr. David Gould, Director of Engineering & Operations at Crescenta Valley Water District, 2700 Foothill Boulevard, La Crescenta CA 91214. Copies of the proposal can be sent to CVWD's office on or after March 23, 2022.

## **2. BACKGROUND**

Crescenta Valley Water District (CVWD or the District) was formed as a "County" Water District in 1950 to provide water service to the La Crescenta area (unincorporated Los Angeles County) and portions of Glendale and La Canada Flintridge. In 1975, the District, under the Clean Water Act was required by the Department of Water Resources to remove the existing sewer septic system and install a new wastewater collection system within the La Crescenta area.

### **A. CVWD Wastewater Collection System:**

In 1979, CVWD created Assessment District 79-1 (Above Foothill Blvd) & 79-2 (Below Foothill Blvd) to collect funds for installation of the new sewer system and connection of customers to the new sewer laterals. CVWD's Sewer Assessment District boundary is different than the water service boundary and service area. See separate PDF file for CVWD's GIS Sewer Atlas Map.

The Sewer Assessment District includes the La Crescenta area (unincorporated LA County) and a small part of La Canada Flintridge. The sewer system does not include any areas within the City of Glendale. The District has about 6,300 sewer accounts, which is less than its 8,100 water accounts.

From 1980 to 1986, CVWD constructed about 64 miles of new sewer collections system including sewer mains, manholes, lateral connections, and cleanouts as shown on the CVWD GIS Sewer Atlas Map.

At that time, customers were required to abandon their existing septic tanks system and connect their property to the new sewer laterals.

In addition, a separate 6.2 mile, 21-inch to 27-inch sewer main was construction from the La Crescenta area, through the City of Glendale to the Los Angeles Glendale Water Reclamation Plant (LAGWRP) near the intersection of the 5 freeway and 134 freeway in Glendale. This sewer main called "Sewer Interceptor Line" transmits all CVWD's wastewater flow to LAGWRP.

In 1990, CVWD installed a Nitrate Removal Ion Exchange Treatment plant at its Glenwood facilities to remove nitrates from local groundwater. The ion exchange process creates brine waste during regeneration of the ion resin. The brine waste is stored in a 64,000-gallon waste tank and between 12 am and 2 am, the brine waste is pumped into the sewer interceptor line. Since the brine waste could upset the biological process at LAGWRP, a valve was installed that diverts CVWD's sewer flow from LAGWRP to the Hyperion Water Reclamation Plant in Playa Del Rey.

CVWD has an existing flow monitoring station located on Elk Street within the City of Glendale. The flow monitoring station is owned and maintained by ADS Environmental Services, which provides flow and strength data to the City of Los Angeles. Included in Appendix "A" is the 2021 – 4<sup>th</sup> quarter report to City of Los Angeles and CVWD sewer flows from 1982 to present for reference.

## **B. Wastewater Treatment & Disposal Agreements**

From 1985 to 2005, CVWD had an agreement with the City of Glendale for the treatment & disposal of CVWD's wastewater. CVWD paid Glendale for part of its capacity at LAGWRP and treatment costs to the City of Los Angeles. The agreement between Glendale and CVWD was terminated in 2004.

In 2005, CVWD enter into an agreement with the City of Los Angeles (City of LA) for conveyance, treatment & disposal of wastewater, which will be renewed in 2030. CVWD became one of the 24 contracting agencies to the City of LA that meet on an annually. The City of LA contract includes universal terms and conditions that were negotiated between Los Angeles and the original contracting entities that provides the same cost recovery for the amalgamated system expenses based on quantity of flow and strength of sewage.

The Amalgamated System Sewerage System Charges (ASSSC) are charged to CVWD to recover CVWD's proportional share of the Net Amalgamated System expenses. The ASSSC consists of two components 1) Operations & Maintenance charges and 2) Capital Improvement charges, which are paid on an annual basis. A summary of City of LA charges and CVWD's contract with the City of LA are included in Appendix "B".

CVWD also has specific terms as part of the City of LA Agreement that includes the following:

- City of La Canada Flintridge transports a portion of their sewer system through CVWD's system to City of LA for the treatment and disposal of its wastewater. The flow and strength of discharged from La Canada to CVWD's facilities is subtracted from the quantity measured at CVWD's Monitoring Station in determining CVWD's quantity of flow and strength.
- Calculation of Contracting Entity's MGD-miles is based all or part of the wastewater tributary to LAGWRP that may be diverted from the North Outfall Sewer or other sewers into LAGWRP.
- Bypass of Nitrate Wastewater – All wastewater from CVWD shall bypass the Los Angeles-Glendale Water Reclamation Plant through a bypass sewer when it contains nitrate laden wastewater and includes a diverter valve to insure the diversion of nitrate laden wastewater into the North Outfall bypass sewer.

The City of LA agreement also includes Amalgamated System Sewerage Facilities Charges (ASSFC) which covers CVWD responsible to the City of LA for any new or upgraded land use changes relative to new developments.



CVWD has done two (2) presentations with respect to the Overview & History of CVWD's Wastewater System – Part 1 & Part 2 which can be found at <https://www.cvwd.com/wastewater>.

### **3. SCOPE OF SERVICES**

The scope of services includes data collection and assessment of existing wastewater collection system, research and incorporate updates from LA County & City of La Canada Flintridge's General Plan or zoning plans that will impact future buildout assumptions, system capacity, evaluate the wastewater condition and capacity assessments, development of a wastewater hydraulic model, and preparation of a 10-year capital improvement program as discussed herein.

#### **A. Data Collection and Assessment of Wastewater System:**

1. Consultant should become fully familiar with CVWD's wastewater mains, lift station, sewer interceptor, divertor valve and appurtenance and be able to provide a condition assessment. This will require the consultant to perform some field assessment and not solely rely on District's GIS or as-built plans.
2. Consultant should request and review any available pertinent records that will assist in the preparation of the WWMP.
3. Consultant should develop a flow monitoring program that CVWD will implement that includes:
  - i. Develop a flow monitoring plan that identifies appropriate locations/ stations for flow monitoring and daily flow within the collection system under wet and dry weather conditions for a minimum duration of at least 30 days. CVWD will use this plan to contract with ADS for the installation and monitoring of the wastewater flow within the District.
  - ii. Coordinate data collection with CVWD of the measured system data that will be used in determining existing capacities, various land use loading factors, future capacities, and projections, and for supporting the wastewater hydraulic modeling calibration.
  - iii. Consultant will work with CVWD to ensure accurate data collection.

#### **B. Population and Development Projections:**

1. Consultant should review the Los Angeles County and City of La Canada Flintridge Land Use Map, General Plan, Housing Plan and Zoning Maps to develop land use data and criteria.
2. District to provide population projections based on latest census data.
3. Consultant should review all active or current Development projects.
4. Consultant should review current and future flow into CVWD's lift station.
5. Prepare related graphics, composite development land use and demand maps, and Geographic Information System (GIS) shape files.

#### **C. Condition/Capacity Assessments:**

1. Consultant should review and analyze existing wastewater flows, estimated sewage flow, and develop land use data and criteria.
2. Consultant should perform an evaluation of the District's conveyance system for existing and future capacity before and after installation of flow monitoring stations.
3. Consultant should perform an evaluation of the District's Lift Station including a full condition assessment and capacity analysis for both existing and future.
4. Consultant should develop preferred solutions and/or alternative solutions to correct deficiencies within the wastewater collection system.

5. It is the District's expectation that the consultant will utilize the best available technologies, which results in gathering the most accurate large-scale condition data of the sewer infrastructure.
6. Consultant should document known system deficiencies, maintenance efforts, and identify possible future capital improvement projects.
7. Consultant should assess the existing capacity of the system, specifically identifying the critical segments based on the data gathered from the field, existing documents, and projected growth.
8. Consultant should identify the critical segments in the order of priority that require immediate, near-term, and long-term attention.

**D. Hydraulic Model Development:**

1. Consultant should develop a dynamic, comprehensive hydraulic model from the compiled data. Utilizing an agreed upon software platform such as Innovyze "InfoSewer".
2. Consultant should develop a detailed hydraulic model of the wastewater collection system using CVWD's existing GIS information & calibrated against collected flow monitoring data.

**E. Capital Improvement Plan Development:**

1. Consultant should identify and prioritize future capacity projects for the wastewater collection system, lift station, sewer interceptor and appurtenances.
2. Consultant should develop a procedure for evaluating the condition of existing infrastructure and prioritization of improvements.
3. Consultant should address existing and future issues related to the system's functionality.
4. Consultant should develop a multi-year phased capital improvement program including short term (1-5 years) and long term (5-10 years) programs.
5. Consultant should prioritize improvements with engineered cost estimates and escalators (CPI).

**F. Public Meetings and Presentations**

1. Consultant should plan to attend two (2) workshop meetings with the CVWD's Engineering Committee.
2. Consultant should plan to attend one (1) formal presentation to CVWD's Board of Directors.

**G. Project Meetings**

1. Attend a kick-off meeting to begin the project.
2. Consultant shall include milestone meetings with District staff as the WWMP progresses.

**H. Project Schedule**

1. Provide a project schedule for developing the preliminary and final reports and WWMP adoption.
2. The final report shall be delivered to the District within **one (1) year** or sooner from the date of the Notice to Proceed.

**I. Prepare and Submit Draft and Final Master Plan Reports**

1. Provide a complete package of the WWMP including Executive Summary, Maps & Exhibits for approval and adoption.
2. Submit, as a deliverable task, a draft, final draft, and final report to the District. All reports must be in hardcopy prints, Microsoft Word, and Adobe PDF file formats.

3. Consultant should provide a digital copy of the Wastewater System Model.
4. Consultant should provide supporting wastewater system model operating manual.

**4. PROPOSAL CONTENT AND REQUIREMENTS:**

- A. Title Page
- B. Table of Contents
- C. Statement of Qualifications
- D. Company Information
- E. Subcontractor Information
- F. Project Team
- G. Project Approach
- H. Project Schedule
- I. Fee and Fee Schedule
- J. Experience
- K. References
  1. Three (3) references from similar projects performed within the last five years.
  2. References for water agencies or cities of comparable size and terrain to CVWD (approximately 10,000 service connections in a challenging terrain).

**5. ADDITIONAL REQUIREMENTS**

- A. 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.
- B. Professional Service Agreement - The chosen consultant shall be responsible for completing the specified services in accordance with the District's standard "Professional Services Agreement," sample agreement in Appendix "C". Services specified in this agreement shall be taken directly from the consultant's accepted proposal and from this "Request for Proposal", if applicable.
- C. 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.
- D. 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.

E. District Responsibilities - District will provide the following to assist the selected consultant with the project and its completion:

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

## **6. EVALUATION PROCESS**

CVWD reserves the right to contact all or any of the references provided in response; contact any current user of the consultant's services or products; solicit information from any available source concerning any aspect of the information submitted; and seek and review any other information deemed pertinent.

CVWD reserves the right to consider other factors at its discretion.

Any award is contingent upon the successful negotiation of the final contract terms. If contract negotiations cannot be concluded successfully, CVWD reserves the right to negotiate a contract with another Consultant or withdraw the RFP.

## **7. PROPOSAL DUE DATE:**

Please submit one (1) copy of the proposal as a PDF file via e-mail by 12:00 pm on March 29, 2022, to [dgould@cvwd.com](mailto:dgould@cvwd.com). Send three (3) copies of the proposal to the attention of Mr. David Gould, Director of Engineering & Operations at Crescenta Valley Water District, 2700 Foothill Boulevard, La Crescenta CA 91214. Copies of the proposal can be sent to CVWD's office on or after March 29, 2022.



March 29, 2022

CRESCENTA VALLEY WATER DISTRICT

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# 2022 Wastewater Master Plan

Project M-1037





March 29, 2022

David S. Gould, P.E. | Director of Engineering & Operations

**Crescenta Valley Water District**

2700 Foothill Blvd, La Crescenta, CA 91214

**Subject: Proposal to Provide Professional Consulting Services for a Wastewater Master Plan**

Dear Mr. Gould:

The Crescenta Valley Water District (CVWD) can place its trust in Kennedy Jenks (KJ) to provide skilled technical staff and relevant experience for your 2022 Wastewater Master Plan (WWMP). We understand you want a clear and reliable Master Plan to provide a justifiable and defensible Capital Improvement Program to increase system reliability and operating efficiencies, improve cost predictability, and maintain a high level of customer satisfaction. Here is what makes our team unique and qualifies us to perform the services identified in your Request for Proposal (RFP):

**Technical Expertise to Develop Viable and Long-Term CIP Prioritization.**

We understand that CVWD seeks to perform a system-wide evaluation to determine immediate needs and plan for the future. Our proposed Project Manager Paul Chau has over a decade of master planning experience for wastewater collection systems, including successful completion of two recent wastewater master plans for the City of South Gate and the Rosamond Community Services District. Providing technical oversight are David Ferguson and Gerald Fejarang. They bring direct experience working with Paul delivering sustainable solutions to address condition, capacity, and prioritization challenges. Together, Paul, David, and Gerald bring the right experience to inform this project and guide the team in delivering a successful project that gives CVWD peace of mind.

**Proven Hydraulic Modeling Experience to Provide an Accurate and User-Friendly Model.**

Paul and the proposed Project Engineers have collectively developed or updated over 200 hydraulic models for water, sewer, and recycled water distribution systems. This extensive experience helps develop user-friendly models with better accuracy so District staff can leverage them in the future. We will work with your modeling staff throughout the development phase to incorporate your needs and will familiarize and train staff to use the models. Our team has experience with both Innovyze and Bentley hydraulic modeling software, so you will have the flexibility to choose the modeling software that best fits your needs.

**Collaborative Approach for Defining System and Operational Goals for a Sustainable Future.**

The successful development of a WWMP that serves your customers' wastewater needs into the future requires a collaborative effort between CVWD and KJ. We will facilitate safe face-to-face meetings through the life of the project to understand and meet the needs of CVWD staff and stakeholders. We propose using technical workshops to facilitate in-depth collaboration with CVWD staff at key project milestones. These workshops will streamline progress meetings and foster effective working relationships between key KJ and CVWD staff.

We look forward to working with you on this important planning project and continue delivering best value to the CVWD, its residents, and the community. If you have any questions regarding our proposal, please contact me at (626) 975-8731. We look forward to working with you on this important project.

Very truly yours,

Kennedy/Jenks Consultants, Inc.



Paul Chau, PE  
Vice President / Project Manager



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## Proven Wastewater Planning Expertise will Provide CVWD with Smooth Project Delivery and Successful Project Execution

KJ offers CVWD extensive, successful experience in the execution of numerous master planning studies, hydraulic modeling, and development of capital improvement programs. A key focus of KJ's wastewater system master planning work is the analysis of existing systems and the conceptual layout of future systems for expansion, improvement, or reliability purposes. In our firm's long history of municipal service, KJ has performed over 150 wastewater system planning studies, conducted infrastructure condition assessments, prepared asset evaluation studies, developed capital improvement programs, and identified funding strategies for these programs.

Long-range planning for our clients has included:

- » Condition assessment, analysis of existing hydraulic deficiencies, and identification of improvements
- » Process performance assessments and recommendations
- » Future demand projections
- » Assessment of future regulatory requirements
- » Identification, comparison, and prioritization of improvements
- » Grant and loan funding evaluations and application
- » Development and approval of revenue-sensitive, phase capital improvement programs

## Extensive California Experience Provides Strategic Insight for CVWD's WWMP

KJ has collaborated with clients throughout California to complete thorough and comprehensive planning documents for efficient wastewater infrastructure capital planning. The map to the right, illustrates representative, regional project types that demonstrate our experience in master planning and knowledge of water resources and wastewater facilities. Our perspective combines technical excellence with local knowledge for a comprehensive analysis of your master planning needs.

## KJ'S EXPERIENCE

**500+**

Planning Projects completed in the Last 25 Years

**\$1B+**

Wastewater Infrastructure Delivered

**7,350+**

Wastewater projects completed

**100+**

Sewer Planning Projects



● COMPLETED MASTER PLANNING PROJECTS

**100+**  
YEARS OF  
SERVICE

**90%**  
REPEAT  
CLIENTS

**18**  
STATES

**400+**  
EMPLOYEES

**0.78**  
EMR SAFETY  
RATING \*

\* better than industry standards

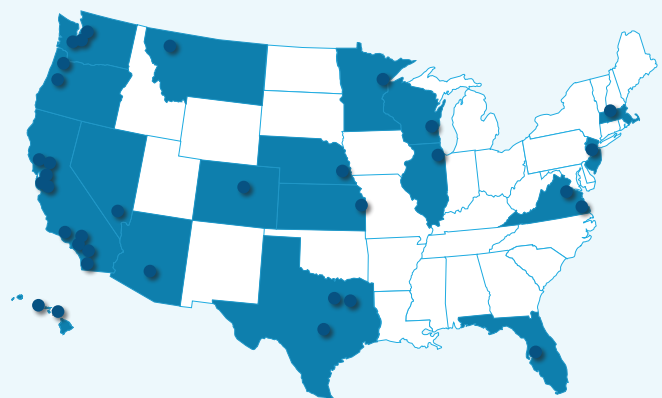
## A Commitment to Excellence

### Firm Overview

Founded in 1919, Kennedy Jenks (KJ) is one of the nation's top environmental and engineering firms. The firm has grown geographically over the years, currently at 18 states throughout the United States. As a full-service, multidiscipline environmental science and engineering consulting firm, KJ has a tradition of developing and implementing focused, reliable and client-centric approaches to environmental restoration projects that address a wide range of environmental concerns. KJ has a corporate commitment that promotes sustainable scientific and engineering solutions. We provide a full range of environmental engineering services, with core services that include initial site assessment through field investigations, pilot studies, feasibility studies, regulatory liaison, remediation design, construction management, and site closure.

*Foundational values serve as guideposts for how our firm and our employees act.*

- **Trust:** Much of our business comes from long-standing clients who trust KJ to understand and accomplish their goals
- **Service:** Excellence in service to our clients and our communities is at the core of KJ's culture and what differentiates KJ from other firms
- **Integrity:** At KJ we are committed to this principle, and instill integrity in everything we do
- **Diversity & Inclusion:** We are committed to fostering a culture where our people find a place they are included and thrive



*With over 400 professionals in 18 states, we create value and deliver projects of various sizes and complexity while providing personalized customer service.*

### **In-House Specialists to Help Meet Your Wastewater Collection Goals**

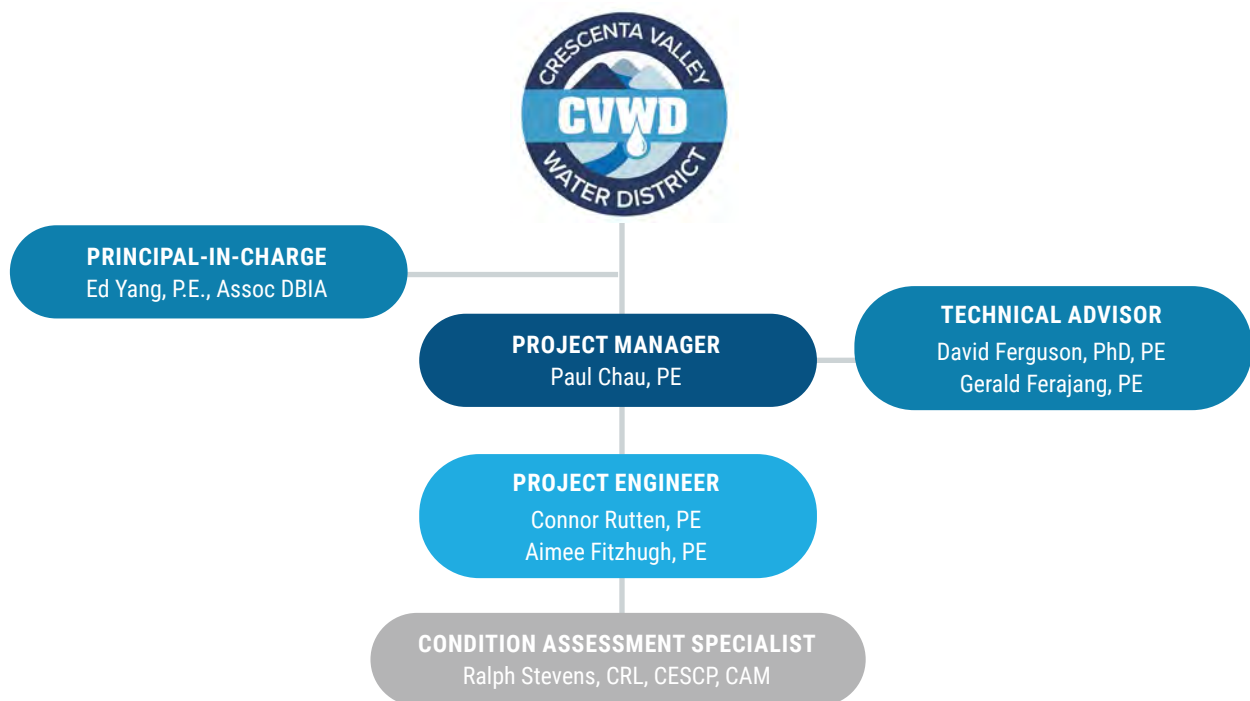
Our project team is structured to provide CVWD with clear lines of authority, responsibility, and communication in order to provide timely delivery of project deliverables. Our dedicated Project Manager, Paul Chau, and lead project engineer, Connor Rutten, are located in our Pasadena office and have worked together numerous master planning projects, including City of Ventura, and City of Thousand Oaks. They will be supported by a strong team of accomplished in-house engineers and specialists who have a proven track record for planning, designing and implementing wastewater collection projects in California and throughout the western United States.

## Experienced Local Team Organized for Efficient Delivery, Streamlined Communication, and Access to Essential Expertise and Resources

The KJ team understands that the success of your projects depends on the competence and capabilities of individual team members, the blending of talents, their dedication and, most importantly, their availability. We have assembled a balanced team of professionals with extensive master planning, hydraulic modeling, pipe assessment, and asset management experience forged from similar Southern California projects.

As shown in our organizational chart below, Paul Chau will serve as our Project Manager and CVWD's point of contact, and Ed Yang will serve as CVWD's Principal-in-Charge. Paul will leverage his diverse planning background and our team's extensive depth of resources to execute this project to your satisfaction.

Included in this section are brief biographies of our key team members. Their resumes with relevant project experience are included in the appendix.



## Why the KJ Team?



### Local Team with Relevant Experience

Most of our team are located at our Pasadena office, within a 15 minute drive to CVWD's facilities, **providing you with unrivaled access for communication and collaboration, and the ability for us to respond quickly to your project needs.**



### Collaborative Approach Delivers Solutions

We know CVWD staff are the most knowledgeable about your collection system. **The KJ team will leverage your staff's knowledge to evaluate operations and performance and identify near-term solutions to achieve long-term goals.**



### Address Technical Needs with a Diverse Skillset

Our team is staffed with a deep bench of seasoned professionals who are proven innovators **with practical solutions to save you time, reduce costs, and lower your risks.**



## A Conversation With the Project Manager

**PAUL CHAU**

“

*I live in the San Gabriel Valley and have a vested interest in delivering successful value-driven projects for CVWD and a local community. I am excited for the opportunity to serve CVWD in my capacity as Project Manager and to deliver projects that not only meet your goals, but are completed within budget and schedule.”*

**Paul Chau, P.E., Project Manager**

### What does KJ offer CVWD that other firms are not likely to offer?

We offer a strong bench of Pasadena-based wastewater professionals who can provide local management and technical expertise, while also providing access to one of the largest groups of water engineering resources in the industry on the West Coast. We will provide unparalleled client service and commitment towards achieving CVWD's goals and objectives.

### What do you see as the most significant project issue?

With water conservation a way of life in California, we don't anticipate that system capacity will be an issue for CVWD. It is likely that the focus of your wastewater CIP will be on addressing deteriorating infrastructure and the best way to do that with a limited annual budget. We will help CVWD implement a risk-based CIP prioritization strategy that maximizes the value of your investments.

### How will you ensure appropriate resources for the projects?

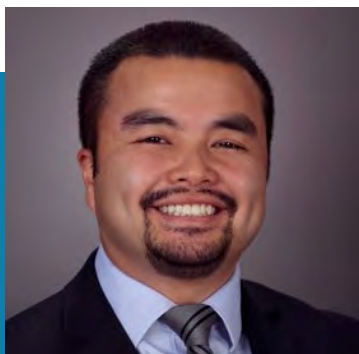
I am personally committed to providing the appropriate resources for any project we undertake with CVWD. We have excellent infrastructure for sharing resources between different offices and have great working relationships with the firms that comprise our team, which will ensure CVWD has the right people available to successfully implement projects.

### How do you control project schedule and costs?

Our approach to project management is based upon developing a partnership with our clients to clearly understand the project requirements, then preparing and executing a project work plan that delivers on-budget and on-time performance for the project deliverables. We use a flexible approach that allows us to adapt and modify management strategies as the project moves forward. Clear identification of scope, schedule, budget, quality standards, levels of communication, and risk management are major elements in a project work plan that is developed for each KJ project.







## PAUL CHAU, PE, CEM

Project Manager | 15 Years of Experience

Paul Chau is a civil engineer with over 15 years of master planning and hydraulic modeling experience for wastewater collection systems. He leads KJ's Master Planning Group and has worked extensively with every proposed key team member. **Paul will use his background in hydraulic modeling to assist CVWD in developing a practical and efficient agency-wide WWMP and will apply his deep understanding of hydraulic models to provide critical recommendations to resolve operation challenges, such as aging infrastructure.**

### Education & Training

**M.S., Environmental Engineering and Science**  
Stanford University, 2007

**B.S., Civil and Environmental Engineering**  
University of California Los Angeles, 2006

### Registrations & Certifications

**Professional Civil Engineer**

California (C75784)

**Certified Energy**

**Manager**  
Association of Energy Engineers

### Why Paul?

- His diverse experience with wastewater planning will provide efficient execution and comprehensive knowledge of project opportunities for CVWD.
- He prides himself on providing excellent service for his clients by providing open and consistent communication and meeting schedule deadlines and milestones.

### Project Experience

#### Integrated Master Water, Sewer and Recycled Water Master Plans

City of South Gate, South Gate, CA

Project Manager

KJ developed a sewer master plan for the City of South Gate in Los Angeles County. An InfoSewer hydraulic model was created to evaluate hydraulic bottlenecks and develop a Capital Improvement Program. In addition, a comprehensive sewer lining program was developed to rehabilitate the City's oldest facilities.

Client Reference:

**Ana Ananda, Consultant/Water Engineer**  
(323) 563-5769

#### Integrated Water and Sewer Master Plans

Rosamond Community Services District, Rosamond, CA

Project Manager

KJ developed a sewer master plan for Rosamond Community Services District, which provides sewer, water, park, and lighting services for the City of Rosamond in Antelope Valley. An InfoSewer hydraulic model was created to evaluate hydraulic bottlenecks and develop a Capital Improvement Program.

Client Reference:

**Brach Smith, Public Works Manager**  
(661) 256-3411 x229



## ED YANG, P.E., ASSOC DBIA

Principal-In-Charge | 32 Years of Experience

Extensive experience in civil and environmental engineering with a primary focus in the preliminary and final design of water and wastewater facilities. He has experience in detailed design and process engineering working as both a project engineer and project manager for water and wastewater facilities. He also has experience in information technology, SCADA, and computer aided engineering/design. **Ed has served as Principal-in-Charge and Engineering Agreement Administrator for several large Southern California utilities, such as Eastern Municipal Water District, Inland Empire Utility Agency, Los Angeles Bureau of Sanitation, and the Metropolitan Water District of Southern California.**

### Why Ed?

- Served in similar capacity for Southern California clients, such as City of Pasadena, City of Los Angeles Bureau of Sanitation, and MWDSC
- Ed has overseen the planning, scheduling, resourcing and delivery of over 150 Capital Improvement Projects for one client and will leverage this experience to maximize the success of your Capital Improvement Plan

### Project Experience

#### On-Call Engineering Services

Metropolitan Water District of Southern California, Various Locations, CA

Contract Administrator/Principal-In-Charge/Project Manager

Since 2005, Ed has overseen the planning, scheduling, resourcing and delivery of over 150 Capital Improvement Projects for Metropolitan. These projects encompass all aspects and disciplines of planning and design services.

Client Reference:

**Susan Mulligan, Former General Manager**  
(805) 450-0821

#### Regional Wastewater Reclamation Facility Master Plan

Elsinore Valley Municipal Water District, Lake Elsinore, CA

QA/QC Review

Assisted in the preparation of a Wastewater Facility Master Plan to determine the future direction of the Elsinore Valley Municipal Water District (EVMWD) Regional Wastewater Reclamation Facility (RWRF).

Client Reference:

**Sudhir Mohleji, Senior Civil Engineer**  
(951) 674-3146 ext. 8347

### Education & Training

**M.S., Civil Engineering**  
Loyola Marymount University, 1996

**B.A., Engineering Management**  
Claremont McKenna, 1992

**B.S., Civil and Environmental Engineering**

UC Davis, 1992

### Registrations & Certifications

**Professional Civil Engineer, California**  
(54752)

**Assoc. DBIA, Design Build Institute of America**



## CONNOR RUTTEN, P.E.

Project Engineer | 6 Years of Experience

Connor is a civil engineer with project experience in water/wastewater pump station and pipeline design, hydraulic modeling, master planning, and resiliency planning. He has developed, calibrated, and analyzed hydraulic water and wastewater models using SewerGEMS as well as InfoSewer, as well as stormwater models using MIKE URBAN and PCSWMM. **He has experience developing population/demand projections, identifying and evaluating Capital Improvement Program (CIP) projects, and developing both high level as well as detailed cost estimates.**

### Education & Training

**B.S., Civil Engineering,**  
University of California,  
Los Angeles, 2016

**M.S, Civil and  
Environmental  
Engineering,** Stanford  
University, 2017

### Registrations & Certifications

**Professional Civil  
Engineer,** California  
(C92734)

**American Water Works  
Association**

### Why Connor?

- Connor is a hydraulic modeling and master planning specialist who will provide the City with efficient execution of the water hydraulic analysis.
- He has worked with Paul Chau on several modeling projects, including assignments with the City of Riverside and South Gate

### Project Experience

#### Downtown Utility Infrastructure Capacity Study

City of Oxnard, Oxnard, CA

Hydraulic Modeling

Connor was responsible for updating the SewerGEMS hydraulic model and providing the City with sewer system capacity maps.

Client Reference:

**Timothy Beaman, Senior Civil Engineer**  
(805) 385-8141

#### South Gate On-Call System Modeling

City of South Gate Public Works, South Gate, CA

Hydraulic Modeling

Connor has performed several sewer capacity studies for new developments being constructed within CSGPW's sewer service area using the City's current InfoSewer hydraulic model, which was constructed and is maintained by KJ

Client Reference:

**Joseph E. Comstock Director of Public Works**  
(323) 357-9657



## AIMIEE FITZHUGH, P.E.

Project Engineer | 25 Years of Experience

Aimée Fitzhugh has 25 years of master planning, hydraulic modeling, and engineering experience for sewer and water distribution systems. She has extensive experience in multiple software packages, including Innovyze InfoWater and InfoSewer, and Bentley WaterCAD and SewerCAD. **Additionally, Aimée supplements her planning and modeling experience with practical design experience of sanitary sewer gravity systems, force mains and lift stations, as well as potable water lines, water tanks, PRVs, deep well pump stations, and booster pump stations.**

### Why Aimee?

- In her role as District Engineer for utilities around the Colorado area, she utilizes and maintains at least 10 water and sewer hydraulic models per year to provide facility planning and design services
- She is particularly adept at updating hydraulic models developed by others and improving them to meet her clients' needs

### Project Experience

#### Sewer Master Plan

City of South Gate, CA

Project Engineer

KJ developed a sewer master plan for the City of South Gate in Los Angeles County. An InfoSewer hydraulic model was created to evaluate hydraulic bottlenecks and develop a Capital Improvement Program. In addition, a comprehensive sewer lining program was developed to rehabilitate the City's oldest facilities.

Client Reference:

**Ana Ananda, Consultant/Water Engineer** (323) 563-5769

#### Update To Water and Wastewater Master Plans

Arapahoe County Water and Wastewater Authority (ACWWA), Arapahoe County, CO

Modeler/Project Engineer

Using the condition assessments, risk analysis, and modeling effort, we prepared a 5-year and 30-year Capital Improvement Plan (CIP) for implementation by ACWWA. We also updated the Water and WWMP so staff will have a current plan for everyday use.

Client Reference:

**Sandor Rebek, Water Resources Engineer**, (720) 260-2887



## DAVID FERGUSON, PHD, P.E.

Technical Advisor | 42 Years of Experience

Dr. Ferguson has four decades of experience in planning, design, construction, and operation of water supply, infrastructure, and treatment projects. **David has a broad range of diverse infrastructure planning and design experience, including several years serving as Operations Manager for two large Southern California utilities. He understands the needs and perspectives of a water/wastewater utility and will help CVWD develop sensible and cost effective solutions for your system.**

### Education & Training

**B.S., Environmental Science**, University of Massachusetts, 1977

**B.S., Civil Engineering**, University of Massachusetts, 1980

**M.S., Civil Engineering**, University of Massachusetts, 1980

**M.B.A., Business Management**, California State University, San Bernardino, 1985

**D.P., Executive Management**, Claremont Graduate University, 1993

### Registration & Certifications

**Professional Civil Engineer**, California (34626)

**Board Certified Environmental Engineer**, American Academy of Environmental Engineers & Scientists (AAEES)

### Why David?

- David has been responsible for the evaluation and/or design of upgrades, rehabilitation, retrofit, and/or replacement for over 40 water treatment plants, 30 reservoirs, 20 wells, and 20 pumping stations for 25 different water utilities.
- He has managed or performed technical review of numerous hydraulic modeling and master planning studies for utilities in Southern California.

### Project Experience

#### Sewer Master Plan

City of South Gate, South Gate, CA

Project Director

Responsible for managing the preparation of a Water Master Plan, Recycled Water Master Plan, and Sewer Master Plan as three standalone documents to address water demands, recycled water demands, and gravity sewer flows. Each document evaluates the immediate, short-term (5-year), and ultimate deficiencies and establish the infrastructure requirements.

Client Reference:  
**Ana Ananda, Consultant/Water Engineer**  
(323) 563-5769

#### Water and Sewer Master Plans

Rosamond Community Services District, Rosamond, CA

Project Director

KJ is developing water and sewer master plans for the District, which provides water, sewer, park, and lighting services for the City of Rosamond in Antelope Valley. An InfoWater hydraulic model was created for the water system and an InfoSewer hydraulic model was created for the sewer system to evaluate hydraulic bottlenecks and develop a Capital Improvement Program. David serves as the Project Director for this project.

Client Reference:  
**Brach Smith, Public Works Manager**  
(661) 256-3411 x229

## GERALD FEJARANG, P.E.

Technical Advisor | 28 Years of Experience

Gerald provides technical support for clients for process troubleshooting, root cause analysis, developing asset management strategies, integrate reliability centered maintenance (RCM) principles and elements with design processes, O&M programs, **improving methods to O&M management and strategies, launching computerized maintenance management systems (CMMS), developing efficient business workflows, and launching risk-based inspections programs.**

### Why Gerald?

- Extensive experience with O&M engineering, reliability engineering, and implementation of utility management elements for O&M organizations.
- Led a variety wastewater projects, from assessments to design, construction, and O&M engineering for new or upgrades facilities

### Project Experience

#### Integrated Wastewater Master Plan

Las Gallinas Valley Sanitary District, CA

Project Manager

Led the KJ team in conducting a five-day Business Risk Vulnerability Analysis (BRVA) workshop to collect information on sewer collection system pump stations/force mains and wastewater treatment plant

Client Reference:  
**Michael Cortez, P.E., District Engineer**  
(415) 472-1033

#### Asset Management Program Services

Delta Diablo Sanitation District, Antioch, CA

Project Manager/Business Risk and Vulnerability Assessment

Led the KJ team in conducting a five-day Business Risk Vulnerability Analysis workshop with key District staff to collect information on current conditions of assets and practices at Delta Diablo's Resource Recovery Facilities

Client Reference:  
**Jayne Strommer, Government Affairs Manager**  
(925) 756-1917



### Education & Training

**B.S., Civil Engineering**, California State University, Sacramento, 1997

### Registrations & Certifications

**Professional Civil Engineer**, California (61346)



## Benefits of the KJ Approach to your WWMP

KJ will deliver an accurate and defensible Wastewater Master Plan that CVWD can rely on for future capital improvement planning and risk management.

This section describes our proposed approach to addressing the key issues for the Project, including constructing a new wastewater hydraulic model, model calibration, developing future sewer flow projections, and developing a risk-based Capital Improvement Plan.

- ✓ **Detailed analysis of existing water demands and land uses to develop sewer flow return ratios specific to CVWD's customers**
- ✓ **Data-Driven hydraulic model calibration and sewer flow projections that will promote confidence in the resulting Capital Improvement Plan**
- ✓ **Prioritized short- and long-term CIP projects that will provide CVWD with the best return on investment (ROI)**

## Spending Capital Dollars When and Where it Counts the Most

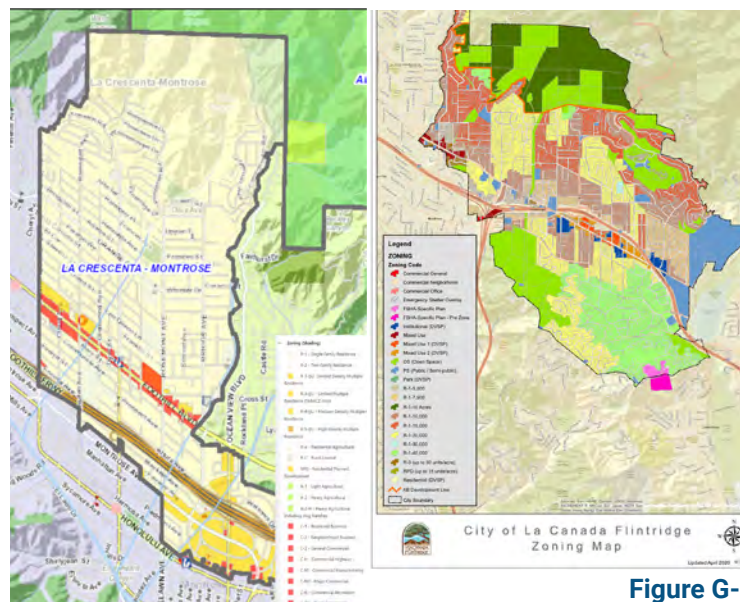


### ⑤ Nexus of Population Projections, Water Demand, and Sewer Flows

**We understand that developing accurate sewer flow projections will lead to better prioritization of capital improvement projects and a better return on investment for CVWD.** We will use planning principles that align with CVWD's water demand projections to promote consistency between CVWD's water and sewer capital improvement planning efforts. As part of Task B, we will develop parcel-level sewer flows for both current system conditions as well as future conditions to the Year 2045.

**Developing sewer flow return ratios specific to CVWD.** Applying accurate system sewer loads is the foundation for creating a calibrated, functional hydraulic model. We will use all available land use data from LA County as well as local municipalities (City of La Cañada Flintridge) paired with water billing data provided by CVWD to calculate unit water demand values by land use type. We will then examine water consumption during winter months (when outdoor usage is assumed minimal) to estimate how much water returns to the sewer system for each land use type, commonly known as sewer return flow ratios.

**Identify future land use and development trends consistent with regional trends and recent zoning and housing legislation.** Zoning and planning documents will be examined (as shown in **Figure G-1**) to capture any changes in future land use within and around CVWD's service area. Population projections based on the latest census data will be cross-examined with expected near-term (1-5 years) and long-term (5-10 years) developments as well as vacant parcels within CVWD's service area to determine where future sewer loadings should be allocated within the hydraulic model. We will work with CVWD to collect, review, and incorporate current and future development projects into the projected sewer flows.

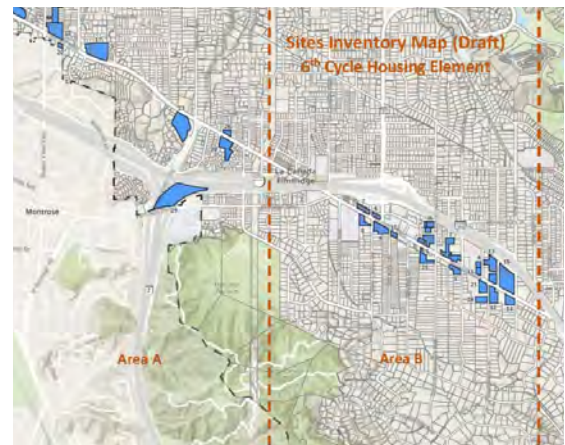


**Figure G-1**

The La Crescenta -Montrose Census Designated Place (CDP) has been identified as an “affected county” by the California Department of Housing and Community Development (HCD) under the Housing Crisis Act of 2019 (SB 330) that became effective January 1, 2020. The bill makes it easier for eligible housing development projects to be approved and constructed in designated urban areas. The City of La Cañada Flintridge just east of La Crescenta is currently in the process of updating the Housing Element of their General Plan to comply with HCD’s State Housing Law and the Regional Housing Needs Assessment (RHNA) by increasing their inventory of available developable sites. This is achieved primarily by amending the density limits on residential and mixed use zones as well as modifying the zoning of Specific Plans to accommodate more residential and mixed use areas. We will examine the trends and impacts of these housing legislations and ensure that they are considered for future land use within the La Crescenta-Montrose area as shown in **Figure G-2**.

### Strategic Selection of Flow Monitoring Locations

As part of Task A, we will review CVWD’s wastewater collection system and target key areas for flow monitoring to optimize the model calibration and provide critical insight into the system’s performance. This will improve the prioritization of future CIP projects and improve CVWD’s ROI in terms of improved system performance (I&I reduction, reduction in SSOs).

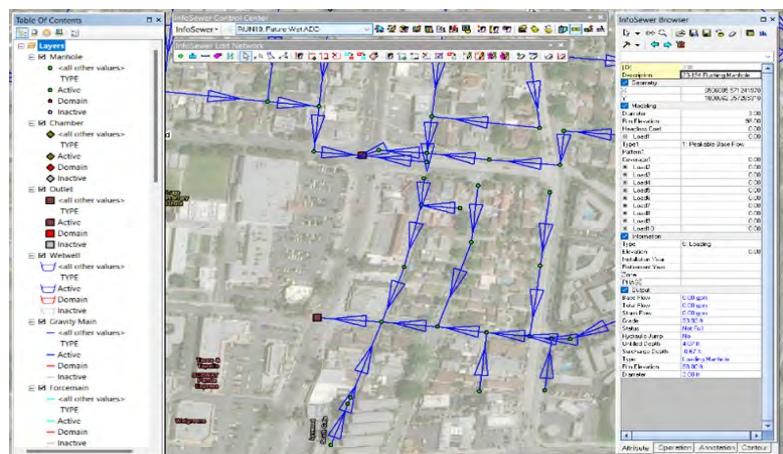


**Figure G-2**

**Pick flow monitoring locations that will optimize model calibration.** Depending on the number of available flow meters, we will create a flow monitoring plan that will divide the system into smaller sewersheds that will improve the model calibration and help identify certain regions of the system that may have higher I&I. The placement of each flow meter will depend on the slope of the upstream pipe. Pipes that are too shallow can cause faulty depth measurements, resulting in inaccurate flow measurements.

### Hydraulic Model Software Selection

Choosing the right hydraulic modeling software is key to ensuring that the developed model meets CVWD’s goals for future use. We have access to several industry-standard hydraulic modeling products that can be used to construct the sewer model from the ground up similarly shown in **Figure G-3**. We will provide CVWD with the benefits and drawbacks of each product and select the product that aligns best with CVWD’s goals for the WWMP as well as for future uses.



**Figure G-3**

## InfoSewer vs InfoSWMM vs SewerGEMS

**Table 1**

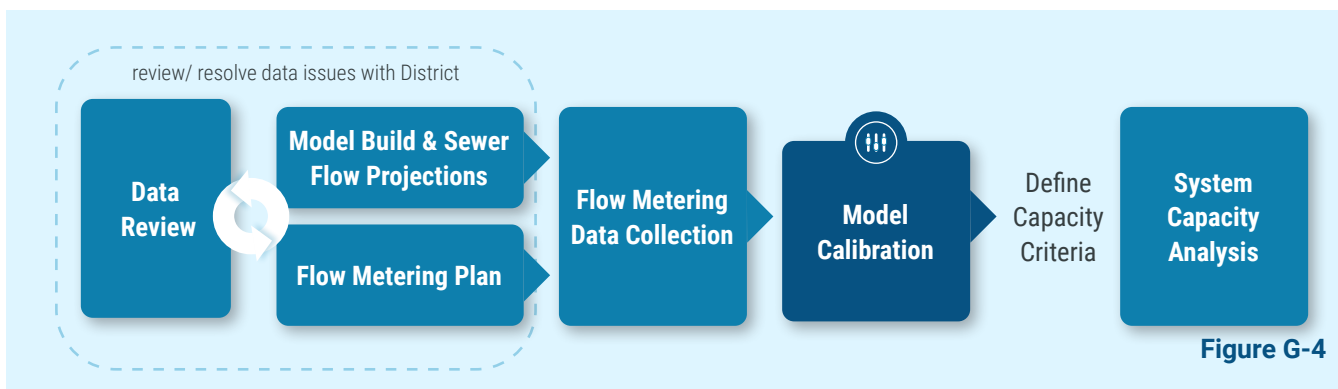
| Feature                           | Bentley SewerGEMS | Innovyze InfoSWMM | Innovyze InfoSewer |
|-----------------------------------|-------------------|-------------------|--------------------|
| Peak ADWF and PWWF Calibration    | X                 | X                 | X                  |
| RDII Calibration                  | X                 | X                 |                    |
| Full GIS Integration              |                   | X                 | X                  |
| Define and Manage Subcatchments   | X                 | X                 |                    |
| Manhole Invert Data Visualization |                   | X                 |                    |

Based on the software comparison provided in **Table 1**, our preliminary recommendation is to use InfoSWMM to develop the calibrated sewer model. InfoSWMM runs using ArcGIS's ArcMap software and is completely integrated, with tools available to directly import and export from and to a geodatabase as well as query tools that leverage the ArcMap platform. Model results can be displayed directly on top of GIS data, including any parcel, street, or land use layer.

InfoSWMM also has the capability to perform rainfall derived inflow & infiltration (RDII) model calibration, allowing CVWD to calculate the portion of flow that is I&I upstream of each flow meter. InfoSWMM can also develop subcatchments using topographic data to help CVWD understand what gravity sewer would serve future developments based on their location within CVWD's service area.

### Sample Workflow

Sample Workflow to expedite schedule shown in **Figure G-4**.



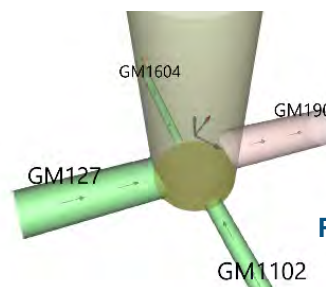
**Figure G-4**

### Data Review and Model Build

We will import the City's latest ArcGIS geodatabase to construct the hydraulic model and leverage InfoSWMM's data scrubbing and visualization tools to identify any issues with the imported data. We will check the data for the following:

- Adverse pipe slopes/flow direction
- Manhole invert and rim elevations
- Pipe invert elevations
- Pipe sizes

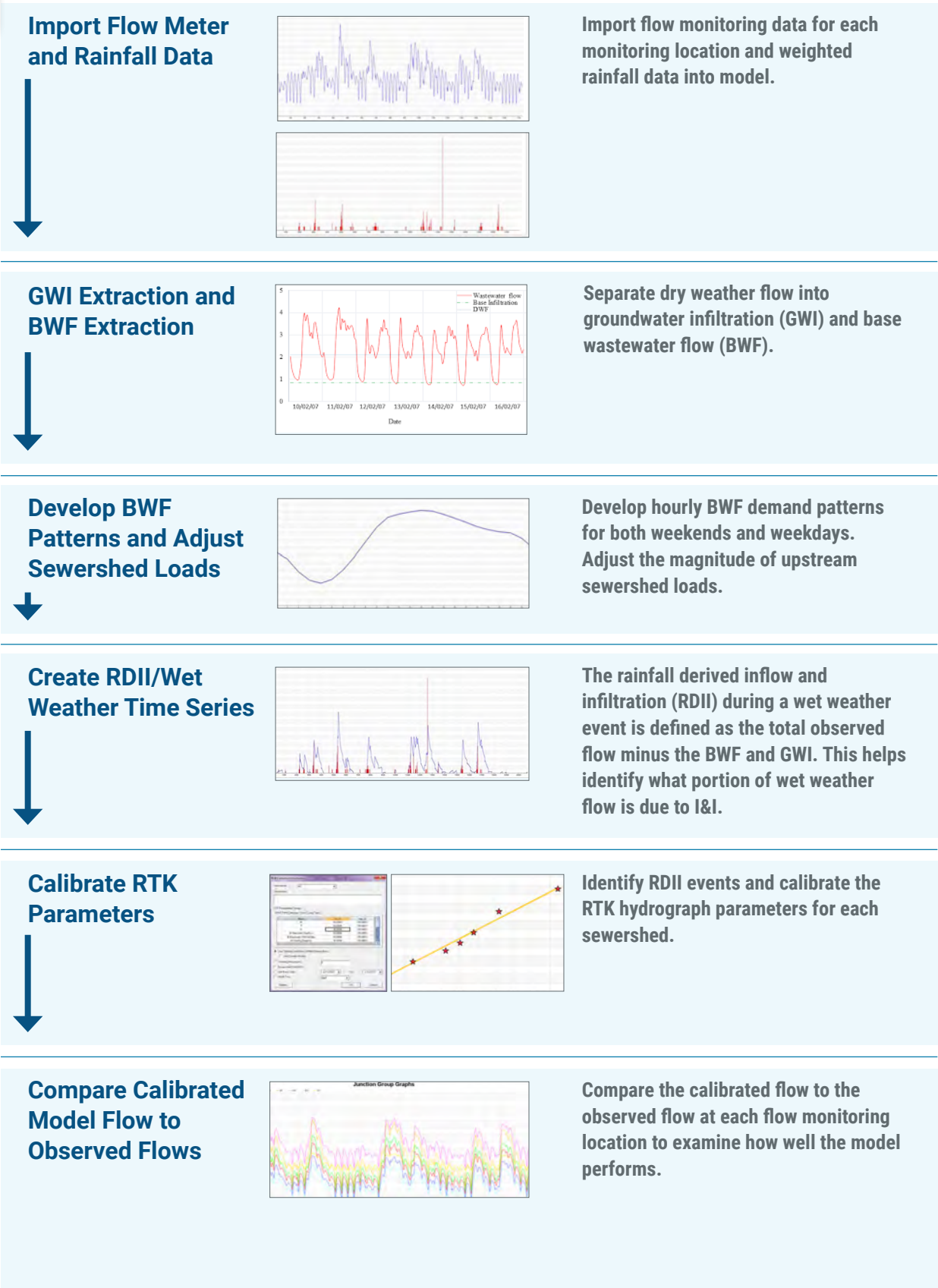
We will also ensure that the model accurately reflects the as-builts and operations of the La Granada Lift Station. We will work collaboratively with CVWD to identify and resolve any data gaps and/or discrepancies between the GIS geodatabase and as-builts. Our goal is to provide CVWD with a well-constructed digital twin that CVWD can use for future sewer capacity evaluation projects as shown in **Figure G-5**.



**Figure G-5**



**Model Calibration**



## System Capacity Analysis

We will evaluate the capacity of each gravity sewer line in terms of the ratio of the depth of flow (in) to the inner diameter of the pipe (in), also known as the ratio  $d/D$ . This ratio will be calculated for each pipe within the system under both average dry weather flow (ADWF) and peak wet weather flow (PWWF) conditions. We understand CVWD has criteria defined in the 2019 SSMP that limits the maximum allowable flow through a gravity sewer line to 60% of ADWF or 80% of PWWF (flow must occur in two consecutive months). We will work with CVWD to align our capacity analysis with the existing SSMP criteria and discuss any additional criteria that CVWD would like to evaluate given access to a calibrated sewer model.

We will also perform a capacity analysis of the La Granada lift station, examining available pump flow and wet well level data to analyze how many cycles per hour the pump is running. We will also perform a volumetric analysis of the wet well to ensure that it is adequately sized based on the developed sewer flow projections.

## Risk-Based Capital Improvement Plan Development

Our approach to developing a prioritized plan to repair, rehabilitate, or replace wastewater collection system infrastructure will augment CVWD's existing Sewer System Management Plan. **Table 2** below highlights features of our approach and why they are important to CVWD's Capital Improvement Plan development.

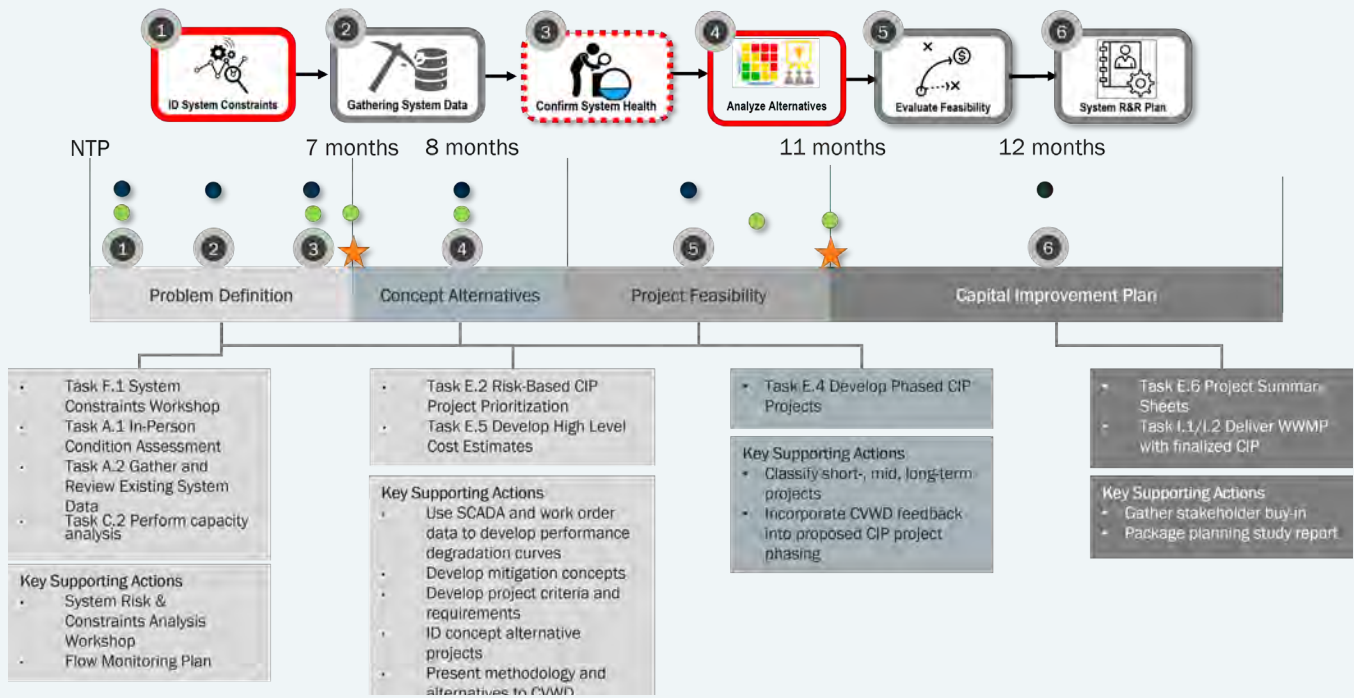
**Table 2**

| Phase                            | Proposed Approach Element                                                                                                                                                                       | Why is it Important?                                                                                                                                                                                   |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Define the Problem               | Identify Wastewater Collection System Constraints                                                                                                                                               | Identifying risks and constraints associated during collection system deterioration allows for improved situational awareness and sets the stage for proactive planning.                               |
|                                  | Review CVWD Available Data including work order and condition assessment reports.                                                                                                               | Validates collection system constraints, identifies any data gaps needed for a thorough analysis.                                                                                                      |
|                                  | Confirm Performance Gaps<br>Prepare response plans for infrastructure showing signs of impending failure                                                                                        | Develops a performance degradation curve for each collection system component using the inspections data to determine remaining useful life.                                                           |
| Analyze Concept Alternatives     | Build a time-based failure prediction model to develop replacement methods and prepare response plans for infrastructure showing signs of impending failure.                                    | The model allows for determination of weakest segments of the collection system and where to prioritize resources. Proactively prepares for operator response corrective actions plans.                |
| Evaluate Project Feasibility     | Transform concept alternatives into tactical repair/rehabilitation/replacement strategies e.g., future capacity considerations, rehabilitation (cured-in-place pipe lining), and manhole lining | Develop construction cost estimates to identify the feasibility of replacement options and the timing of each option relative to predicted failure and capital resources to optimize capital spending. |
| Deliver Capital Improvement Plan | Develop a lifecycle Capital Improvement Plan to identify short- and long-term projects.                                                                                                         | The Capital Improvement Plan will be a document that will provide repair/rehabilitation/replacement projects that will improve CVWD's maintenance practices.                                           |

## Hitting the Ground Running with a Constraint Analysis is the First Step to Identifying Wastewater Collection System Vulnerabilities, **Prioritizing Our Actions and Where We Need to Invest Our Resources**

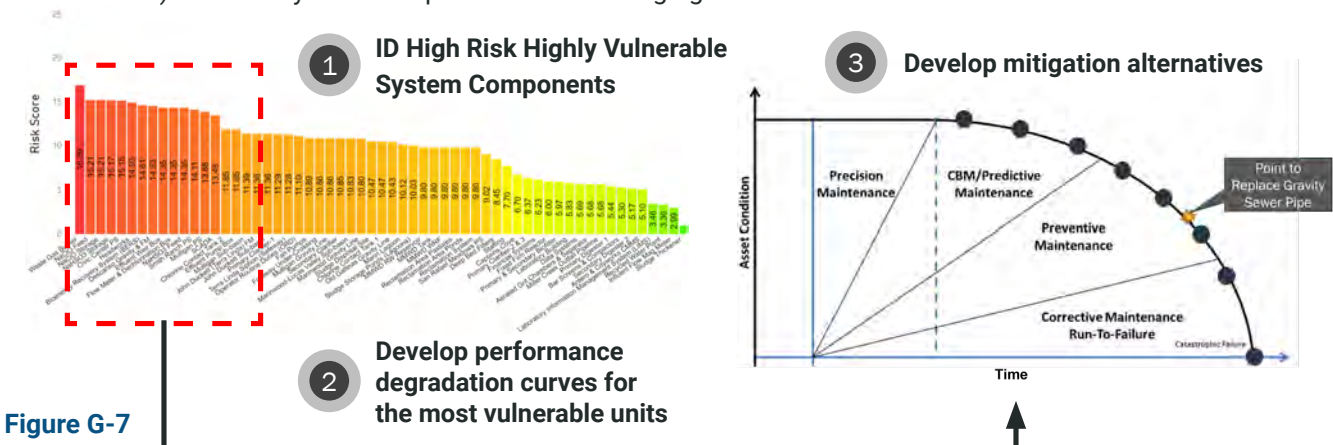
Because rehabilitating and/or replacing miles of gravity sewer pipe doesn't happen overnight and resources are finite, prioritization becomes key to wastewater collection system improvements. Our experienced team will hit the ground running by conducting a constraint analysis workshop with key individuals from CVWD. The collaborative constraint analysis allows our team to quickly align ourselves with CVWD and efficiently gets all perspectives and ideas on the discussion table to set the stage for the rest of the study to proactively manage and develop the Capital Improvement Plan.

The workflow below illustrates the specific tasks and key supporting actions required to complete your Capital Improvement Plan.



**Figure G-6** ● KJ Led Effort ● District Input Required ★ Key Milestone

The result is that the team identifies the “weak links” of the system, and operations and maintenance constraints that may allow the risk to materialize and disrupt critical service. Our objective is to ultimately rank each component of the collection system with its own consequential criticality score and use this criticality register as the foundation to building a risk register (i.e., combining the results of the system inspections data to develop probability of deterioration) for each system component while leveraging work order data.



**Figure G-7**

A “scorecard” approach will be used to compare the concept projects using both qualitative and quantitative information, using a simplified set of criteria collaboratively developed with the District. According to the District’s Sewer System Management Plan, we understand the District values the health & safety of its community and maintenance staff, maintaining regulatory compliance, reducing environmental impact, and maximizing return on capital investment. These criteria can be incorporated into the project evaluation, scoring, weighting and ranking process as described below:

- a. **Scoring:** establish a scale (i.e. 1 to 3) to apply for quantitative and qualitative criteria.
- b. **Weighting:** assign weighting percentages for each criterion to create weighting themes to represent priorities (e.g., safest approach, cost, environmental impact, public image, minimal service disruption)
- c. **Ranking:** multiply the criteria scoring by the weighting to get a total score, then rank the projects from highest to lowest weighted scoring.

| Example Ranking Results | Ranking Criteria |                         |                     |                  | Top Scoring Projects |
|-------------------------|------------------|-------------------------|---------------------|------------------|----------------------|
|                         | Public Safety    | Operational Flexibility | Service Disruptions | Financial Impact |                      |
| Project 1               | 1                | 1                       | 2                   | 1                | ☑                    |
| Project 2               | 3                | 2                       | 1                   | 2                | ☑                    |
| Project 3               | 2                | 3                       | 3                   | 4                |                      |
| Project 4               | 4                | 4                       | 4                   | 3                |                      |

Figure G-8

- d. The use of multiple weighting themes can provide a sensitivity analysis to identify projects that rise to the top irrespective of weighting distributions.

A color-coded alternative ranking matrix, similar to the sample shown in **Figure G-8**, will be developed to visually identify high-ranking projects that rise to the top and low-ranking projects that fall to the bottom.

Scope of Work

CVWD’s scope of work as provided in the RFP is shown below in black text. KJ has provided value-added clarifications and enhancements shown in blue.

A. DATA COLLECTION AND ASSESSMENT OF WASTEWATER SYSTEM:

1. KJ will become fully familiar with CVWD’s wastewater mains, lift station, sewer interceptor, divertor valve and appurtenance and will provide a condition assessment by:

- a. Reviewing District’s GIS database and as-built plans
- b. Performing one (1) in-person full-day field assessment of critical infrastructure, including the La Granada Lift Station, the diverter valve, and other locations/infrastructure that CVWD feels would provide important context or information for the condition assessment. **Three KJ staff will perform the field assessment. A summary memo will be prepared describing the team’s observations from the field assessment.**

2. KJ will request and review available pertinent records and data from CVWD that will assist in the preparation of the WWMP, including SCADA data, historical water billing data, land use data, sewer as-builts, La Granada Lift Station and Force Main as-builts, and historical work order information.

3. KJ will develop a flow monitoring program that CVWD will implement that includes:

- a. Appropriate locations/stations for continuous flow monitoring for a 3-month period (Sept 1 2022 – Dec 1 2022) in order to collect flow meter data under both wet and dry weather conditions. CVWD will use this plan to contract with ADS for the installation and monitoring of the wastewater flow within CVWD.

**Key Assumption:** Flow monitoring will collect at least two (2) significant rain events (at least 1-inch within 24 hours) for model calibration purposes.

- b. Coordinate data collection with CVWD of the measured system data that will be used in determining existing capacities, various land use loading factors, future capacities, and projections,

and for supporting the wastewater hydraulic modeling calibration.

- c. KJ will work with CVWD to ensure accurate data collection. **KJ recommends having ADS collect the data two weeks after installation to ensure that the collected data is accurate and reliable. If available, cloud-based real-time data collection is recommended.**

Task A Deliverables:

- Summary Memo with observations from the in-person condition assessment
- Flow Monitoring Program including a map showing the locations of each of the proposed flow monitoring devices

B. POPULATION AND DEVELOPMENT PROJECTIONS:

1. KJ will review the Los Angeles County and City of La Cañada Flintridge Land Use Map, General Plan, Housing Plan and Zoning Maps to develop land use data and **identify future land use/zoning trends based on recent legislation.**

2. CVWD to provide population projections based on latest census data **and CVWD’s 2020 Urban Water Management Plan (UWMP).**

3. KJ will work with CVWD to collect **all** current, near-term, and long-term Development projects and will incorporate these projects into the sewer flow projections.

4. KJ will review current and future flows into CVWD’s lift station. **See item C.1.**

5. KJ will prepare related graphics, composite development land use and demand maps, and Geographic Information System (GIS) shape files for use within the WWMP.

Task B Deliverables:

- Map of existing and future land uses/developments, PDF



### C. CONDITION/CAPACITY ASSESSMENTS:

1. KJ will review and analyze existing wastewater flows, estimated sewage flow, and develop land use data and criteria. **KJ will use provided water billing data and land use data to develop sewer return flow ratios that will be used for existing and future sewage flow calculations.** CVWD's 2020 UWMP water demand projections and development plans, collected under Task B.3, will be utilized to develop the sewer flows, based on sewer return flow ratios. Future sewer flow projections will be provided in 5-year increments to a planning horizon of 2045, which is consistent with CVWD's 2020 UWMP. CVWD's projected per capita water demand, as described in the 2020 UWMP, will be utilized to incorporate future additional water conservation to the sewer flow projection analysis.

2. KJ will perform an evaluation of CVWD's conveyance system for existing and future capacity before and after installation of flow monitoring stations. **KJ will use the hydraulic model developed under Task D to perform a preliminary capacity analysis of the conveyance system under existing and 2045 sewer flow conditions, for both dry weather and peak wet weather conditions, prior to the installation of the flow monitoring stations.** KJ will develop capacity criteria based on input from CVWD and the existing Sewer System Management Plan. A generic wet weather loading equation will be utilized for the preliminary capacity analysis. The preliminary capacity analysis will help inform selection of flow monitoring locations. After the flow monitoring program is complete and the hydraulic model is calibrated, a refined capacity analysis will be conducted under existing and 2045 sewer flow conditions, for both dry weather and peak wet weather conditions. Capacities will be shown as system maps with d/D identified for each pipeline. System deficiencies will be identified. Hydraulic modeling runs for flow conditions between existing and 2045 will be provided as needed to determine the timing of capacity deficiencies.

3. KJ will perform an evaluation of CVWD's Lift Station including a full condition assessment and capacity analysis for both existing and future sewer flows. **See item A.1. Collected field data, as-built information, and SCADA data will all be used in the Lift Station capacity evaluation.**

4. KJ will develop preferred solutions and/or alternative solutions to correct deficiencies within the wastewater

collection system.

5. KJ will utilize the best available technologies to gather the most accurate large-scale condition data of the sewer infrastructure. **This will include leveraging available ArcGIS Online datasets such as soil maps, fault lines, and population density to inform the CIP project likelihood of failure (LOF) factors.** KJ will use the spatial analyst tools within ArcGIS to overlay and evaluate the sewer system. For example, gravity sewer lines located in areas with high soil corrosivity will be identified as having higher LOF than sewer lines located in areas with low soil corrosivity.

6. KJ will document known system deficiencies, maintenance efforts, and identify possible future capital improvement projects. **It is assumed that CVWD will provide this information.**

7. KJ will assess the existing capacity of the system, specifically identifying the critical segments based on the data gathered from the field, existing documents, and projected growth.

8. KJ will identify the critical segments in the order of priority that require immediate, near-term, and long-term attention.

#### Task C Deliverables:

- Table of sewer return flow ratios by land use type, PDF
- Table of sewer flow projections in 5-year increments to 2045, PDF
- Four preliminary capacity analysis maps, PDF
- Four refined capacity analysis maps, PDF
- Map of system deficiencies, PDF
- Maps of proposed solutions for system deficiencies, PDF
- System map of large-scale condition data, PDF

### D. HYDRAULIC MODEL DEVELOPMENT:

1. KJ will develop a dynamic, comprehensive hydraulic model from the compiled data. **KJ will review the available modeling software (SewerGEMS, InfoSewer, and InfoSWMM) with CVWD during one of the initial project meetings to identify the software that best meets CVWD's needs and future goals for the hydraulic model.**

**Key Assumption:** The provided GIS geodatabase will contain manhole and sewer line information that:

- **Is geospatially correct (correct alignments and connectivity)**
- **Contains accurate manhole depths and manhole diameters**
- **Contains accurate pipeline inverts and identifies any drop manhole locations**
- **Contains correct pipeline direction (drawn from the upstream manhole to the downstream manhole)**
- **Contains correct pipe material and diameter information**

2. KJ will develop a detailed hydraulic model of the wastewater collection system using CVWD's existing GIS information & calibrated against collected flow monitoring data. **CVWD's GIS data will be imported to the hydraulic model. The facility data will be validated using trial runs of the hydraulic model and any discrepancies will be cross-referenced with available as-builts and coordination with District staff. We will provide corrected GIS data back to CVWD. For the model calibration, the following steps will be taken:**

**a. Import Flow Monitoring and Rainfall Data.** Import flow monitoring data for each monitored location. Import weighted rainfall data for the collection system service area.

**b. GWI and BWF Extraction.** Use software to separate dry weather flow meter data into groundwater infiltration (GWI) and base wastewater flow (BWF). BWF represents the sewer loadings from upstream customers.

**c. Define BWF Pattern and Adjust Sewershed Loads.** Use the isolated BWF to develop a demand pattern that can be applied to upstream customers. Adjust the magnitude of the sewer loads to match the monitored flows during dry weather flow conditions (less the GWI).

**d. Create RDII/Wet Weather Time Series.** The rainfall derived inflow and infiltration (RDII) during a wet weather event is defined as the total observed flow minus the BWF and GWI. This helps identify what portion of wet weather flow is due to I&I.

**e. Calibrate RTK Hydrograph Parameters.** The RTK parameters are used to measure the short-term, medium-term, and long-term sewer flow responses to a wet weather event. The modeling software is used to calibrate the RTK parameters

for each sewershed (area upstream of the flow monitoring station). A genetic algorithm is used to iterate the RTK parameters until the predicted RDII matches the observed RDII. The more significant wet weather events that are captured during the flow monitoring period, the more accurate the RDII calibration is.

f. Finally, the calibrated flow can be compared to the observed flow at each flow monitoring location to examine how well the model performs.

#### Task D Deliverables:

- Hydraulic model files
- Revised GIS database, if required
- Model calibration results (graphs), PDF

## E. CAPITAL IMPROVEMENT PLAN DEVELOPMENT:

1. KJ will identify and prioritize future capacity projects for the wastewater collection system, lift station, sewer interceptor and appurtenances. **This task will be absorbed into Tasks E.2, E.4, and E.5, which evaluate and prioritize projects based on risk of failure and cost.**

2. KJ will set up a **risk-based** procedure for evaluating the condition of existing infrastructure and prioritization of system improvements. **This will include the following workflow steps:**

**a. Identify system constraints.** Use in-person workshop under Task G.2 to discuss system with engineering and operations and identify poorly performing portions/assets within the system. Identify constraints preventing CVWD from improving/fixing asset performance. Discuss "what-if" analysis and the consequence of failure (COF) of different parts of the collection system. This will also inform the flow metering placement.

**b. Gather System Data.** Compile the data gathered under Task A.2 and the capacity analysis results from Task C.2. Develop likelihood of failure (LOF) for the components of the collection system.

**c. Confirm System Health.** Provide shortlist of gravity sewer pipe that appears to be deficient from the model results and schedule CCTV for the identified pipelines.

**d. Analyze Alternatives.** Load the LOF and COF data into the risk calculation engine to evaluate each collection system component and develop CVWD’s risk profile. This will help to identify the highly vulnerable assets for which degradation curves will be developed to identify what the acceptable level of risk is for each asset and when CVWD will need to take action to repair, rehabilitate, or replace the asset. See Task E.5 for next step.

3. KJ will address existing and future issues related to the system’s functionality. **This task will be absorbed into Task E.2, which identifies the risk of failure of each component of the collection system.**

4. KJ will develop a multi-year phased capital improvement program including short term (1-5 years) and long term (5-10 years) programs. **A capital improvement program will be developed in 5-year increments through 2045. Projects will be scored based on a simplified set of criteria collaboratively developed with CVWD which will include the calculated risk and cost of each project, as well as any additional qualitative or quantitative criteria such as health & safety, regulatory compliance, and environmental impacts. Projects will be prioritized into the appropriate 5-year planning period based on their scoring and available budget. See Task E.6 for next step.**

5. KJ should prioritize improvements with engineered cost estimates and escalators (CPI). **KJ will develop high-level construction cost estimates for repair, rehabilitation, or replacement of each of the “high-risk” assets. See Task E.4 for next step.**

6. KJ will develop a one-page project summary sheet for each recommended capital improvement project, which will include a map or figure of the proposed improvement, facility description, design criteria, implementation time frame, and construction cost estimate. It is assumed that up to ten (10) project summary sheets will be developed.

**Task E Deliverables:**

- Summary of LOF and COF factors and scoring criteria used for CIP Prioritization
- Summary of LOF and COF factors, risk profile, and degradation curves used for CIP Prioritization
- One-page CIP project summary sheets, PDF
- Table of capital improvement program through 2045, PDF

F. PUBLIC MEETINGS AND PRESENTATIONS

1. KJ will plan to attend two (2) workshop meetings with the CVWD’s Engineering Committee. **Up to two (2) KJ staff will attend the meetings in person. A presentation slide deck will be prepared for each meeting.**

2. KJ will plan to attend one (1) formal presentation to CVWD’s Board of Directors. **Up to two (2) KJ staff will attend the meeting in person. A presentation slide deck will be prepared for the meeting.**

**Task F Deliverables:**

- PowerPoint slide deck for each meeting

G. PROJECT MEETINGS

1. Attend a kick-off meeting to begin the project. **Up to two (2) KJ staff will attend the meeting in person. KJ will prepare a meeting agenda, meeting materials, and meeting notes.**

2. KJ will include milestone meetings with District staff as the WWMP progresses. **Up to two (2) KJ staff will attend seven (7) milestone meetings in person. KJ will prepare a meeting agenda, meeting materials, and meeting notes. We propose the following milestone meetings:**

- System operation and constraints
- Flow monitoring program recommendations
- Sewer flow projections
- Hydraulic model calibration results
- System analysis and deficiencies
- CIP recommendations
- Draft report review

**Task G Deliverables:**

- Kickoff meeting agenda and minutes
- Periodic meeting agenda and minutes, as needed

H. PROJECT SCHEDULE

1. A proposed project schedule for developing the preliminary and final reports and WWMP adoption is included on page 22.

2. The final report shall be delivered to CVWD within one (1) year or sooner from the date of the Notice to Proceed.

**Task H Deliverables:**

- See project schedule include on page 22

**I. PREPARE AND SUBMIT DRAFT AND FINAL MASTER PLAN REPORTS**

1. Provide a complete package of the WWMP including Executive Summary, Maps & Exhibits for approval and adoption.
2. Submit, as a deliverable task, a draft, final draft, and final report to CVWD. All reports must be in hardcopy prints, Microsoft Word, and Adobe PDF file formats. **CVWD's comments on the draft report will be incorporated in the final draft report. CVWD's comments on the final draft report will be incorporated in the final report.**
3. KJ will provide a digital copy of the Wastewater System Model.
4. KJ will provide supporting wastewater system model operating manual. **The operating manual will focus on specific instructions on how to utilize CVWD's hydraulic model. Generic hydraulic modeling instructions are available through the modeling software's manual and would not be included in the proposed District model operating manual. A draft operating manual will be prepared for CVWD's review. A final operating manual will be prepared based on CVWD's comments on the draft operating manual.**

**Task I Deliverables:**

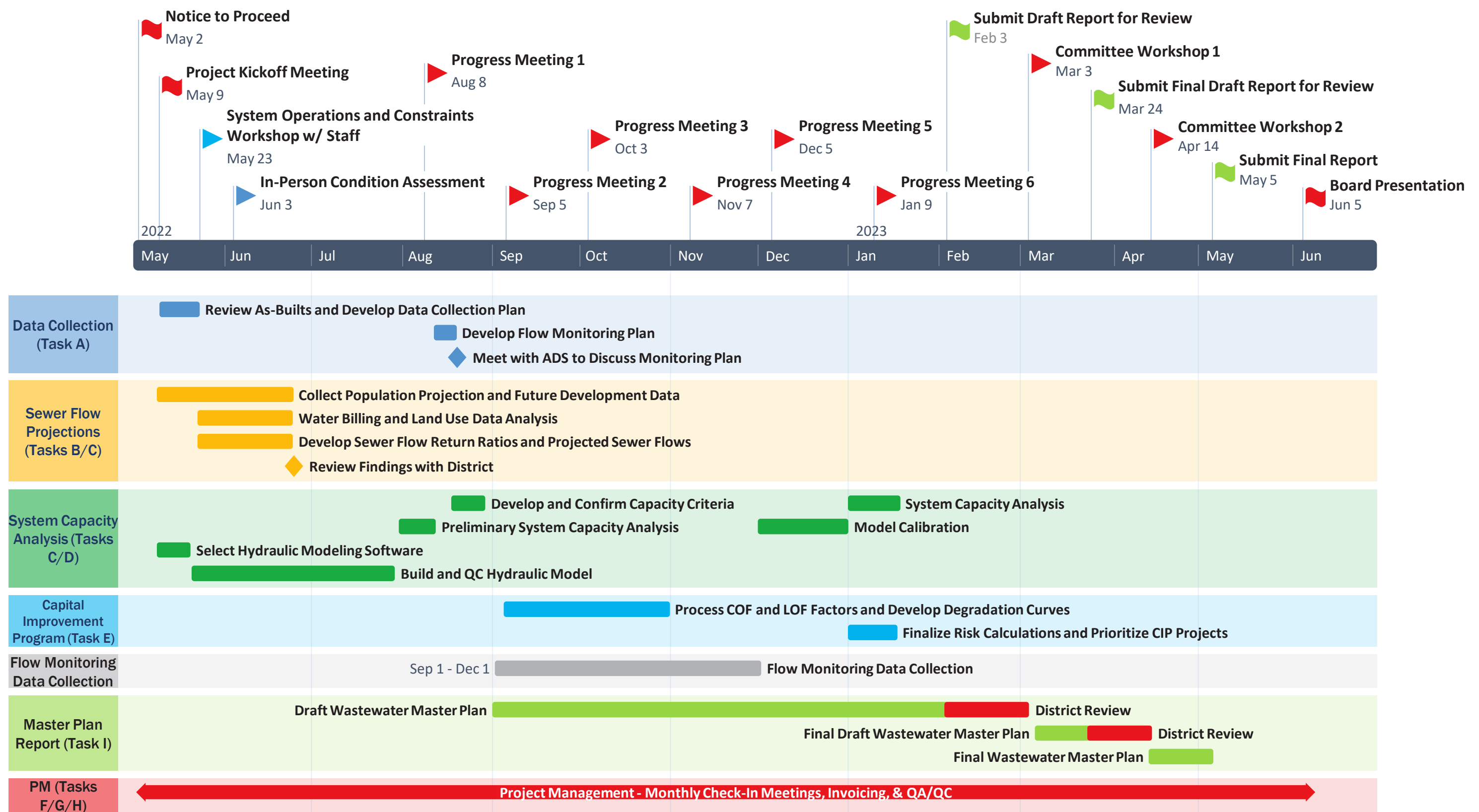
- Draft Wastewater Master Plan, PDF, Word, and 5 hard copies
- Final Draft Wastewater Master Plan, PDF, Word, and 5 hard copies
- Final Wastewater Master Plan, PDF, Word, and 5 hard copies
- Copy of wastewater hydraulic model files
- Draft wastewater hydraulic model operating manual, PDF, Word, and 5 hard copies
- Final wastewater hydraulic model operating manual, PDF, Word, and 5 hard copies

**J. PROJECT MANAGEMENT**

1. Project coordination and administration will be provided, consisting of invoicing, schedule and budget monitoring, team coordination, and contract administration. It is assumed that the project duration is 12 months.
2. Project deliverables will undergo quality reviews prior to submittal to CVWD in accordance with KJ' Quality Control Program. An internal team project initiation review meeting and concept & criteria review meeting will be conducted to review project approach and methodology early in the process. As the project is executed, other QC reviews are performed at appropriate milestones, which are generally associated with submittals to CVWD; internal QC review will occur prior to submission of a submittal.

**Task J Deliverables:**

- Monthly invoices, PDF







**Client/Address:** Crescenta Valley Water District  
2700 Foothill Blvd.  
La Crescenta, CA 91214

**Contract/Proposal Date:** March 29, 2022

## Schedule of Charges

January 1, 2020

### PERSONNEL COMPENSATION

| Classification                       | Hourly Rate |
|--------------------------------------|-------------|
| Engineer-Scientist-Specialist 1..... | \$130       |
| Engineer-Scientist-Specialist 2..... | \$165       |
| Engineer-Scientist-Specialist 3..... | \$185       |
| Engineer-Scientist-Specialist 4..... | \$200       |
| Engineer-Scientist-Specialist 5..... | \$220       |
| Engineer-Scientist-Specialist 6..... | \$245       |
| Engineer-Scientist-Specialist 7..... | \$270       |
| Engineer-Scientist-Specialist 8..... | \$290       |
| Engineer-Scientist-Specialist 9..... | \$305       |
| CAD-Technician .....                 | \$120       |
| Senior CAD-Technician .....          | \$140       |
| CAD-Designer .....                   | \$155       |
| Senior CAD-Designer .....            | \$175       |
| Project Administrator .....          | \$130       |
| Administrative Assistant.....        | \$110       |
| Aide.....                            | \$85        |

### Direct Expenses

Reimbursement for direct expenses, as listed below, incurred in connection with the work, will be at cost plus five percent for items such as:

- Maps, photographs, 3rd party reproductions, 3rd party printing, equipment rental, and special supplies related to the work.
- Consultants, soils engineers, surveyors, contractors, and other outside services.
- Rented vehicles, local public transportation and taxis, travel and subsistence.
- Project specific telecommunications and delivery charges.
- Special fees, insurance, permits, and licenses applicable to the work.
- Outside computer processing, computation, and proprietary programs purchased for the work.

Reimbursement for vehicles used in connection with the work will be at the federally approved mileage rates or at a negotiated monthly rate.

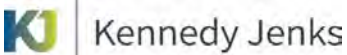
If prevailing wage rates apply, the above billing rates will be adjusted as appropriate.

Overtime for non-exempt employees will be billed at one and a half times the Hourly Rates specified above.

Rates for professional staff for legal proceedings or as expert witnesses will be at rates one and one-half times the Hourly Rates specified above.

Excise and gross receipts taxes, if any, will be added as a direct expense.

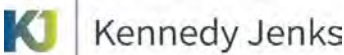
Proposal Fee Estimate (Assoc. Proj. Costs per Schedule of Charges)



CLIENT Name: Crescenta Valley Water District  
PROJECT Description: Wastewater Master Plan  
Proposal/Job Number: B10440143 Date: 3/29/2022

| January 1, 2022 Rates                                                        | Eng-Sci-9<br>David F. Gerald F. | Eng-Sci-8 | Eng-Sci-7<br>R. Stevens | Eng-Sci-6<br>Paul C. Janet H. | Eng-Sci-5<br>Aimtee F. | Eng-Sci-4<br>Connor R. | Eng-Sci-3<br>Evelyn C. | Eng-Sci-2 | Project Assistant |       | KJ       | KJ    | KJ          |             |            |                |                               |
|------------------------------------------------------------------------------|---------------------------------|-----------|-------------------------|-------------------------------|------------------------|------------------------|------------------------|-----------|-------------------|-------|----------|-------|-------------|-------------|------------|----------------|-------------------------------|
| Classification:                                                              |                                 |           |                         |                               |                        |                        |                        |           |                   | Total | Labor    | ODCs  | ODCs Markup | Total Labor | Total Subs | Total Expenses | Total Labor + Subs + Expenses |
| Hourly Rate:                                                                 | \$305                           | \$290     | \$270                   | \$245                         | \$220                  | \$200                  | \$185                  | \$165     | \$130             | Hours | Fees     | Fees  | 5%          |             |            |                | Fees                          |
| Phase A - Data Collection and Assessment of Wastewater System                |                                 |           |                         |                               |                        |                        |                        |           |                   |       |          |       |             |             |            |                |                               |
| Task A.1 In-Person Condition Assessment                                      | 2                               |           | 16                      | 8                             |                        | 16                     |                        |           |                   | 42    | \$10,090 | \$300 | \$15        | \$10,090    | \$0        | \$315          | \$10,405                      |
| Task A.2 Data Collection and Review                                          |                                 |           |                         | 4                             |                        | 12                     | 12                     |           |                   | 28    | \$5,600  |       | \$0         | \$5,600     | \$0        | \$0            | \$5,600                       |
| Task A.3 Develop Flow Metering Plan & Map                                    |                                 |           |                         | 4                             |                        | 12                     |                        |           |                   | 16    | \$3,380  |       | \$0         | \$3,380     | \$0        | \$0            | \$3,380                       |
| Phase A - Subtotal                                                           | 2                               | 0         | 16                      | 16                            | 0                      | 40                     | 12                     | 0         | 0                 | 86    | \$19,070 | \$300 | \$15        | \$19,070    | \$0        | \$315          | \$19,385                      |
| Phase B - Population and Development Projections                             |                                 |           |                         |                               |                        |                        |                        |           |                   |       |          |       |             |             |            |                |                               |
| Task B.1 Review Land Use Data                                                |                                 |           |                         | 4                             |                        | 24                     |                        |           |                   | 28    | \$5,780  |       | \$0         | \$5,780     | \$0        | \$0            | \$5,780                       |
| Task B.2 Review Population Projections                                       |                                 |           |                         | 2                             |                        | 4                      |                        |           |                   | 6     | \$1,290  |       | \$0         | \$1,290     | \$0        | \$0            | \$1,290                       |
| Task B.3 Review Current and Projected Development Projects                   |                                 |           |                         | 2                             |                        | 12                     |                        |           |                   | 14    | \$2,890  |       | \$0         | \$2,890     | \$0        | \$0            | \$2,890                       |
| Task B.4 Review Lift Station Flows                                           |                                 |           |                         | 2                             |                        | 4                      |                        |           |                   | 6     | \$1,290  |       | \$0         | \$1,290     | \$0        | \$0            | \$1,290                       |
| Task B.5 Develop Land Use and Development Maps                               |                                 |           |                         | 2                             |                        | 24                     |                        |           |                   | 26    | \$5,290  |       | \$0         | \$5,290     | \$0        | \$0            | \$5,290                       |
| Phase B - Subtotal                                                           | 0                               | 0         | 0                       | 12                            | 0                      | 68                     | 0                      | 0         | 0                 | 80    | \$16,540 | \$0   | \$0         | \$16,540    | \$0        | \$0            | \$16,540                      |
| Phase C - Condition/Capacity Assessments                                     |                                 |           |                         |                               |                        |                        |                        |           |                   |       |          |       |             |             |            |                |                               |
| Task C.1 Develop Sewer Return Flow Ratios by Land Use Type                   |                                 |           |                         | 4                             |                        | 40                     |                        |           |                   | 44    | \$8,980  |       | \$0         | \$8,980     | \$0        | \$0            | \$8,980                       |
| Task C.2 Conveyance System Capacity Analysis                                 |                                 |           |                         | 16                            |                        | 80                     |                        |           |                   | 96    | \$19,920 |       | \$0         | \$19,920    | \$0        | \$0            | \$19,920                      |
| Task C.3 Lift Station Capacity Analysis (Wet Well Volume, Pump Cycling, etc) |                                 |           |                         | 4                             |                        | 16                     |                        |           |                   | 20    | \$4,180  |       | \$0         | \$4,180     | \$0        | \$0            | \$4,180                       |
| Task C.4 Develop Solutions                                                   |                                 |           |                         | 8                             |                        | 24                     |                        |           |                   | 32    | \$6,760  |       | \$0         | \$6,760     | \$0        | \$0            | \$6,760                       |
| Task C.5 Large Scale Condition Analysis                                      |                                 |           |                         | 4                             |                        | 16                     |                        |           |                   | 20    | \$4,180  |       | \$0         | \$4,180     | \$0        | \$0            | \$4,180                       |
| Task C.6 Document Known System Deficiencies                                  |                                 |           |                         | 2                             |                        | 4                      |                        |           |                   | 6     | \$1,290  |       | \$0         | \$1,290     | \$0        | \$0            | \$1,290                       |
| Task C.7 Existing Capacity Analysis                                          |                                 |           |                         | 4                             |                        | 8                      |                        |           |                   | 12    | \$2,580  |       | \$0         | \$2,580     | \$0        | \$0            | \$2,580                       |
| Task C.8 Identify Critical Projects                                          |                                 |           |                         | 4                             |                        | 20                     |                        |           |                   | 24    | \$4,980  |       | \$0         | \$4,980     | \$0        | \$0            | \$4,980                       |
| Phase C - Subtotal                                                           | 0                               | 0         | 0                       | 46                            | 0                      | 208                    | 0                      | 0         | 0                 | 254   | \$52,870 | \$0   | \$0         | \$52,870    | \$0        | \$0            | \$52,870                      |
| Phase D - Hydraulic Model Development                                        |                                 |           |                         |                               |                        |                        |                        |           |                   |       |          |       |             |             |            |                |                               |
| Task D.1 Model Software Selection                                            |                                 |           |                         | 4                             |                        | 4                      |                        |           |                   | 8     | \$1,780  |       | \$0         | \$1,780     | \$0        | \$0            | \$1,780                       |
| Task D.2 Import and QC Manholes/Pipes into InfoSWMM Hydraulic Model          |                                 |           |                         | 4                             | 80                     |                        |                        |           |                   | 84    | \$18,580 |       | \$0         | \$18,580    | \$0        | \$0            | \$18,580                      |
| Task D.2 Import Sewer Loads                                                  |                                 |           |                         | 2                             |                        | 32                     |                        |           |                   | 34    | \$6,890  |       | \$0         | \$6,890     | \$0        | \$0            | \$6,890                       |
| Task D.2 Import Meter and Rainfall Data                                      |                                 |           |                         |                               |                        | 16                     |                        |           |                   | 16    | \$3,200  |       | \$0         | \$3,200     | \$0        | \$0            | \$3,200                       |
| Task D.2 Perform RDII Model Calibration                                      |                                 |           |                         |                               |                        | 80                     |                        |           |                   | 80    | \$16,000 |       | \$0         | \$16,000    | \$0        | \$0            | \$16,000                      |

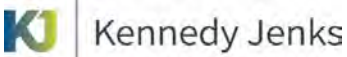
Proposal Fee Estimate (Assoc. Proj. Costs per Schedule of Charges)



CLIENT Name: Crescenta Valley Water District  
PROJECT Description: Wastewater Master Plan  
Proposal/Job Number: B10440143 Date: 3/29/2022

| January 1, 2022 Rates                                                                                                                             | Eng-Sci-9<br>David F. Gerald F. | Eng-Sci-8 | Eng-Sci-7<br>R. Stevens | Eng-Sci-6<br>Paul C. Janet H. | Eng-Sci-5<br>Aimtee F. | Eng-Sci-4<br>Connor R. | Eng-Sci-3<br>Evelyn C. | Eng-Sci-2 | Project Assistant |       | KJ       | KJ    | KJ          |             |            |                |                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------|-------------------------|-------------------------------|------------------------|------------------------|------------------------|-----------|-------------------|-------|----------|-------|-------------|-------------|------------|----------------|-------------------------------|
| Classification:                                                                                                                                   |                                 |           |                         |                               |                        |                        |                        |           |                   | Total | Labor    | ODCs  | ODCs Markup | Total Labor | Total Subs | Total Expenses | Total Labor + Subs + Expenses |
| Hourly Rate:                                                                                                                                      | \$305                           | \$290     | \$270                   | \$245                         | \$220                  | \$200                  | \$185                  | \$165     | \$130             | Hours | Fees     | Fees  | 5%          |             |            |                | Fees                          |
| Phase D - Subtotal                                                                                                                                | 0                               | 0         | 0                       | 10                            | 80                     | 132                    | 0                      | 0         | 0                 | 222   | \$46,450 | \$0   | \$0         | \$46,450    | \$0        | \$0            | \$46,450                      |
| Phase E - Capital Improvement Plan Development                                                                                                    |                                 |           |                         |                               |                        |                        |                        |           |                   |       |          |       |             |             |            |                |                               |
| Task E.1 Identify Capital Projects                                                                                                                |                                 |           |                         |                               |                        |                        |                        |           |                   | 0     | \$0      |       | \$0         | \$0         | \$0        | \$0            | \$0                           |
| Task E.2 Set Up Risk-Based CIP Project Prioritization: Develop LOF Factors, Risk Profile, and Performance Degradation Curves for High-Risk Assets | 8                               |           |                         | 4                             |                        | 48                     |                        |           |                   | 60    | \$13,020 |       | \$0         | \$13,020    | \$0        | \$0            | \$13,020                      |
| Task E.3 Evaluation System Functionality                                                                                                          |                                 |           |                         |                               |                        |                        |                        |           |                   | 0     | \$0      |       | \$0         | \$0         | \$0        | \$0            | \$0                           |
| Task E.4 Develop Phased CIP Projects based                                                                                                        |                                 |           |                         | 4                             |                        | 32                     |                        |           |                   | 36    | \$7,380  |       | \$0         | \$7,380     | \$0        | \$0            | \$7,380                       |
| Task E.5 Develop High Level Cost Estimates including escalation for CIP Projects                                                                  |                                 |           |                         | 20                            |                        | 10                     |                        |           |                   | 30    | \$6,900  |       | \$0         | \$6,900     | \$0        | \$0            | \$6,900                       |
| Task E.6 Project Summary Sheets                                                                                                                   |                                 |           |                         | 8                             |                        | 40                     |                        |           |                   | 48    | \$9,960  |       | \$0         | \$9,960     | \$0        | \$0            | \$9,960                       |
| Phase E - Subtotal                                                                                                                                | 8                               | 0         | 0                       | 36                            | 0                      | 130                    | 0                      | 0         | 0                 | 174   | \$37,260 | \$0   | \$0         | \$37,260    | \$0        | \$0            | \$37,260                      |
| Phase F - Public Meetings & Presentations                                                                                                         |                                 |           |                         |                               |                        |                        |                        |           |                   |       |          |       |             |             |            |                |                               |
| Task F.1 - Two (2) Workshops                                                                                                                      |                                 |           |                         | 8                             |                        | 16                     |                        |           |                   | 24    | \$5,160  | \$80  | \$4         | \$5,160     | \$0        | \$84           | \$5,244                       |
| Task F.2 - Board Presentation                                                                                                                     |                                 |           |                         | 4                             |                        | 8                      |                        |           |                   | 12    | \$2,580  | \$40  | \$2         | \$2,580     | \$0        | \$42           | \$2,622                       |
| Phase F - Subtotal                                                                                                                                | 0                               | 0         | 0                       | 12                            | 0                      | 24                     | 0                      | 0         | 0                 | 36    | \$7,740  | \$120 | \$6         | \$7,740     | \$0        | \$126          | \$7,866                       |
| Phase G - Project Meetings                                                                                                                        |                                 |           |                         |                               |                        |                        |                        |           |                   |       |          |       |             |             |            |                |                               |
| Task G.1 - Kickoff Meeting                                                                                                                        |                                 |           |                         | 2                             |                        | 4                      |                        |           |                   | 6     | \$1,290  | \$40  | \$2         | \$1,290     | \$0        | \$42           | \$1,332                       |
| Task G.2 - Seven (7) Milestone Meetings                                                                                                           | 4                               |           | 4                       | 14                            |                        | 28                     |                        |           |                   | 50    | \$11,330 | \$240 | \$12        | \$11,330    | \$0        | \$252          | \$11,582                      |
| Phase G - Subtotal                                                                                                                                | 4                               | 0         | 4                       | 16                            | 0                      | 32                     | 0                      | 0         | 0                 | 56    | \$12,620 | \$280 | \$14        | \$12,620    | \$0        | \$294          | \$12,914                      |
| Phase I - Prepare and Submit Draft and Final Master Plan Reports                                                                                  |                                 |           |                         |                               |                        |                        |                        |           |                   |       |          |       |             |             |            |                |                               |
| Task I.1 - Draft Wastewater Master Plan                                                                                                           |                                 |           |                         | 10                            |                        | 80                     | 40                     |           | 4                 | 134   | \$26,370 | \$150 | \$8         | \$26,370    | \$0        | \$158          | \$26,528                      |
| Task I.2 - Final Draft Wastewater Master Plan                                                                                                     |                                 |           |                         | 5                             |                        | 40                     | 20                     |           | 4                 | 69    | \$13,445 | \$150 | \$8         | \$13,445    | \$0        | \$158          | \$13,603                      |
| Task I.2 - Final Wastewater Master Plan                                                                                                           |                                 |           |                         | 2                             |                        | 20                     | 10                     |           | 4                 | 36    | \$6,860  | \$150 | \$8         | \$6,860     | \$0        | \$158          | \$7,018                       |
| Task I.3 - Hydraulic Model Transfer                                                                                                               |                                 |           |                         |                               |                        | 4                      |                        |           |                   | 4     | \$800    |       | \$0         | \$800       | \$0        | \$0            | \$800                         |
| Task I.4 - Draft and Final Wastewater Hydraulic Model Operating Manual                                                                            |                                 |           |                         | 5                             |                        | 40                     | 20                     |           | 2                 | 67    | \$13,185 | \$300 | \$15        | \$13,185    | \$0        | \$315          | \$13,500                      |

Proposal Fee Estimate (Assoc. Proj. Costs per Schedule of Charges)



CLIENT Name: Crescenta Valley Water District  
PROJECT Description: Wastewater Master Plan  
Proposal/Job Number: B10440143 Date: 3/29/2022

| January 1, 2022 Rates         | Eng-Sci-9<br>David F., Gerald F. | Eng-Sci-8 | Eng-Sci-7<br>R. Stevens | Eng-Sci-6<br>Paul C.<br>Janet H. | Eng-Sci-5<br>Aimiee F. | Eng-Sci-4<br>Connor R. | Eng-Sci-3<br>Evelyn C. | Eng-Sci-2 | Project Assistant |       | KJ        | KJ      | KJ             |                |               |                   | Total Labor + Subs<br>+ Expenses |
|-------------------------------|----------------------------------|-----------|-------------------------|----------------------------------|------------------------|------------------------|------------------------|-----------|-------------------|-------|-----------|---------|----------------|----------------|---------------|-------------------|----------------------------------|
| Classification:               |                                  |           |                         |                                  |                        |                        |                        |           |                   | Total | Labor     | ODCs    | ODCs<br>Markup | Total<br>Labor | Total<br>Subs | Total<br>Expenses | Total Labor + Subs<br>+ Expenses |
| Hourly Rate:                  | \$305                            | \$290     | \$270                   | \$245                            | \$220                  | \$200                  | \$185                  | \$165     | \$130             | Hours | Fees      | Fees    | 5%             |                |               |                   | Fees                             |
| Phase F - Subtotal            | 0                                | 0         | 0                       | 22                               | 0                      | 184                    | 90                     | 0         | 14                | 310   | \$60,660  | \$750   | \$38           | \$60,660       | \$0           | \$788             | \$61,448                         |
| Phase J - Project Management  |                                  |           |                         |                                  |                        |                        |                        |           |                   |       |           |         |                |                |               |                   |                                  |
| Task J.1 - Project Management |                                  |           |                         | 60                               |                        |                        |                        |           | 24                | 84    | \$17,820  |         | \$0            | \$17,820       | \$0           | \$0               | \$17,820                         |
| Task J.2 - QA/QC              | 24                               |           |                         | 16                               | 8                      |                        |                        |           |                   | 48    | \$13,000  |         | \$0            | \$13,000       | \$0           | \$0               | \$13,000                         |
| Phase G - Subtotal            | 24                               | 0         | 0                       | 76                               | 8                      | 0                      | 0                      | 0         | 24                | 132   | \$30,820  | \$0     | \$0            | \$30,820       | \$0           | \$0               | \$30,820                         |
| All Phases Total              | 38                               | 0         | 20                      | 246                              | 88                     | 818                    | 102                    | 0         | 38                | 1350  | \$284,030 | \$1,450 | \$73           | \$284,030      | \$0           | \$1,523           | \$285,553                        |
|                               |                                  |           |                         |                                  |                        |                        |                        |           |                   |       |           |         |                |                |               |                   |                                  |

## Relevant Planning Experience

KJ provides CVWD with the right balance of expertise, a fresh perspective and innovative ideas, and a team that has worked together on several recent master plans with similar technical issues and concerns. As shown in **Table 3**, we bring success stories and lessons learned from recent projects that allow us to efficiently and cost-effectively develop your WWMP. Recent, relevant planning projects completed by members of this team are highlighted on the following pages.

| Relevant Project Highlights                                                    | Relevant Scope Elements |               |                    |                               |                 |                    |                 |                       |
|--------------------------------------------------------------------------------|-------------------------|---------------|--------------------|-------------------------------|-----------------|--------------------|-----------------|-----------------------|
|                                                                                | Wastewater Mains        | Lift Stations | Sewer Interceptors | Condition/Capacity Assessment | Data Collection | Hydraulic Modeling | CIP Development | On-Time and On-Budget |
| <b>Wastewater System Master Plan</b>   City of Ventura ●                       | ●                       | ●             | ●                  | ●                             | ●               | ●                  | ●               | ●                     |
| <b>Water, Recycled Water, Sewer Master Plans</b>   City of South Gate ●        | ●                       |               | ●                  | ●                             | ●               | ●                  | ●               | ●                     |
| <b>Water and Sewer Master Plan</b>   Rosamond Community Services District ●    | ●                       |               |                    | ●                             | ●               | ●                  |                 | ●                     |
| <b>Integrated Master Plan Update</b>   Las Virgenes Municipal Water District ● | ●                       | ●             | ●                  | ●                             | ●               |                    | ●               | ●                     |
| <b>Asset Management Plan</b>   Three Lakes Sanitation District ●               | ●                       | ●             | ●                  | ●                             | ●               |                    | ●               | ●                     |
| <b>General Engineering Services</b>   South Arapahoe Sanitation District ●     | ●                       | ●             | ●                  | ●                             | ●               | ●                  | ●               | ●                     |
| <b>Wastewater Comprehensive Plan</b>   City of Port Angeles ●                  | ●                       | ●             | ●                  | ●                             | ●               | ●                  |                 | ●                     |

**Table 3.** The KJ team knows how to maximize your resources and deliver reliable service for decades. Highlighted projects are denoted with the following ●.





## Sewer Master Plan

### City of South Gate

South Gate, CA

**KJ developed integrated water, sewer, and recycled water master plans for the City South Gate. Our sewer system analysis included a capacity assessment using a comprehensive all-pipe hydraulic model and a prioritized pipeline replacement plan.**

The City currently provides water distribution and sewer collection services to a population of roughly 89,000 people within its service area. KJ prepared an integrated master plan for the City's potable water (PW), sewer, and recycled water (RW) distribution systems. The main objectives successfully completed in the sewer master plan were:

- Provided future sewer flow projections using water demand data and calibrated sewer return ratios
- Created hydraulic model of the sewer system to identify capacity deficiencies and necessary improvements based upon future growth and development;
- Identified a timeframe and cost of maintaining and installing system improvements based upon the growth forecast and condition of existing system pipelines;
- Identified strategies for maintenance, replacement, and installation of system improvements.

For analysis of the sewer system, four steady-state modeling scenarios were developed based on existing and future sewer flows. Flows were estimated based on water demands and sewer return ratios. Future growth assumptions mirrored those used for the PW system, resulting in complete planning consistency between the PW and sewer systems.

Results from the model demonstrated all pipelines met design criteria for existing average and peak flows. No pipelines exceeded capacity criterion during future flow conditions. However, an asset management analysis identified several opportunities for the City to mitigate risk by rehabilitating old, unlined concrete pipe.

**A Capital Improvement Program (CIP) was prepared to address the deficiencies identified within the sewer system.**

#### Client Reference:

City of South Gate  
8650 California Avenue  
South Gate, CA 90280

Ana Ananda, Project Manager  
(323) 563-5769

#### Relevant Team Members:

Paul Chau, Project Director  
David Ferguson, Project Manager  
Connor Rutten, Project Engineer  
Aimee Fitzhugh, Project Engineer

#### Relevant Project Highlights

- Sewer flow projections
- Created hydraulic model of the sewer system
- Installing system improvements
- Capital Improvement Program (CIP) was prepared to address the deficiencies



## Sewer Master Plan

### Rosamond Community Services District

Rosamond, CA

KJ developed integrated water and sewer master plan for Rosamond Community Services District (RCSD), which provides water, sewer, park, and lighting services for the City of Rosamond in Antelope Valley, California.

A Geographic Information System (GIS) database was developed as precursors to performing hydraulic modeling of the sewer system. The database was developed using as-built drawings, GIS shapefiles, and field verified data provided by RCSD. The sewer system database maintains the installation years, lengths, diameters, materials, invert elevations, and rim elevations of pipelines and manholes, as well as proposed developments.

To analyze the systems' capacities and evaluate their deficiencies, the KJ team created a system hydraulic model utilizing Innovyze's InfoSewer software. Four extended period simulation scenarios were developed for evaluation, based on flows: existing average flows, existing peak flows, future build-out (2040) average flows and future build-out peak flows.

#### Client Reference:

Rosamond Community Services District  
3179 35th Street West,  
Rosamond, CA 93650

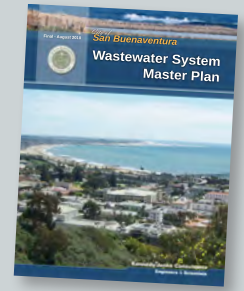
Brach Smith,  
Public Works Manager  
(661) 256-3411 ext. 229

#### Relevant Team Members:

Paul Chau, Project Manager  
David Ferguson, Project Director

#### Relevant Project Highlights

- Sewer master plan
- Performed hydraulic modeling of the sewer system
- Analyzed the systems' capacities and evaluate their deficiencies
- Utilizing Innovyze's InfoSewer software



## Wastewater Master Plan Updates

### City of Ventura

Ventura, CA

As part of the master plan, KJ has been providing hydraulic analyses for new developments within the City. The purpose of these hydraulic analyses is to assess the impact of the development on the City's sewer collection system. The results of the hydraulic analyses are utilized to formulate specific developer fees based on the development's impact on the system.

Paul served as the Project Engineer for these projects, utilizing H2OMAP Sewer software to execute the hydraulic analyses. The City's wastewater collection system model includes 5,890 manholes and 1,490,054 linear feet of piping. For each project, wastewater demands are updated based on the development's projected flows. The affected sewershed is re-calibrated based on flow monitoring data provided by the developer. The hydraulic analysis is executed under a peak wet weather flow scenario for both existing and future ultimate wastewater flows.

### Deficiencies Noted and Resulting Project Decision

The hydraulic analyses were used primarily to define pipeline deficiencies based on modeled depth-to-diameter ratios. Two types of deficiencies were defined: ones without the impact of the development and ones with the impact of the development. A comparison of the two types of deficiencies is utilized to define the deficiencies that directly correlate to the development's impact. The hydraulic analyses also define recommended pipeline sizes to address the deficiencies. The City utilizes the results of the hydraulic analyses to assess fees to the developer based on their impact to the system.

### Client Reference:

City of Ventura  
501 Poli Street  
Ventura, CA 93001

Susan Rungren  
Utilities Engineer  
(805) 677-4138

### Relevant Team Members:

Paul Chau, Project Engineer

### Relevant Project Highlights

- Hydraulic analyses on the City's sewer collection system
- Sewershed is re-calibrated based on flow monitoring data
- Defined pipeline deficiencies based on modeled depth-to-diameter ratios
- Assess fees to the developer based on their impact to the system



## General Engineering Services

### South Arapahoe Sanitation District

Lakewood, CO

Since 1978, KJ has managed the maintenance, budget, capital improvements, and day-to-day operations for this 30,000-customer sanitation district. On a daily basis, KJ staff communicates with customers, contractors, and governmental agencies. We coordinate with the District Board of Directors, as well as its attorney and accountant. Projects that KJ has managed for this district include:

- **Capacity Studies and Master Planning for future development in the District.**

KJ constantly modifies the modeling of the District's major outfalls, which utilizes SewerCad to determine available capacity in the sewer system for future development. New developments are reviewed so that these new flows can be incorporated into the District's master outfall study.

- **Preparation of the District's Long-Term Capital Improvement Program (CIP), from 1998 to present.** On an annual basis, through CCTV, onsite observation, database records, and prior experience of line issues, lines and manholes are identified that need to be rehabilitated and, therefore, included in the Long-Term CIP Project listing. The rehabilitation is prioritized based on severity of the National Association of Sanitary Sewer Contractors (NASSCO)-rated sewer line issues; proximity of the lines to each other; and scheduled paving improvements in the Colorado Department of Transportation (CDOT), Centennial and Greenwood Village Road Rehabilitation Programs. A ten-year listing and associated Opinion of Probable Cost is prepared for the lines, which is incorporated into the District's long term budgeting and used for sewer billing rate adjustments.
- **Management of annual CIP Projects.** Since 2000, KJ has managed the rehabilitation of over 55,000 linear feet of sanitary sewer pipe, ranging in size from 8" diameter to 36" diameter, along with associated manhole rehabilitation. Pipe rehabilitation has included excavation as well as cured-in-place pipe lining. These rehabilitation programs involved extensive homeowner, agency and contractor coordination and communication in order to ensure the least possible disruption.

### Client Reference:

South Arapahoe Sanitation District  
143 Union Boulevard, Suite 600  
Lakewood, CO 80228

Steve Daldegan,  
District Manager  
(303) 994-5175  
sdaldegan@lakehurstwater.org

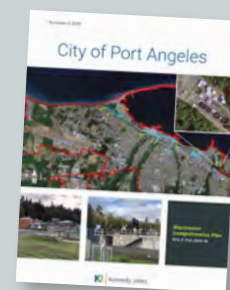
### Relevant Team Members:

Aimee Fitzhugh, Modeler/  
Project Engineer

### Relevant Project Highlights

- Master Planning
- Sewer System Hydraulic Modeling
- Development of Long-Term Capital
- Improvement Program
- Implementation of Annual Capital
- Improvement Project
- Data Collection and Analysis





## Wastewater Comprehensive Plan

### City of Port Angeles

Port Angeles, WA

The City of Port Angeles is updating its comprehensive plan for its sewer collection and treatment assets. The City faces challenges that include aging infrastructure, knowledge transfer, regulatory changes, and funding. KJ began with a series of risk assessment workshops to identify and understand key areas of vulnerability within the their systems. The prioritized, risk-based list was used to steer the analysis of both the collections and WWTF systems. KJ is performing an analysis of the City's collection system, CSO diversion facility, and treatment plant to determine near-term and long-term improvements. Andrew is the lead for the collection system evaluation, which includes hydraulic modeling of their collection system, condition assessments of their lift stations, and development of improvements. In addition to the offsite evaluations, the KJ WWTF team evaluated the entire WWTF process using hydraulic and BioWin process models. The tools and evaluation have identified capacity and reliability needs to help appropriately direct resources.

#### Client Reference:

City of Port Angeles  
321 E 5th Street  
Port Angeles, WA 98362

Tyler White  
Wastewater Treatment Plant  
Superintendent  
(360) 417-4690

#### Relevant Team Members:

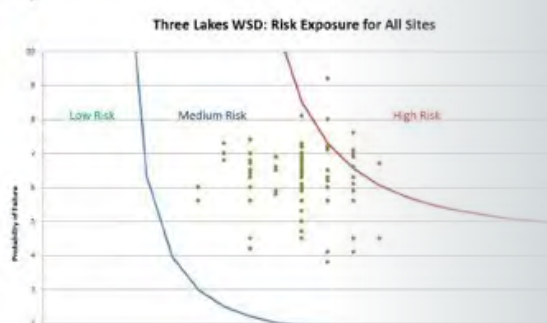
Aimee Fitzhugh, Modeler/  
Project Engineer

#### Relevant Project Highlights

- Approved Wastewater Plan that Enables CIP Funding and Grant Opportunities
- Understanding of System Vulnerabilities
- Optimization of Facility Operations
- Accommodating for City Growth and Development
- Understanding Impacts of Future Permitting Requirements



| Priority Lift Stations |                   |             |
|------------------------|-------------------|-------------|
| Priority Number        | Lift Station Name | Category    |
| 1                      | Cool Water        | Development |
| 2                      | Soda Springs      | Development |
| 3                      | Norton            | Development |
| 4                      | Kickapoo (A3-1)   | Development |
| 5                      | CutThroat (J1-1)  | Development |
| 6                      | F4-1              | Individual  |
| 7                      | Highland (K1-1)   | Development |



## Asset Management Plan

### Three Lakes Sanitation District

Grand Lake, CO

In 2018, KJ prepared an Asset Management Plan that catalogs Three Lakes Sanitation District's (District) collection system assets, provides a comprehensive summary of each asset's condition based on assessment performed by District staff, and identifies current and future rehabilitation and improvement recommendations. A capital improvement plan was developed based on the estimated remaining useful life of each asset, and an assigned replacement cost for each asset. The plan was broken down into three main asset categories; Lift Station and Force Mains, Sewer Collection System, and Wastewater Treatment Plant. The District has 116 lift stations, 56 miles of sewer main, and one wastewater treatment plant.

We provided recommendations to the District that reduced operational risk in an effort to provide the greatest return for available capital improvement funds. For the District's lift stations, we created an asset matrix that cataloged lift station and force main assets, the last reported condition assessment, recommendations for rehabilitation, and relative risk condition. From the matrix, we then developed a priority list for future lift station upgrades/renovations. This matrix served as the basis for the development of opinions of probable costs for improvements. For the sewer collection system, we developed a similar asset matrix and assessed the risk of each facility. We also developed exhibits to identify collection system assets that have a higher risk of failure and therefore should be observed on a more regular basis, including:

- Pipelines located adjacent to, or that cross over, a creek that could be impacted by erosion.
- "Hot Spot" pipelines that have a history of needed increased jetting due to grease or debris build-up.
- Clay or non-PVC pipelines.

The results of the condition assessment, the asset matrices, and the capital improvement plans were summarized in a comprehensive Asset Management Plan Report.

#### Client Reference:

Three Lakes Sanitation District  
1111 Co Road, 48,  
Grand Lake, CO 80447

Katie Nicholls,  
District Manager  
(970) 627-3544  
katie@threelakesws.com

#### Relevant Project Highlights

- Identified current and future wastewater facilities rehabilitation and improvement requirements
- Capital Improvement Plan recommendations including an estimate of the remaining useful life of each asset infrastructure improvements
- Summarized current and future regulator pressures and the resultant impact on the planning of existing and new facilities improvements



## Integrated Master Plan Update

### Las Virgenes Municipal Water District

Calabasas, CA

KJ prepared an Integrated Master Plan that comprehensively evaluated the water, recycled water, and sewer systems associated with Las Virgenes Municipal Water District (LVMWD). The plan was developed in a workshop-driven process that involved multiple utilities and stakeholders, including the Joint Powers Authority of LVMWD and Triunfo Sanitation District and Calleguas MWD.

KJ provided consulting services to LVMWD for the update of the potable water, recycled water, and sanitation Master Plans as well as an Integrated Plan to align the utility systems with a common vision. The plans included a comprehensive assessment of build-out water demands, wastewater flows, and recycled water opportunities with considerations for water conservation and SBx7-7 compliance, development of updated potable water and recycled water hydraulic models, an updated wastewater treatment plant process model, and formulation of a phased Capital Improvement Program for each utility system. The plan was performed under a workshop driven process with the Board of Directors and the wastewater JPA.

#### Client Reference:

Las Virgenes Municipal Water District  
4232 Las Virgenes Road,  
Suite #1994  
Calabasas, CA 91302

John Zhao, Director of  
Facilities and Operations  
(818) 252-2230

#### Relevant Project Highlights

- Comprehensive assessment of sewer systems
- Updated wastewater treatment plant process model
- Formulation of a phased Capital Improvement Program

## Serving The Needs of Our Clients By Delivering Value-Added, Innovative Engineering Services To Achieve Their Goals

KJ's team has a proven track record providing engineering services for general sewer plans, CIP Projects, and wastewater treatment facility planning. We invite you to contact the references listed below. These individuals will attest to the quality and responsiveness of our team's services on projects similar to yours.

| PROJECT NAME AND YEAR                                                                                    | CLIENT REFERENCE                                                                                                                         | BRIEF DESCRIPTION OF THE SERVICES PROVIDED                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sewer Master Plan, City of South Gate, South Gate, CA   2017</b>                                      | Ana Ananda<br>Consultant/Water Engineer<br>(323) 563-5769<br>8650 California Ave<br>South Gate, CA 90280<br>aananda@sogate.org           | <ul style="list-style-type: none"> <li>• Provided future sewer flow projections using water demand data and calibrated sewer return ratios</li> <li>• Created hydraulic model of the sewer system to identify capacity deficiencies and necessary improvements based upon future growth and development;</li> <li>• Identified a timeframe and cost of maintaining and installing system improvements based upon the growth forecast and condition of existing system pipelines</li> </ul> |
| <b>Sewer Master Plan, Rosamond Community Services District, Rosamond, CA   2020</b>                      | Brach Smith,<br>Public Works Manager<br>(661) 256-3411 ext. 229<br>3179 35th Street West<br>Rosamond, CA 93650<br>bsmith@rosamondcsd.com | <ul style="list-style-type: none"> <li>• KJ developed integrated water and sewer master plans for Rosamond Community Services District (RCSD)</li> <li>• Performed hydraulic modeling of the sewer system</li> <li>• Analyzed the systems' capacities and evaluate their deficiencies</li> </ul>                                                                                                                                                                                           |
| <b>General Engineering Services, Arapahoe County Water and Wastewater Authority, Lakewood, CO   2019</b> | Steve Daldegan<br>District Manager<br>(303) 994-5175<br>13031 E Caley Ave<br>Centennial, CO 80111<br>sdaldegan@lakehurstwater.org        | <ul style="list-style-type: none"> <li>• Management of annual Capital Improvement Program (CIP) Projects.</li> <li>• Capacity Studies and Master Planning for future development in the District, KJ constantly modifies the modeling of the District's major outfalls, which utilizes SewerCad to determine available capacity in the sewer system for future development</li> </ul>                                                                                                      |



## Contact Information

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**Paul Chau, P.E.**  
Project Manager  
(626) 975-8731

**Pasadena Office**  
300 N. Lake Avenue, Suite 1020  
Pasadena, CA 91101

# CRESCENTA VALLEY WATER DISTRICT

## General Manager Report

**To:** Honorable President and Members of the Board of Directors  
**From:** Nem Ochoa, General Manager  
**Subject:** General Manager Report

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GM Report  
April 12, 2022

### General Managers Report Topics:

- GM Activities

The following are some highlights in this month's report:

- CVWD Water Education Center
- 40 Years of Service Recognition and Dedication
- Drought Executive Order
- Water Production, Hydrology, Engineering Projects

## STAFFING

One (1) employee has a work anniversary in April. Arturo Montes – 4 years

As of April 7<sup>th</sup> the District has gone 91 days without a lost time accident.

## GENERAL MANAGER ACTIVITIES

### Meetings:

|                                  |                                                   |
|----------------------------------|---------------------------------------------------|
| Budget Meeting                   | - March 29 <sup>th</sup>                          |
| Water Supply Development Meeting | - March 31 <sup>st</sup>                          |
| Mindfulness Webinar              | - March 31 <sup>st</sup>                          |
| Technology Committee Meeting     | - April 4 <sup>th</sup>                           |
| Engineering Committee Meeting    | - April 7 <sup>th</sup>                           |
| Management Staff Meetings        | - March 28 <sup>th</sup> , April 11 <sup>th</sup> |

Submitted by:



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Nem Ochoa  
General Manager



# Engineering Report

April 12, 2022  
Staff Report

**To:** Honorable President and Members of the Board of Directors  
**From:** David S. Gould, P.E. – Director of Engineering & Operations  
**Subject:** **Engineering Report – March 2022**

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**1. Water Production Report**

- March 1 – 31 – Water production – 60%/40% split – 99.2 MG for the month
- Average use 1.3% less than 2021 and 13.0% greater than 5-yr average

**2. Rainfall Update**

- 1.73” for March 2022
- Rainfall Total for Rainfall Year 2021/22 – 16.36”

**3. Report on Engineering**

• **FY 21/22 Capital Improvement Projects**

- Ramsdell Mixing Station/Pressure Reducing Station - Under Review
- FY 21/22 – Pipeline Replacement Program
  - Project 1 – 2800 to 3100 Blocks of Los Olivos – Under Construction
  - Project 2 – 4700 & 4800 Blocks of Cheryl – Construction to start end of April
- Edmund #2 Reservoir Rehabilitation – Under Construction – Re-coating work
- Well 9 Rehabilitation – No Report
- Booster Pump 26 at Cresta Heights Rehabilitation – No Report
- SCADA Radio Communications Network – Working on Request for Quote
- SCADA System Upgrades – Under Design/Installation
- Conversion to Chloramination – No Report
- Wastewater Master Plan – See Staff Report

• **FY 20/21 Capital Improvement Projects**

- Emergency Generator at Sewer Lift Station
  - Agreement between LA County & LCF Complete
  - New Project Start Date – 6/1/22

• **Grant Program**

- Local Hazard Mitigation Plan – Approved by FEMA
  - Application for five (5) new emergency generators and Seismic Feasibility Study of Facilities submitted on 4/8/22
- USBR WaterSmart Grant 2021 - 3” & 4” Meters
  - Finalized agreement with USBR
  - Project to start in May 2022
- USBR WaterSmart Grant 2022 – USBR to award in August 2022
- Stormwater Capture Project at Crescenta Valley County Park – No Report

• **AMI Customer Engagement Portal**

- Completed Phase 1 of software integration
- Phase 2 – Working on layout of customer engagement portal

4. **Developer Projects**

- D-21-G2 – Fires Service for Clark High School – See Staff Report
- 2341 Mira Vista – New 4 Units – Reconciliation and Transfer of Ownership
- 3037/3043 Foothill – New 38 Units and mixed commercial – Permitting
- 2201 Honolulu – New 4" water main – Contractor Experience Review
- Waiting on Developer
  - 1961 Waltonia – New 6 units
  - 4360 Ocean View – 3 Units upgraded to 7 units
  - 4521 Briggs/2413 Foothill – New 70 units
  - 3900 Park Place – New 28 units
  - 2345 Mira Vista – New 4 units

5. **FMWD** – Construction – Started re-coating of La Crescenta Reservoir project.

# CRESCENTA VALLEY WATER DISTRICT

## WATER PRODUCTION REPORT

March 1 - March 31, 2022

|                            |            |       |          |     |
|----------------------------|------------|-------|----------|-----|
| <b>Well Production:</b>    | 53,595,700 | Gals  |          |     |
| <b>GWP Production:</b>     | 5,029,000  | Gals  |          |     |
| <b>Gravity Production:</b> | 1,206,820  | Gals  | % GW     | 60% |
| FMWD:                      | 39,322,397 | Gals  |          |     |
| City of Glendale:          | 0          | Gals  | % Import | 40% |
| <b>TOTAL:</b>              | 99,153,917 | Gals  |          |     |
|                            | 304.29     | ac-ft |          |     |

Glenwood Nitrate Water

Reclamation Plant:\* 0

\*Included in Well Production

## WATER DEMAND COMPARISON

| Time Period                      | Average Daily Usage (gals) | Current Period Change |
|----------------------------------|----------------------------|-----------------------|
| March 1 - March 31, 2022         | 3,142,615                  |                       |
| March 1 - March 31, 2021         | 3,184,127                  | -1.3%                 |
| 5-yr Average - March 2017 - 2021 | 2,782,152                  | 13.0%                 |

RAINFALL: March 1 - March 31, 2022 1.73"

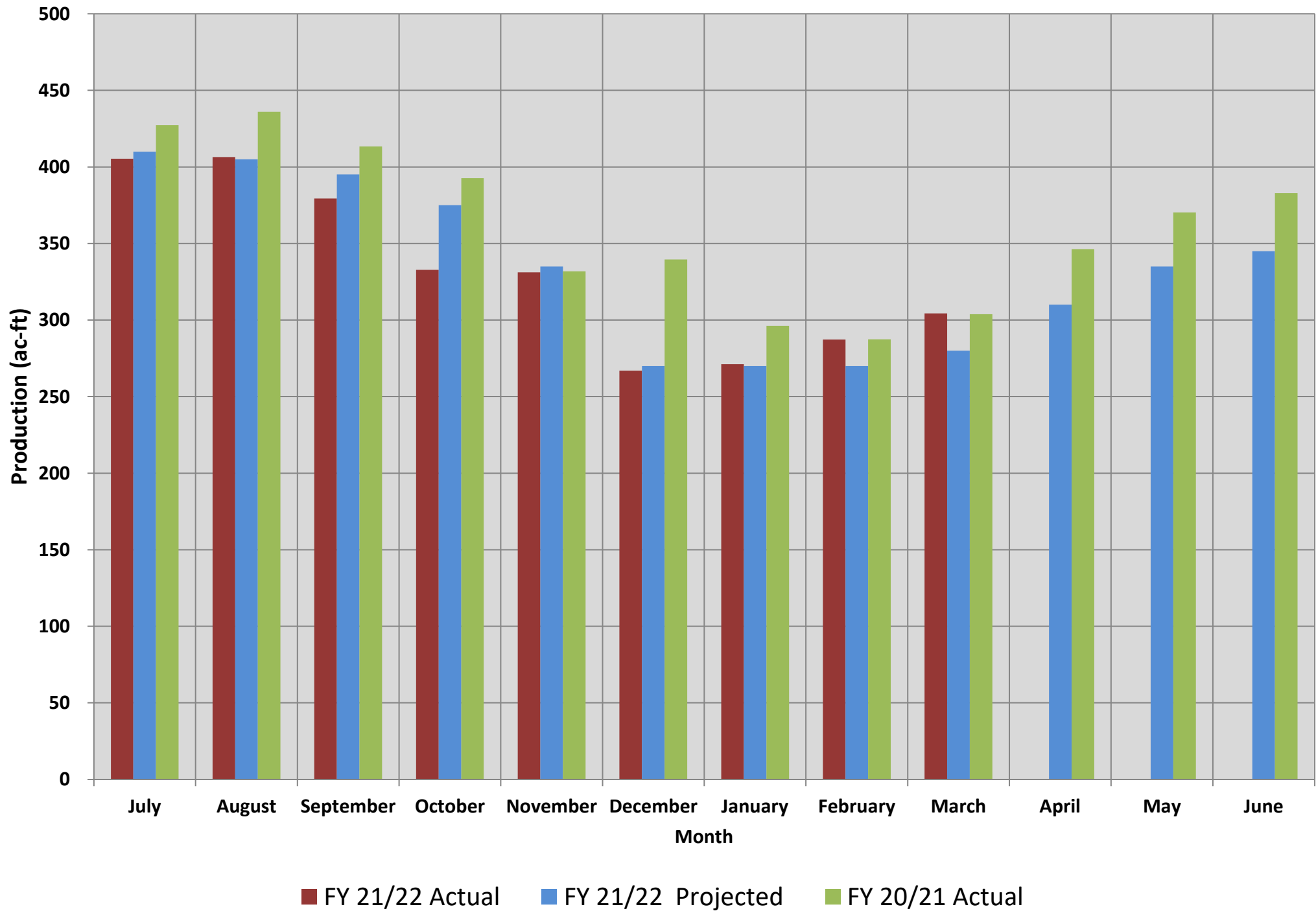
Season-To-Date: 16.36"

| 2021/22 Fiscal Year Water Production |                                       |                                          | WY 21/22 - Groundwater Production Water Rights |       | GWP (Well 16) Water Production - 2022 |                         | Purchased Water Production Tier 2 Allocation 2022 |                                   |
|--------------------------------------|---------------------------------------|------------------------------------------|------------------------------------------------|-------|---------------------------------------|-------------------------|---------------------------------------------------|-----------------------------------|
| Month                                | Actual Total Water Production (ac-ft) | Projected Total Water Production (ac-ft) | Month                                          | Month | Month                                 | Well Production (ac-ft) | Month                                             | Imported Water Production (ac-ft) |
| July                                 | 405                                   | 410                                      | October                                        | 162   | January                               | 16                      | January                                           | 101                               |
| August                               | 406                                   | 405                                      | November                                       | 159   | February                              | 13                      | February                                          | 122                               |
| September                            | 379                                   | 395                                      | December                                       | 149   | March                                 | 15                      | March                                             | 121                               |
| October                              | 333                                   | 375                                      | January                                        | 154   | April                                 |                         | April                                             |                                   |
| November                             | 331                                   | 335                                      | February                                       | 152   | May                                   |                         | May                                               |                                   |
| December                             | 267                                   | 270                                      | March                                          | 168   | June                                  |                         | June                                              |                                   |
| January                              | 271                                   | 270                                      | April                                          |       | July                                  |                         | July                                              |                                   |
| February                             | 287                                   | 270                                      | May                                            |       | August                                |                         | August                                            |                                   |
| March                                | 304                                   | 280                                      | June                                           |       | September                             |                         | September                                         |                                   |
| April                                |                                       | 310                                      | July                                           |       | October                               |                         | October                                           |                                   |
| May                                  |                                       | 335                                      | August                                         |       | November                              |                         | November                                          |                                   |
| June                                 |                                       | 345                                      | September                                      |       | December                              |                         | December                                          |                                   |
| Total to Date                        | 2,985                                 | 3,010                                    | Total to Date                                  | 945   | Total to Date                         | 44                      | Total to Date                                     | 344                               |
| Projected                            | 3,975                                 | 4,000                                    | Water Rights                                   | 3,294 |                                       |                         | Tier 2                                            | 2,154                             |
| % of Projected                       | 74.6%                                 | 75.3%                                    | % of Rights                                    | 29%   |                                       |                         | % of Allocation                                   | 16%                               |
| Remaining                            | 1,015                                 | 990                                      | Remaining                                      | 2,349 |                                       |                         | Remaining                                         | 1,810                             |

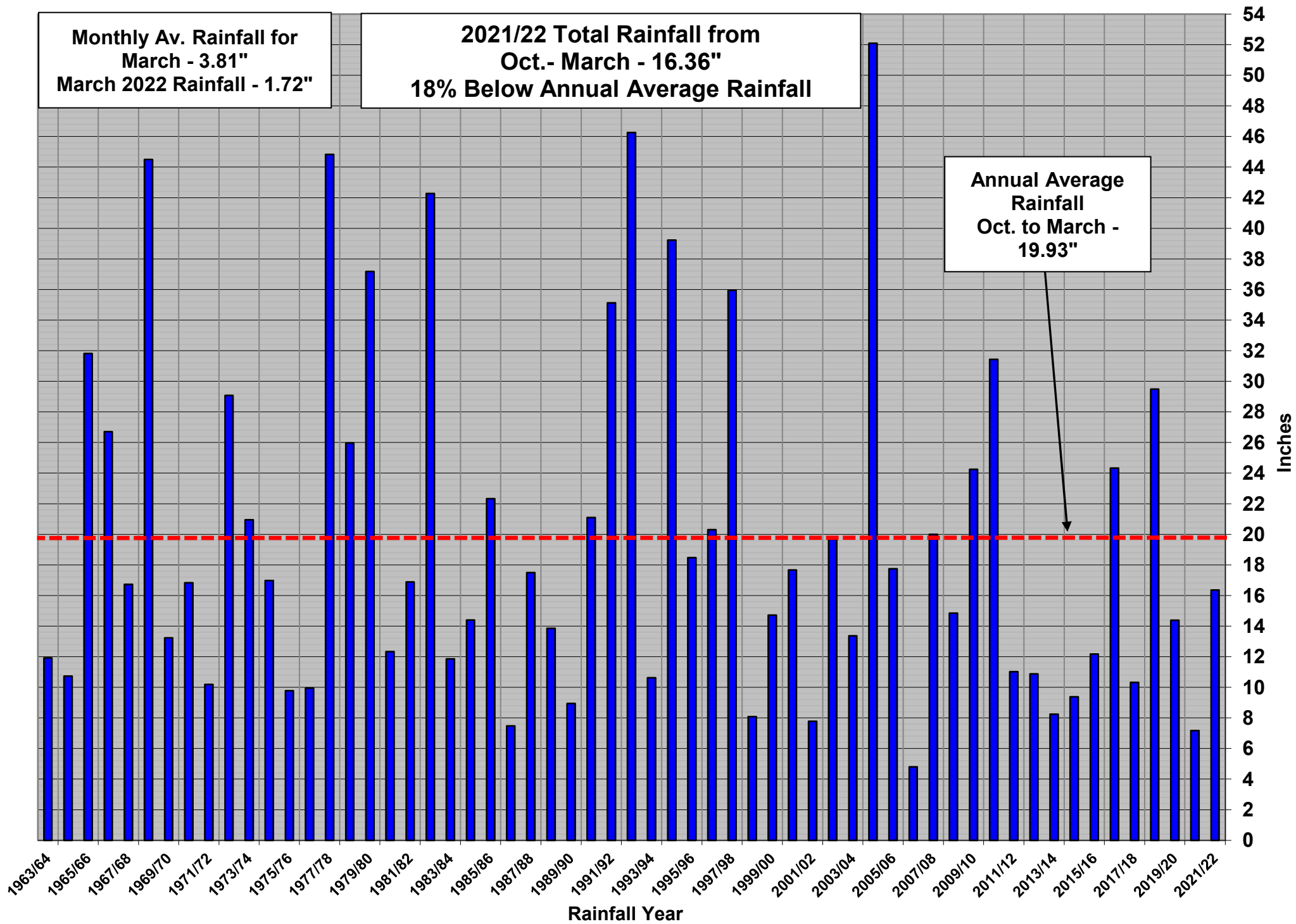
### NOTE:

1) Blue Numbers = Estimated Water Production

# Monthly Water Production: FY 21/22 Actual, FY 21/22 Projected & FY 20/21 Actual



# Monthly Rainfall - 1963/64 - 2021/22 (Oct.- March)





# **CRESCENTA VALLEY WATER DISTRICT**

2700 FOOTHILL BOULEVARD  
LA CRESCENTA, CALIFORNIA

To be held on  
April 7, 2022 at 3:00 PM

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

Posted April 6, 2022 at 3:00 PM

## **TELECONFERENCING NOTICE**

Under AB 361 and District Resolution No. 772, the District will continue to hold Board and Committee meetings by teleconference, due to the continuing State of Emergency for COVID-19 and the ongoing imminent risks to the health or safety of the attendees from COVID-19.

[This meeting will be held by teleconference only.]

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: 854 6816 2314

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

Those members of the public who are able to and would like to additionally participate with a computer through videoconference may access the Zoom videoconferencing tool available at the following link – <https://us02web.zoom.us/j/85468162314>

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 [customerservice@cvwd.com](mailto:customerservice@cvwd.com). 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. Under the provisions of the Brown Act, the Board is prohibited from taking action on items not listed on the agenda, except under certain circumstances.

**Action Items**

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

1. Discussion of FY 22/23 Capital Improvement Project Program Budget
2. Update of FY 21/22 CIP Budget and Schedule

**Committee Member's Request for Future Agenda Items**

**Next Engineering Committee Meeting** – May 17, 2022, at 3:00 pm

**Adjournment**

# CRESCENTA VALLEY WATER DISTRICT

## STAFF REPORT

Information Item No. 1

April 20, 2021

**To:** Engineering Committee  
**From:** David S. Gould, P.E. – Director of Engineering & Operations  
**Subject:** Discussion of Draft FY 22/23 Capital Improvement Project Budget

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### **BACKGROUND:**

Staff presented the draft FY 22/23 Capital Improvement Project Budget (CIP) for the discussion. The main element of the CIP budget is replacement of 6605 LF (1.25 miles) pipeline as continue with the 10-year ramps schedule. The Board agreed to use Pay as you go financing for the next 3-years in accordance with the 3-year rate increase.

### **DISCUSSION:**

Attached is the draft FY 22/23 CIP budget for review and discussion. The major projects for this coming fiscal year include replacement of 6,605 LF of pipeline, reservoir rehabilitation, continuation of AMI program, continuation of the SCADA replacement project, and design for installation of 5 new emergency electrical generators. In addition, included in the CIP summary is a list of grants awarded and pending that will offset CIP costs.

### **SUMMARY:**

The CIP is being presented for discussion with the Engineering Committee and the final budget will be presented to the Board of Directors at the future Board meeting.

Prepared & Submitted by:



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

# Crescenta Valley Water District

## FY 22/23 Capital Improvement Project Priority List

| Capital Improvement Project Program                            | Budget<br>FY 22/23 | Category                 | Bond (B)<br>or<br>PayGo (P) | Cumulative<br>Estimated<br>Costs | Project Description                                                                                                                                                                                                                            |
|----------------------------------------------------------------|--------------------|--------------------------|-----------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Annual Pipeline Replacement - 6,605 LF                         | \$ 3,598,500       | Water<br>Distribution    | P                           | \$ 3,598,500                     | <b>Pipeline Replacement</b> - Project 1 - 3400 & 3500 Block of Montrose. Project 2 - 2600 & 2700 blocks of Orange and 5000 Block of Adobe Ln. Project 3: 2400-2600 Block of Upper Terrace. Project 4: 3000 & 3100 Block of Orange.             |
| Steel Reservoir Rehabilitation - Goss Canyon #1                | \$ 845,000         | Water Storage            | P                           | \$ 4,443,500                     | <b>Reservoir Rehabilitation</b> - Structural repairs and re-coating at Goss Canyon #1 Reservoir during low demand (Winter) season                                                                                                              |
| Well 14 Rehabilitation                                         | \$ 140,000         | Water Supply             | P                           | \$ 4,583,500                     | <b>Well Rehabilitation</b> - Remove & Inspect Well Pump & Casing, Chemical Treatment Well Casing, Pump Test, New Pump & Motor                                                                                                                  |
| PRS - Zone 2 to Zone 1/Upgrade - Ramsdell Mixing Station       | \$ 1,400,000       | Water<br>Distribution    | P                           | \$ 5,983,500                     | <b>New Pressure Reducing Station &amp; Upgrade Ramsdell Mixing Station - <u>Continuation from FY 21/22</u></b> - Construction of PRS from Zone 2 to zone 1 & Upgrade to Ramsdell Mixing Station                                                |
| Replacement - SCADA System                                     | \$ 395,000         | Technology               | P                           | \$ 6,378,500                     | <b>Replacement of SCADA System - <u>Continuation from FY 21/22</u></b> - Completion of the replacement of RTU/PLC Equipment including new equipment, programing, integration and testing                                                       |
| Replacement - Communication Radio Network                      | \$ 225,500         | Technology               | P                           | \$ 6,604,000                     | <b>Replacement of SCADA Radio Communication System - <u>Continuation from FY 21/22</u></b> - Completion to Upgrading Radio System to 5.8GHz radios                                                                                             |
| AMI - Replace 1-1/2" Meters & Add Zone 9, 10, & 11 SmartPoints | \$ 450,000         | Technology               | P                           | \$ 7,054,000                     | <b>Advanced Metering Infrastructure (AMI) - <u>Continuation from FY 21/22</u></b><br>1) Install 1-1/2" water meters 2) SmartPoints - Zones 9, 10 & 11                                                                                          |
| New Emergency Electrical Generator at Mills Plant - Design     | \$ 160,000         | Public Safety            | P                           | \$ 7,214,000                     | <b>New Emergency Electrical Generator</b> - Installation of a Stationary 200kW Emergency Electrical Generators at the Mills Plant & Paschall Booster Station; 3 - 70kW Emergency Electrical Generator at Wells 5, 7 & 9 - <b>Cal OES Grant</b> |
| Annual Booster Pump Replacement                                | \$ 50,000          | Water<br>Distribution    | P                           | \$ 7,264,000                     | <b>Booster Pump Replacement</b> - Replace 15-yr and older booster pump with new pump assembly and high efficiency motor - Replace Booster 26 at Cresta Heights Reservoir                                                                       |
| Stormwater Recharge CVC Park - Planning                        | \$ 50,000          | Water Supply             | P                           | \$ 7,314,000                     | <b>Stormwater Recharge - <u>Continuation from FY 20/21</u></b> - Concept plan, grant funding options and coordination with stakeholders                                                                                                        |
| Disinfection - Conversion to Chloramines                       | \$ 75,000          | Water<br>Treatment       | P                           | \$ 7,389,000                     | <b>Disinfection Changeover</b> - Utilizing a consultant to assist operations staff with conversion, monitoring and standard operating procedures                                                                                               |
| Seismic Vulnerability Study - Main Office & Glenwood Plant     | \$ 100,100         | Facilities &<br>Planning | P                           | \$ 7,489,100                     | <b>Seismic Vulnerability Study</b> - at Main Office & Glenwood Plant - <b>Cal OES Grant</b>                                                                                                                                                    |
| Pay-Go Total                                                   | \$ 7,489,100       |                          |                             |                                  |                                                                                                                                                                                                                                                |

| FY 2022/23 CIP Budget<br>Draft - 04/07/22                               | Recorded<br>FY 20/21 |  | Budget<br>FY 21/22 | Projected<br>FY 21/22 |  | Budget<br>FY 22/23 |  | Forecast<br>FY 23/24 | Forecast<br>FY 24/25 | Forecast<br>FY 25/26 | Forecast<br>FY 26/27 | Forecast<br>FY 27/28 | Forecast<br>FY 28/29 | Forecast<br>FY 29/30 | Forecast<br>FY 30/31 | Forecast<br>FY 31/32 |
|-------------------------------------------------------------------------|----------------------|--|--------------------|-----------------------|--|--------------------|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 10-Year Capital Improvement Project Summary                             |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 1. Water Supply                                                         | \$ 157,768           |  | \$ 135,000         | \$ 139,548            |  | \$ 190,000         |  | \$ 144,000           | \$ 148,000           | \$ 152,000           | \$ 157,000           | \$ 162,000           | \$ 167,000           | \$ 172,000           | \$ 177,000           | \$ 182,000           |
| 2. Water Storage                                                        | \$ 663,607           |  | \$ 590,000         | \$ 724,201            |  | \$ 845,000         |  | \$ 1,020,400         | \$ 1,046,500         | \$ 1,725,000         | \$ 1,325,000         | \$ 1,660,000         | \$ 1,125,000         | \$ 1,685,000         | \$ -                 | \$ -                 |
| 3A. Water Distribution - Pipeline -10-Yr Ramp up                        | \$ 1,924,636         |  | \$ 3,000,000       | \$ 3,084,656          |  | \$ 3,598,500       |  | \$ 3,730,000         | \$ 4,440,000         | \$ 5,320,000         | \$ 6,570,000         | \$ 7,610,000         | \$ 8,020,000         | \$ 8,980,000         | \$ 10,240,000        | \$ 10,240,000        |
| 3B. Water Distribution - Other                                          | \$ 133,014           |  | \$ 781,000         | \$ 150,400            |  | \$ 1,450,000       |  | \$ 511,500           | \$ 53,000            | \$ 54,600            | \$ 56,200            | \$ 97,900            | \$ 159,600           | \$ 61,400            | \$ 63,200            | \$ 1,325,100         |
| 4. Water Treatment                                                      | \$ 54,073            |  | \$ 75,000          | \$ 75,000             |  | \$ 75,000          |  | \$ -                 | \$ -                 | \$ -                 | \$ 225,000           | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 |
| 5. Technology                                                           | \$ 473,911           |  | \$ 1,019,000       | \$ 996,075            |  | \$ 1,070,500       |  | \$ 560,000           | \$ 605,000           | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 |
| 6. Public Safety/Emergency Response                                     | \$ 134,549           |  | \$ 30,450          | \$ 30,450             |  | \$ 160,000         |  | \$ 1,340,000         | \$ 215,000           | \$ 189,000           | \$ 150,000           | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 |
| 7. Facilities & Planning                                                | \$ 3,956             |  | \$ -               | \$ -                  |  | \$ 100,100         |  | \$ 151,000           | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 |
| Capital Improvement Projects - Total                                    | \$ 3,545,513         |  | \$ 5,630,450       | \$ 5,200,330          |  | \$ 7,489,100       |  | \$ 7,456,900         | \$ 6,507,500         | \$ 7,440,600         | \$ 8,483,200         | \$ 9,529,900         | \$ 9,471,600         | \$ 10,898,400        | \$ 10,480,200        | \$ 11,747,100        |
|                                                                         |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Bond Financing - CIP                                                    | \$ 2,291,858         |  | \$ 2,708,142       | \$ 2,708,142          |  | \$ -               |  | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 |
| Water Distribution - Pipeline Total                                     | \$ 1,924,636         |  | \$ 3,000,000       | \$ 3,084,656          |  | \$ 3,598,500       |  | \$ 3,730,000         | \$ 4,440,000         | \$ 5,320,000         | \$ 6,570,000         | \$ 7,610,000         | \$ 8,020,000         | \$ 8,980,000         | \$ 10,240,000        | \$ 10,240,000        |
| Remaining CIP                                                           | \$ 1,620,877         |  | \$ 2,922,308       | \$ 2,492,188          |  | \$ 3,890,600       |  | \$ 3,726,900         | \$ 2,067,500         | \$ 2,120,600         | \$ 1,913,200         | \$ 1,919,900         | \$ 1,451,600         | \$ 1,918,400         | \$ 240,200           | \$ 1,507,100         |
| IRWMP - Re-Activate Well 2 - Construction (Award)                       |                      |  |                    |                       |  | \$ (63,000)        |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Cal OES - Local Hazard Mitigation Plan (Award)                          |                      |  |                    |                       |  | \$ (24,064)        |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| USBR Small - Large Meter AMI Project (Award)                            |                      |  |                    |                       |  | \$ (70,000)        |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| USBR WaterSMART 2022 - AMI Project - \$500K (Pending)                   |                      |  |                    |                       |  | \$ (150,000)       |  | \$ (350,000)         |                      |                      |                      |                      |                      |                      |                      |                      |
| USBR WaterSMART 2022 - AMI Project - \$2M (Pending)                     |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Cal OES - Critical Infrastructure Emergency Generator Project (Pending) |                      |  |                    |                       |  | \$ (120,000)       |  | \$ (1,005,000)       |                      |                      |                      |                      |                      |                      |                      |                      |
| Cal OES - CVWD Seismic Vulnerability Study (Pending)                    |                      |  |                    |                       |  | \$ (75,075)        |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Grant Reimbursement                                                     |                      |  |                    |                       |  | \$ (502,139)       |  | \$ (1,355,000)       |                      |                      |                      |                      |                      |                      |                      |                      |
| Water Fund Financing - CIP                                              | \$ 3,545,513         |  | \$ 5,630,450       | \$ 5,200,330          |  | \$ 6,986,961       |  | \$ 6,101,900         | \$ 6,507,500         | \$ 7,440,600         | \$ 8,483,200         | \$ 9,529,900         | \$ 9,471,600         | \$ 10,898,400        | \$ 10,480,200        | \$ 11,747,100        |
| Total Financing - CIP                                                   | \$ 3,545,513         |  | \$ 5,630,450       | \$ 5,200,330          |  | \$ 6,986,961       |  | \$ 6,101,900         | \$ 6,507,500         | \$ 7,440,600         | \$ 8,483,200         | \$ 9,529,900         | \$ 9,471,600         | \$ 10,898,400        | \$ 10,480,200        | \$ 11,747,100        |
|                                                                         |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| CIP Total per FY 21/22 - 5 year projections with 8% increase            |                      |  |                    | \$ 5,208,750          |  | \$ 5,227,163       |  | \$ 5,939,726         | \$ 6,760,092         | \$ 7,755,608         | \$ 9,123,057         | \$ 10,288,646        | \$ 10,288,646        | \$ 10,829,677        | \$ 13,338,137        | \$ 14,691,527        |
|                                                                         |                      |  |                    |                       |  | \$ (1,759,798)     |  | \$ (162,174)         | \$ 252,592           | \$ 315,008           | \$ 639,857           | \$ 758,746           | \$ 817,046           | \$ (68,723)          | \$ 2,857,937         | \$ 2,944,427         |
|                                                                         |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |

| FY 2022/23 CIP Budget<br>Draft - 04/07/22               |  |  | Recorded<br>FY 20/21 | Budget<br>FY 21/22 | Projected<br>FY 21/22 | Budget<br>FY 22/23 | Forecast<br>FY 23/24 | Forecast<br>FY 24/25 | Forecast<br>FY 25/26 | Forecast<br>FY 26/27 | Forecast<br>FY 27/28 | Forecast<br>FY 28/29 | Forecast<br>FY 29/30 | Forecast<br>FY 30/31 | Forecast<br>FY 31/32 |           |    |           |    |           |    |           |    |         |    |         |
|---------------------------------------------------------|--|--|----------------------|--------------------|-----------------------|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|----|-----------|----|-----------|----|-----------|----|---------|----|---------|
| 1. Water Supply                                         |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| A. Groundwater Water Supply                             |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| i. Well Rehabilitation                                  |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Well 11 Rehabilitation                                  |  |  | \$                   | 56,106             |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Well 12 Rehabilitation                                  |  |  | \$                   | 97,944             | \$                    | -                  | \$                   | 4,548                |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Well 9 Rehabilitation                                   |  |  |                      |                    | \$                    | 105,000            | \$                   | 105,000              |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Well Rehabilitation (1 Well per year)                   |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| ii. New Wells                                           |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Well 18 (Sycamore House) - Design                       |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Well 18 (Sycamore House) - Construction                 |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| iii. Groundwater Basin Recharge                         |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Stormwater Recharge Project at CVC Park - Planning      |  |  | \$                   | 3,718              | \$                    | 30,000             | \$                   | 30,000               |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Storm water Recharge Project at CVC Park - Design       |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Storm water Recharge Project at CVC Park - Construction |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| B. Imported Water Supply                                |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| C. Recycled Water System                                |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| i. Recycled Water                                       |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| ii. Membrane Bioreactor Technology (MBR)                |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| MBR Plant - Harmony/Two-Strike Park- Planning           |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| D. Water Supply Studies                                 |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Water Resources Study                                   |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| GWP Water Supply Feasibility Study                      |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Verdugo Basin Groundwater Model                         |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Groundwater Well Replacement Study                      |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Groundwater Pilot Hole Study                            |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| WS Total                                                |  |  | \$                   | 157,768            | \$                    | 135,000            | \$                   | 139,548              | \$                   | 144,000              | \$                   | 148,000              | \$                   | 152,000              | \$                   | 157,000   | \$ | 162,000   | \$ | 167,000   | \$ | 172,000   | \$ | 177,000 | \$ | 182,000 |
| 2. Water Storage                                        |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| A. Reservoir Rehabilitation                             |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| i. Steel Reservoir Rehabilitation                       |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Markridge                                               |  |  | \$                   | 367                |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Rosemont                                                |  |  | \$                   | 608,059            |                       | \$                 | 26,929               |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Oak Creek - 16" Manifold Repair                         |  |  | \$                   | 55,181             |                       | \$                 | 1,272                |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Edmund #2                                               |  |  |                      |                    | \$                    | 590,000            | \$                   | 696,000              |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Goss Canyon #1                                          |  |  |                      |                    |                       |                    | \$                   | 845,000              |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Goss Canyon #2                                          |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Shields                                                 |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Eagle Canyon                                            |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Dunsmore                                                |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Cresta Hts #1 & 2                                       |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Pickens Canyon                                          |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Ordunio                                                 |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| ii. Concrete Reservoir Rehabilitation                   |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Encinal                                                 |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Williams (Ocean View)                                   |  |  |                      |                    |                       |                    |                      |                      |                      |                      | \$                   | 160,000              |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Edmund #1                                               |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      | \$                   | 175,000              |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
|                                                         |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      | \$                   | 185,000              |                      |           |    |           |    |           |    |           |    |         |    |         |
| iii. Steel Reservoir Corrosion Protection System        |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Cathodic Protection Inspection & Replacement            |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| iv. Overflow & Drain System Upgrade                     |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| B. Reservoir Water Quality                              |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| i. Water Quality Mixing System                          |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Reservoir Mixing System - 2 Reservoirs                  |  |  |                      |                    |                       |                    | \$                   | 150,000              |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Reservoir Mixing System - 2 Reservoirs                  |  |  |                      |                    |                       |                    |                      | \$                   | 150,000              |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Reservoir Mixing System - 3 Reservoirs                  |  |  |                      |                    |                       |                    |                      |                      | \$                   | 225,000              |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Reservoir Mixing System - 4 Reservoirs                  |  |  |                      |                    |                       |                    |                      |                      |                      | \$                   | 300,000              |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| C. Water Storage Studies                                |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Reservoir Inlet/Outlet & Overflow Piping Study          |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Conditional Assessment of Reservoirs Study              |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| Ocean View #2 Reservoir Feasibility Study               |  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |    |           |    |           |    |           |    |         |    |         |
| WS Total                                                |  |  | \$                   | 663,607            | \$                    | 590,000            | \$                   | 724,201              | \$                   | 1,020,400            | \$                   | 1,046,500            | \$                   | 1,725,000            | \$                   | 1,325,000 | \$ | 1,660,000 | \$ | 1,125,000 | \$ | 1,685,000 | \$ | -       | \$ | -       |



| FY 2022/23 CIP Budget<br>Draft - 04/07/22                  |  | Recorded<br>FY 20/21 | Budget<br>FY 21/22 | Projected<br>FY 21/22 | Budget<br>FY 22/23 | Forecast<br>FY 23/24 | Forecast<br>FY 24/25 | Forecast<br>FY 25/26 | Forecast<br>FY 26/27 | Forecast<br>FY 27/28 | Forecast<br>FY 28/29 | Forecast<br>FY 29/30 | Forecast<br>FY 30/31 | Forecast<br>FY 31/32 |           |           |           |           |           |           |           |           |           |            |            |            |            |
|------------------------------------------------------------|--|----------------------|--------------------|-----------------------|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|
| 3. Water Distribution                                      |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| A. Pipeline Replacement                                    |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| FY 20/21 Pipeline Replacement                              |  | \$                   | 1,924,636          | \$                    | 400,000            | \$                   | 730,980              |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Project 1: 3400 & 3500 Blocks of Montrose (1150 LF)        |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Project 2: 2600 & 2700 Block of Orange (2425 LF)           |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Project3 : 2400 - 2600 Blocks of Upper Terrace (1380 LF)   |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Project 4: 3000 & 3100 Blocks of Alabama (1650 LF)         |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Annual Pipeline Replacement                                |  |                      |                    | \$                    | 2,600,000          | \$                   | 2,353,676            |                      | \$                   | 4,100,000            | \$                   | 4,440,000            | \$                   | 5,320,000            | \$        | 6,570,000 | \$        | 7,610,000 | \$        | 8,020,000 | \$        | 8,980,000 | \$        | 10,240,000 | \$         | 11,500,000 |            |
| C. Booster Pump System                                     |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| i. Annual Pump /Motor Replacement                          |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Boosters - Glenwood 32 & 33                                |  | \$                   | 85,951             |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Annual Booster Replace - 1 Booster                         |  | \$                   | 20,385             | \$                    | 53,000             | \$                   | 53,000               | \$                   | 50,000               | \$                   | 51,500               | \$                   | 53,000               | \$                   | 54,600    | \$        | 56,200    | \$        | 57,900    | \$        | 59,600    | \$        | 61,400    | \$         | 63,200     | \$         | 65,100     |
| ii. Pump Station Upgrade                                   |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Paschall Booster Station - Technical Memorandum Study      |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Paschall Booster Station - Booster Station                 |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| iii. VFD Pump Upgrade                                      |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| iii. MCC Replacement                                       |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Paschall                                                   |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| D. Pressure Reducing Stations                              |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| PRS - Zone 2 to Zone 1                                     |  | \$                   | 26,677             |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| E. Miscellaneous Projects                                  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| i. Water Surge Control                                     |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Rehabilitation Surge Tank at Glenwood                      |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Install Surge Tank at Mills Plant                          |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Rehabilitation Surge Tank at Paschall Booster Station      |  |                      |                    |                       |                    |                      |                      |                      |                      | \$                   | 40,000               | \$                   | 100,000              |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| iii. Misc.                                                 |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Upgrade - Ramsdell Mixing Station                          |  |                      |                    | \$                    | 728,000            | \$                   | 97,400               | \$                   | 1,400,000            |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Mills Plant - Aeration Tower                               |  |                      |                    |                       |                    |                      |                      |                      |                      | \$                   | 90,000               |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| F. Water Distribution Studies                              |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| WD Total                                                   |  | \$                   | 2,057,650          | \$                    | 3,781,000          | \$                   | 3,235,056            | \$                   | 5,048,500            | \$                   | 4,241,500            | \$                   | 4,493,000            | \$                   | 5,374,600 | \$        | 6,626,200 | \$        | 7,707,900 | \$        | 8,179,600 | \$        | 9,041,400 | \$         | 10,303,200 | \$         | 11,565,100 |
| 4. Water Treatment                                         |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| A. Nitrate Removal                                         |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| i. Glenwood                                                |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Replace Ion Exchange Resin at Glenwood                     |  |                      |                    |                       |                    |                      |                      |                      | \$                   | 150,000              |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| ii. Mills                                                  |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| iii. Ordunio                                               |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Replace Bio Remediation ARoNite Media at Ordunio           |  |                      |                    |                       |                    |                      |                      |                      | \$                   | 75,000               |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| C. Disinfection - Convert to Chloramines                   |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Conversion to Chloramination                               |  | \$                   | 54,073             | \$                    | 75,000             | \$                   | 75,000               | \$                   | 75,000               |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| D. Federal and State Regulations                           |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| E. Water Quality Studies                                   |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| WT Total                                                   |  | \$                   | 54,073             | \$                    | 75,000             | \$                   | 75,000               | \$                   | 75,000               | \$                   | -                    | \$                   | -                    | \$                   | -         | \$        | -         | \$        | -         | \$        | -         | \$        | -         | \$         | -          | \$         | -          |
| 5. Technology                                              |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| A. Automated Meter Information (AMI) System                |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| AMI - Communication                                        |  | \$                   | 215,080            |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| GRANT - 3" & 4" Smart Meters                               |  | \$                   | 1,004              | \$                    | 200,000            | \$                   | 200,000              |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| AMI - 3/4" to 1" - Smart Meters                            |  | \$                   | 71,693             | \$                    | 233,000            | \$                   | 233,000              |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| AMI - Customer Service Interface                           |  |                      |                    | \$                    | 87,000             | \$                   | 87,000               |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| GRANT - AMI - USBR Grant                                   |  |                      |                    | \$                    | -                  | \$                   | 3,000                |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| 1-1/2" & 2" Smart Meters                                   |  |                      |                    |                       |                    |                      |                      | \$                   | 97,800               | \$                   | 170,750              |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| AMI - Meter Lids                                           |  |                      |                    |                       |                    |                      |                      | \$                   | 352,200              | \$                   | 364,250              | \$                   | 605,000              |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| B. Supervisory Control and Data Acquisition (SCADA) System |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| Communication Radio Network                                |  | \$                   | 77,101             | \$                    | 125,000            | \$                   | 125,000              | \$                   | 225,500              |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| SCADA Replacement - Installation                           |  | \$                   | 109,033            | \$                    | 374,000            | \$                   | 348,075              | \$                   | 395,000              | \$                   | 25,000               |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| C. Graphical Information System (GIS)                      |  |                      |                    |                       |                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |           |           |           |           |           |           |           |           |           |            |            |            |            |
| TECH Total                                                 |  | \$                   | 473,911            | \$                    | 1,019,000          | \$                   | 996,075              | \$                   | 1,070,500            | \$                   | 560,000              | \$                   | 605,000              | \$                   | -         | \$        | -         | \$        | -         | \$        | -         | \$        | -         | \$         | -          | \$         | -          |

| FY 2022/23 CIP Budget<br>Draft - 04/07/22                  |  | Recorded<br>FY 20/21 |  | Budget<br>FY 21/22 | Projected<br>FY 21/22 |  | Budget<br>FY 22/23 |  | Forecast<br>FY 23/24 | Forecast<br>FY 24/25 | Forecast<br>FY 25/26 | Forecast<br>FY 26/27 | Forecast<br>FY 27/28 | Forecast<br>FY 28/29 | Forecast<br>FY 29/30 | Forecast<br>FY 30/31 | Forecast<br>FY 31/32 |
|------------------------------------------------------------|--|----------------------|--|--------------------|-----------------------|--|--------------------|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 6. Public Safety/Emergency Response                        |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| A. Emergency Electrical Generators                         |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| New Emergency Electrical Generator - Paschall              |  |                      |  |                    |                       |  | \$ 35,000          |  | \$ 353,800           |                      |                      |                      |                      |                      |                      |                      |                      |
| New Emergency Electrical Generator - Mills Plant           |  |                      |  |                    |                       |  | \$ 35,000          |  | \$ 353,800           |                      |                      |                      |                      |                      |                      |                      |                      |
| New Emergency Electrical Generator - Wells 5, 7 & 9        |  |                      |  |                    |                       |  | \$ 90,000          |  | \$ 632,400           |                      |                      |                      |                      |                      |                      |                      |                      |
| B. Water Storage                                           |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Dunsmore/Pickens - Seismic Sensors                         |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Ordunio - Seismic Sensors & Valve Actuators                |  |                      |  |                    |                       |  |                    |  | \$ 126,000           |                      |                      |                      |                      |                      |                      |                      |                      |
| Oak Creek #1 & #2 - Seismic Sensors & Valve Actuators      |  |                      |  |                    |                       |  |                    |  |                      | \$ 146,000           |                      |                      |                      |                      |                      |                      |                      |
| Encinal & Ocean View - Seismic Sensors & Valve Actuators   |  |                      |  |                    |                       |  |                    |  |                      |                      | \$ 150,000           |                      |                      |                      |                      |                      |                      |
| C. Security                                                |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Security Cameras - Reservoir Sites                         |  |                      |  |                    |                       |  |                    |  | \$ 44,000            |                      |                      |                      |                      |                      |                      |                      |                      |
| Security Cameras - Well Sites                              |  |                      |  |                    |                       |  |                    |  | \$ 45,000            | \$ 20,000            |                      |                      |                      |                      |                      |                      |                      |
| Security Cameras - Other Sites                             |  |                      |  |                    |                       |  |                    |  |                      | \$ 23,000            |                      |                      |                      |                      |                      |                      |                      |
| D. Miscellaneous                                           |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| FEMA Local Hazard Mitigation Plan                          |  | \$ 134,549           |  | \$ 30,450          | \$ 30,450             |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| SF/ER Total                                                |  | \$ 134,549           |  | \$ 30,450          | \$ 30,450             |  | \$ 160,000         |  | \$ 1,340,000         | \$ 215,000           | \$ 189,000           | \$ 150,000           | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 |
| 7. Facilities & Planning                                   |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| A. Main Office                                             |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Seismic Vulnerability Study - Main Office & Glenwood Plant |  |                      |  |                    |                       |  | \$ 100,100         |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Expansion with New Roof with Solar Panels                  |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| New Main Office Building - Design                          |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| B. Glenwood Plant                                          |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Needs Assessment Study                                     |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Upgrades to Glenwood Plant                                 |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| C. Mills Plant                                             |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| D. Reservoir Site Improvements                             |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Roof for Old Encinal - Storage Bldg                        |  | \$ 3,956             |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Facilities Maintenance Master Plan                         |  |                      |  |                    |                       |  |                    |  | \$ 151,000           |                      |                      |                      |                      |                      |                      |                      |                      |
| Facilities Upgrade & Improvements                          |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 5. Misc. Properties                                        |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 6. District Planning                                       |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Asset Management Study                                     |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Computer Maintenance Management System (CMMS)              |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Solar Power Feasibility Study                              |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| LAFCO/Overlap Area Study with GWP                          |  |                      |  |                    |                       |  |                    |  |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| F & P Total                                                |  | \$ 3,956             |  | \$ -               | \$ -                  |  | \$ 100,100         |  | \$ 151,000           | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 | \$ -                 |
| Capital Improvement Projects - Total                       |  | \$ 3,545,513         |  | \$ 5,630,450       | \$ 5,200,330          |  | \$ 7,489,100       |  | \$ 7,456,900         | \$ 6,507,500         | \$ 7,440,600         | \$ 8,483,200         | \$ 9,529,900         | \$ 9,471,600         | \$ 10,898,400        | \$ 10,480,200        | \$ 11,747,100        |

# CRESCENTA VALLEY WATER DISTRICT

## STAFF REPORT

Information Item No. 2  
April 7, 2022

**To:** Engineering Committee  
**From:** David S. Gould, P.E. – Director of Engineering & Operations  
**Subject:** Status Update - FY 21/22 Capital Improvement Project Budget

### **DISCUSSION:**

The following is an update of the FY 21/22 Capital Improvement Project status and budget update.

#### **1. 2800 to 3100 Blocks of Los Olivos (E-1033)**

- a. Construction Started – March 8, 2022
- b. Installed 1,200 LF of pipeline and 20 water services to date
- c. End Construction – June 30, 2022
- d. Change Orders to date - \$0.00
- e. Budget

| Account Description                                                                                | Amount        |
|----------------------------------------------------------------------------------------------------|---------------|
| FY 21/22 Water Distribution Pipeline Replacement for E-1033                                        | \$1,500,000   |
| E-1033 - 2800-3100 Los Olivos Ln., - Contract Bid                                                  | (\$945,600)   |
| E-1033 - 10% Contingency for cost of unforeseen or additional work                                 | (\$94,560)    |
| E-1033 - Tetra Tech - Engineering Design Services                                                  | (\$56,200)    |
| E-1033 - Dudek - Construction Management & Inspection Services                                     | (\$142,230)   |
| E-1033 - Additional costs such as material purchased by CVWD, soils engineer, and CVWD labor costs | (\$265,086)   |
| Total Cost Estimate                                                                                | (\$1,503,676) |
| Amount Remaining                                                                                   | (\$3,676)     |

#### **2. 3200 Block of Alabama 4700 & 4800 Blocks of Cheryl & 3300 Block of Thelma St (E-1034)**

- a. Start Construction – April 11, 2022
- b. End Construction – July 2022
- c. Budget

| Account Description                                                                                | Amount      |
|----------------------------------------------------------------------------------------------------|-------------|
| FY 21/22 Water CIP– Water Distribution Pipeline Replacement                                        | \$1,100,000 |
| E-1034 – 4800 Blocks of Cheryl Ave. 3200 block of Alabama Street - Contractor Bid                  | (\$447,750) |
| E-1034 - 10% Contingency for cost of unforeseen or additional work                                 | (\$44,775)  |
| E-1034 - Cannon - Construction Management & Inspection                                             | (\$105,300) |
| E-1034 - Additional costs such as material purchased by CVWD, soils engineer, and CVWD labor costs | (\$266,225) |
| Total Cost Estimate                                                                                | (\$864,050) |
| Amount Remaining in Water CIP – Distribution System – Annual Pipeline Replacement                  | \$232,274   |

### **Summary of FY 21/22 Pipeline Replacement Budget:**

| FY 20/21 Pipeline Replacement Program<br>Cost Update: 04/07/22 | E-Job  | Recorded<br>FY 20/21 | Budget<br>FY 21/22 | FY 21/22<br>Cost to date<br>from 7/1/21 to<br>3/31/22 | FY 21/22<br>Cost<br>Committed<br>from 4/1/22 to<br>6/30/22 | Projected<br>FY 21/22 |
|----------------------------------------------------------------|--------|----------------------|--------------------|-------------------------------------------------------|------------------------------------------------------------|-----------------------|
| 2800 - 3100 Blocks of Los Olivos                               | E-1033 | \$ 774               | \$1,500,000        | \$ 249,625                                            | \$ 1,254,051                                               | \$1,503,676           |
| 4700 Block of Cheryl                                           | E-1034 | \$ 671               | \$1,100,000        | \$ 95,726                                             | \$ 768,324                                                 | \$ 864,050            |
| FY 21/22 Pipeline Replacement                                  |        | \$ 345,351           | \$2,600,000        | \$ 345,351                                            | \$ 2,022,375                                               | \$2,367,726           |

### 3. FY 20/21 – Pipeline Replacement Projects – Carryover to FY 21/22

#### a. E-1022 – Project completed in October 2021

| FY 20/21 Pipeline Replacement Program<br>Cost Update: 04/07/22                                                              | E-Job  | Recorded<br>FY 20/21 | Budget<br>FY 21/22 | FY 21/22<br>Cost to date<br>from 7/1/21 to<br>3/31/22 | FY 21/22<br>Cost<br>Committed<br>from 4/1/22 to<br>6/30/22 | Projected<br>FY 21/22 |
|-----------------------------------------------------------------------------------------------------------------------------|--------|----------------------|--------------------|-------------------------------------------------------|------------------------------------------------------------|-----------------------|
| 2400 & 2500 Blocks of Janet Lee                                                                                             | E-1008 | \$ 861,188           |                    | \$ 59,930                                             |                                                            |                       |
| 4300 Block of Rosemont                                                                                                      | E-1019 | \$ 39,407            |                    | \$ 1,272                                              |                                                            |                       |
| 3400 & 3500 Block of Encinal                                                                                                | E-1021 | \$ 760,569           |                    | \$ 31,301                                             |                                                            |                       |
| 4800 block of Dyer, 2800 block of El Caminito, 4800 block of Glenwood, 2800<br>block of Stevens & 2700 block of Paraiso Way | E-1022 | \$ 175,758           | \$400,000          | \$ 638,477                                            |                                                            |                       |
| FY 20/21 Pipeline Replacement                                                                                               |        | \$1,836,922          | \$400,000          | \$ 730,980                                            | \$ -                                                       | \$730,980             |

### 4. New Pressure Reducing Station & Rehabilitation of the Ramsdell Mixing Station (E-977)

- 90% design under review by staff
- Preliminary Construction Cost Estimate – \$1.4M

The original budget for FY 21/22 was \$728,000 for design and construction. Staff has been working with Cannon on finalizing the design of the project and the preliminary construction cost estimate provided by Cannon was at \$1.4M, which is more than the original cost estimate. Staff reassessed the remaining portions of the project for FY 21/22 and revised the project such that the design to be finished by July 1, 2022, which is shown in the revised budget below.

Construction cost will be moved to FY 22/23 with the preliminary project schedule that after the design is complete, staff will obtain permits from the City of Glendale for permits and advertise for bids. In anticipated that the project will be awarded in September 2022. Shop drawing review, ordering completed by October 2023 and delivery of materials should be available by January 2023. Staff anticipates that construction to be completed by July 2023.

| FY 20/21 Pipeline Replacement Program<br>Cost Update: 04/07/22 | E-Job | Recorded<br>FY 20/21 | Budget<br>FY 21/22 | FY 21/22<br>Cost to date<br>from 7/1/21 to<br>3/31/22 | FY 21/22<br>Cost<br>Committed<br>from 4/1/22 to<br>6/30/22 | Projected<br>FY 21/22 | Budget<br>FY 22/23 | Total<br>Project<br>Costs |
|----------------------------------------------------------------|-------|----------------------|--------------------|-------------------------------------------------------|------------------------------------------------------------|-----------------------|--------------------|---------------------------|
| Upgrade to Ramsdell Mixing Station - Design                    | E-977 | \$ 2,869             | \$ 728,000         | \$ 48,198                                             | \$ 49,202                                                  | \$ 97,400             | \$1,400,000        | \$1,500,269               |

### 5. Steel Reservoir Rehabilitation at Edmund #2 (E-1036)

- Contract awarded to J. Colon Coatings Inc.
- Structural work completed
- Coating Work – Started Feb 2022
- Project anticipated to be completed – End of April 2022

| FY 20/21 Pipeline Replacement Program<br>Cost Update: 04/07/22 | E-Job  | Recorded<br>FY 20/21 | Budget<br>FY 21/22 | FY 21/22<br>Cost to date<br>from 7/1/21 to<br>3/31/22 | FY 21/22<br>Cost<br>Committed<br>from 4/1/22 to<br>6/30/22 | Projected<br>FY 21/22 |
|----------------------------------------------------------------|--------|----------------------|--------------------|-------------------------------------------------------|------------------------------------------------------------|-----------------------|
| Edmund #2                                                      | E-1036 |                      | \$ 590,000         | \$ 61,348                                             | \$ 634,652                                                 | \$ 696,000            |

**6. Replacement of SCADA Equipment, Programing & Integration (E-939)**

- a. Pilot Project for Wells 8 & 14 – Complete
- b. APEX Manufacturing Solutions and CVWD crews have begun the design and ordering equipment and materials.

| FY 20/21 Pipeline Replacement Program<br>Cost Update: 04/07/22 | E-Job | Recorded<br>FY 20/21 | Budget<br>FY 21/22 | FY 21/22<br>Cost to date<br>from 7/1/21 to<br>3/31/22 | FY 21/22<br>Cost<br>Committed<br>from 4/1/22 to<br>6/30/22 | Projected<br>FY 21/22 |
|----------------------------------------------------------------|-------|----------------------|--------------------|-------------------------------------------------------|------------------------------------------------------------|-----------------------|
| <i>SCADA Replacement - Installation</i>                        | E-939 | \$ 105,977           | \$ 374,000         | \$ 77,449                                             | \$ 270,626                                                 | \$ 348,075            |

| SCADA Replacement -Project Cost Breakdown |                   |            |                   |            |                   |            |                  |
|-------------------------------------------|-------------------|------------|-------------------|------------|-------------------|------------|------------------|
| Summary                                   |                   | % Complete | FY 21/22          | % Complete | FY 22/23          | % Complete | FY 23/24         |
| New Equipment                             | \$ 285,000        | 80%        | \$ 228,000        | 20%        | \$ 57,000         | 0%         | \$ -             |
| Programing                                | \$ 334,460        | 25%        | \$ 83,615         | 70%        | \$ 234,122        | 5%         | \$ 16,723        |
| CVWD Costs                                | \$ 46,140         | 25%        | \$ 11,535         | 70%        | \$ 32,298         | 5%         | \$ 2,307         |
| Contingency                               | \$ 99,840         | 25%        | \$ 24,960         | 70%        | \$ 69,888         | 5%         | \$ 4,992         |
| <b>Total</b>                              | <b>\$ 765,440</b> |            | <b>\$ 348,110</b> |            | <b>\$ 393,308</b> |            | <b>\$ 24,022</b> |

**7. AMI – Customer Engagement Platform (E-1035)**

- a. Working with WaterSmart on transferring data from Springbrook - Complete
- b. Reviewing “Welcome Letter” to customers
- c. Working with WaterSmart on layout and content of Customer Portal
- d. Tentative Launch Date – June 13, 2022

**8. AMI – Installation of ¾” & 1” meters (E-1035)**

- a. Installation of ¾” & 1” meters within Zone 1
  - i. Installed 347 meters to-date
  - ii. 150 meters remaining to install
- b. Installation of SmartPoints and Meter Lids in Zone 1
  - i. Ordering 500 SmartPoints & Meter Lids
  - ii. Estimated Delivery – End of May 2022
  - iii. Install and connect to AMI Network about 500 meters in Zone 1

**9. AMI – Installation of 3” & 4” meters (E-1031)**

- a. Received and finalizing agreement with USBR
- b. Site Survey – meeting in May 2022
- c. Ordering 3" & 4" meters; Delivery June 2022.
- d. Install and connect 32 - 3" & 4" meters in June 2022.

| FY 20/21 Pipeline Replacement Program<br>Cost Update: 04/07/22 | E-Job  | Recorded<br>FY 20/21 | Budget<br>FY 21/22 | FY 21/22<br>Cost to date<br>from 7/1/21 to<br>3/31/22 | FY 21/22<br>Cost<br>Committed<br>from 4/1/22 to<br>6/30/22 | Projected<br>FY 21/22 |
|----------------------------------------------------------------|--------|----------------------|--------------------|-------------------------------------------------------|------------------------------------------------------------|-----------------------|
| 3" & 4" Smart Meters                                           | E-1031 | \$ 1,004             | \$ 200,000         | \$ 834                                                | \$ 199,166                                                 | \$ 200,000            |
| AMI - 3/4" to 1" - Smart Meters                                | E-1035 | \$ 71,693            | \$ 233,000         | \$ 8,751                                              | \$ 224,249                                                 | \$ 233,000            |
| AMI - Customer Service Interface                               | E-1035 |                      | \$ 87,000          | \$ 45,860                                             | \$ 4,140                                                   | \$ 50,000             |

**10. FEMA Local Hazard Mitigation Plan (M-1004)**

- a. Received approval for Notice of Intent (NOI) with FEMA for two (2) projects
- b. Project 1 – New emergency electrical generators at 5 sites application due 4/8/22
  - i. Working with Tetra Tech on submittal to Cal OES
  - ii. New stationary generators at Mills Plant, Paschall Booster Station, & Wells 5, 7 & 9
  - iii. Preliminary cost - \$1.5M
    - 1) 75% reimbursement from Cal OES - \$1.125M
    - 2) 25% reimbursement from CVWD - \$375,000
- c. Project 2 – Seismic Evaluation of CVWD's facilities application due 4/8/22
  - i. Working with Tetra Tech on submittal to Cal OES
  - ii. Facilities Seismic Vulnerability Study for Main Office and Glenwood Operations building
  - iii. Preliminary cost - \$100,100
    - 1) 75% reimbursement from Cal OES - \$75,075
    - 2) 25% reimbursement from CVWD - \$25,025

**11. Well 9 Rehabilitation**

- a. In Design
- b. Working with General Pump Company on Annual Well & Pump Rehabilitation Contract

**12. Booster 26 at Cresta Heights Replacement**

- a. In Design
- b. Working with General Pump Company on Annual Well & Pump Rehabilitation Contract

**13. Replacement of SCADA communication radio network (E-1025)**

- a. Behind Schedule
- b. Developing Scope of Work

**14. Conversion of Disinfection System to Chloramines (E-995)**

- a. Behind Schedule
- b. Working on Scope of Work

**FY 2021/21 CIP Budget**

See attached for updated CIP Budget with actual costs

**RECOMMENDATION:**

Staff's recommendation is to continue to provide updated information to the Engineering Committee as the FY 21/22 CIP program progress over the next 3-months.

Prepared & submitted by:



David S. Gould, P.E.

Director of Engineering & Operations



| FY 21/ 22 Capital Improvement Project Program<br>Cost Update: 04/01/22 | E-Job | Recorded<br>FY 20/21 |  | Budget<br>FY 21/22 | <i>FY 21/22<br/>Cost to date from<br/>7/1/21 to 3/31/22</i> | <i>FY 21/22<br/>Cost Committed<br/>from 4/1/22 to<br/>6/30/22</i> | Projected<br>FY 21/22 |
|------------------------------------------------------------------------|-------|----------------------|--|--------------------|-------------------------------------------------------------|-------------------------------------------------------------------|-----------------------|
| 1. Water Supply                                                        |       | \$ 153,866           |  | \$ 135,000         | \$ 4,640                                                    | \$ 134,908                                                        | \$ 139,548            |
| 2. Water Storage                                                       |       | \$ 663,213           |  | \$ 616,900         | \$ 89,549                                                   | \$ 634,652                                                        | \$ 724,201            |
| 3A. Water Distribution - Pipeline - Pyramid - 20 yrs                   |       | \$ 1,838,368         |  | \$ 3,000,000       | \$ 1,076,331                                                | \$ 2,022,375                                                      | \$ 3,098,706          |
| 3B. Water Distribution - Other                                         |       | \$ 139,017           |  | \$ 781,000         | \$ 48,198                                                   | \$ 102,202                                                        | \$ 150,400            |
| 4. Water Treatment                                                     |       | \$ 54,073            |  | \$ 75,000          | \$ -                                                        | \$ 75,000                                                         | \$ 75,000             |
| 5. Technology                                                          |       | \$ 466,671           |  | \$ 1,019,000       | \$ 152,076                                                  | \$ 716,999                                                        | \$ 869,075            |
| 6. Public Safety/Emergency Response                                    |       | \$ 134,549           |  | \$ 30,450          | \$ 30,450                                                   | \$ -                                                              | \$ 30,450             |
| 7. Facilities & Planning                                               |       | \$ 3,956             |  | \$ -               | \$ -                                                        | \$ -                                                              | \$ -                  |
|                                                                        |       |                      |  |                    |                                                             |                                                                   |                       |
| Capital Improvement Projects - Total                                   |       | \$ 3,453,712         |  | \$ 5,657,350       | \$ 1,401,243                                                | \$ 3,686,137                                                      | \$ 5,087,379          |
|                                                                        |       |                      |  |                    |                                                             |                                                                   |                       |
| Bond Financing - CIP                                                   |       | \$ 2,695,174         |  | \$ 2,304,826       |                                                             |                                                                   | \$ 2,304,826          |
| Water Distribution - Pipeline Total                                    |       |                      |  | \$ 3,000,000       |                                                             |                                                                   | \$ 3,098,706          |
| Remaining CIP                                                          |       |                      |  | \$ 2,657,350       |                                                             |                                                                   | \$ 1,988,673          |
| Water Fund Financing - CIP                                             |       | \$ 758,538           |  | \$ 3,352,524       |                                                             |                                                                   | \$ 2,782,553          |
| Total Financing - CIP                                                  |       | \$ 3,453,712         |  | \$ 5,657,350       |                                                             |                                                                   | \$ 5,087,379          |

| FY 21/ 22 Capital Improvement Project Program<br>Cost Update: 04/01/22 | E-Job  | Recorded<br>FY 20/21 | Budget<br>FY 21/22 | <u>FY 21/22</u><br>Cost to date from<br>7/1/21 to 3/31/22 | <u>FY 21/22</u><br>Cost Committed<br>from 4/1/22 to<br>6/30/22 | Projected<br>FY 21/22 |
|------------------------------------------------------------------------|--------|----------------------|--------------------|-----------------------------------------------------------|----------------------------------------------------------------|-----------------------|
| <b>1. Water Supply</b>                                                 |        |                      |                    |                                                           |                                                                |                       |
| <b>A. Groundwater Water Supply</b>                                     |        |                      |                    |                                                           |                                                                |                       |
| <b>i. Well Rehabilitation</b>                                          |        |                      |                    |                                                           |                                                                |                       |
| Well 11 Rehabilitation                                                 |        | \$                   | 56,106             |                                                           |                                                                |                       |
| Well 12 Rehabilitation                                                 | E-1028 | \$                   | 94,042             |                                                           |                                                                |                       |
| Well 9 Rehabilitation                                                  |        |                      |                    |                                                           |                                                                |                       |
| <b>iii. Groundwater Basin Recharge</b>                                 |        |                      |                    |                                                           |                                                                |                       |
| Stormwater Recharge Project at CVC Park - Planning                     | E-985  | \$                   | 3,718              |                                                           |                                                                |                       |
| <b>WS Total</b>                                                        |        | \$                   | 153,866            |                                                           |                                                                |                       |
| <b>2. Water Storage</b>                                                |        |                      |                    |                                                           |                                                                |                       |
| <b>A. Reservoir Rehabilitation</b>                                     |        |                      |                    |                                                           |                                                                |                       |
| <b>i. Steel Reservoir Rehabilitation</b>                               |        |                      |                    |                                                           |                                                                |                       |
| Markridge                                                              |        | \$                   | 367                |                                                           |                                                                |                       |
| Rosemont                                                               | E-1018 | \$                   | 607,665            |                                                           |                                                                |                       |
| Oak Creek - 16" Manifold Repair                                        | E-1026 | \$                   | 55,181             |                                                           |                                                                |                       |
| Edmund #2                                                              | E-1036 |                      |                    |                                                           |                                                                |                       |
| <b>WS Total</b>                                                        |        | \$                   | 663,213            |                                                           |                                                                |                       |
| <b>3. Water Distribution</b>                                           |        |                      |                    |                                                           |                                                                |                       |
| <b>A. Pipeline Replacement</b>                                         |        |                      |                    |                                                           |                                                                |                       |
| 2400 & 2500 Blocks of Janet Lee                                        | E-1008 | \$                   | 861,188            |                                                           |                                                                |                       |
| 4300 Block of Rosemont                                                 | E-1019 | \$                   | 39,407             |                                                           |                                                                |                       |
| 3400 & 3500 Block of Encinal                                           | E-1021 | \$                   | 760,569            |                                                           |                                                                |                       |
| 2800 Block of El Caminito, 4800 Block of Glenwood                      | E-1022 | \$                   | 175,758            |                                                           |                                                                |                       |
| FY 20/21 Pipeline Replacement                                          |        | \$                   | 1,836,922          |                                                           |                                                                |                       |
| 2800 - 3100 Blocks of Los Olivos                                       | E-1033 | \$                   | 774                |                                                           |                                                                |                       |
| 4700 Block of Cheryl                                                   | E-1034 | \$                   | 671                |                                                           |                                                                |                       |
| FY 21/22 Pipeline Replacement                                          |        | \$                   | 1,445              |                                                           |                                                                |                       |
| <b>i. Annual Pump /Motor Replacement</b>                               |        |                      |                    |                                                           |                                                                |                       |
| Boosters - Glenwood 32 & 33                                            |        | \$                   | 85,951             |                                                           |                                                                |                       |
| Booster - Paschall Booster B                                           | E-1029 | \$                   | 20,385             |                                                           |                                                                |                       |
| Booster - Booster 26 at Cresta Heights                                 |        |                      |                    |                                                           |                                                                |                       |
| <b>D. Pressure Reducing Stations</b>                                   |        |                      |                    |                                                           |                                                                |                       |
| PRS - Zone 2 to Zone 1                                                 | E-977  | \$                   | 32,680             |                                                           |                                                                |                       |
| PRS - Upgrade Zone 4 to Zone 3                                         |        |                      |                    |                                                           |                                                                |                       |
| <b>E. Miscellaneous Projects</b>                                       |        |                      |                    |                                                           |                                                                |                       |
| <b>iii. Misc.</b>                                                      |        |                      |                    |                                                           |                                                                |                       |
| Upgrade - Ramsdell Mixing Station                                      | E-977  | \$                   | -                  |                                                           |                                                                |                       |
| <b>WD Total</b>                                                        |        | \$                   | 1,977,384          |                                                           |                                                                |                       |

| FY 21/ 22 Capital Improvement Project Program<br>Cost Update: 04/01/22 |                                     |        | E-Job | Recorded<br>FY 20/21 | Budget<br>FY 21/22 | FY 21/22<br>Cost to date from<br>7/1/21 to 3/31/22 | FY 21/22<br>Cost Committed<br>from 4/1/22 to<br>6/30/22 | Projected<br>FY 21/22 |
|------------------------------------------------------------------------|-------------------------------------|--------|-------|----------------------|--------------------|----------------------------------------------------|---------------------------------------------------------|-----------------------|
| <b>4. Water Treatment</b>                                              |                                     |        |       |                      |                    |                                                    |                                                         |                       |
| <b>C. Disinfection - Convert to Chloramines</b>                        |                                     |        |       |                      |                    |                                                    |                                                         |                       |
|                                                                        | Conversion to Chloramination        | E-995  | \$    | 54,073               | \$ 75,000          | \$ -                                               | \$ 75,000                                               | \$ 75,000             |
| <b>WT Total</b>                                                        |                                     |        | \$    | 54,073               | \$ 75,000          | \$ -                                               | \$ 75,000                                               | \$ 75,000             |
| <b>5. Technology</b>                                                   |                                     |        |       |                      |                    |                                                    |                                                         |                       |
| <b>A. Automated Meter Information (AMI) System</b>                     |                                     |        |       |                      |                    |                                                    |                                                         |                       |
|                                                                        | AMI - Communication                 | E-1020 | \$    | 215,080              |                    |                                                    |                                                         |                       |
|                                                                        | 3" & 4" Smart Meters                | E-1031 | \$    | 1,004                | \$ 200,000         | \$ 834                                             | \$ 199,166                                              | \$ 200,000            |
|                                                                        | AMI - 3/4" to 1" - Smart Meters     | E-1035 | \$    | 71,693               | \$ 233,000         | \$ 8,751                                           | \$ 224,249                                              | \$ 233,000            |
|                                                                        | AMI - Customer Service Interface    | E-1035 |       |                      | \$ 87,000          | \$ 45,860                                          | \$ 4,140                                                | \$ 50,000             |
|                                                                        | AMI - USBR Grant                    | E-1041 |       |                      | \$ -               | \$ 1,572                                           | \$ 1,428                                                | \$ 3,000              |
| <b>B. Supervisory Control and Data Acquisition (SCADA) System</b>      |                                     |        |       |                      |                    |                                                    |                                                         |                       |
|                                                                        | Communication Radio Network         | E-1025 | \$    | 72,917               | \$ 125,000         | \$ 17,610                                          | \$ 17,390                                               | \$ 35,000             |
|                                                                        | SCADA Replacement - Installation    | E-939  | \$    | 105,977              | \$ 374,000         | \$ 77,449                                          | \$ 270,626                                              | \$ 348,075            |
| <b>TECH Total</b>                                                      |                                     |        | \$    | 466,671              | \$ 1,019,000       | \$ 152,076                                         | \$ 716,999                                              | \$ 869,075            |
| <b>6. Public Safety/Emergency Response</b>                             |                                     |        |       |                      |                    |                                                    |                                                         |                       |
| <b>D. Miscellaneous</b>                                                |                                     |        |       |                      |                    |                                                    |                                                         |                       |
|                                                                        | FEMA Local Hazard Mitigation Plan   | M-1004 | \$    | 134,549              | \$ 30,450          | \$ 30,450                                          | \$ -                                                    | \$ 30,450             |
| <b>SF/ER Total</b>                                                     |                                     |        | \$    | 134,549              | \$ 30,450          | \$ 30,450                                          | \$ -                                                    | \$ 30,450             |
| <b>7. Facilities &amp; Planning</b>                                    |                                     |        |       |                      |                    |                                                    |                                                         |                       |
| <b>D. Reservoir Site Improvements</b>                                  |                                     |        |       |                      |                    |                                                    |                                                         |                       |
|                                                                        | Roof for Old Encinal - Storage Bldg | E-1027 | \$    | 3,956                |                    |                                                    |                                                         |                       |
| <b>F &amp; P Total</b>                                                 |                                     |        | \$    | 3,956                | \$ -               | \$ -                                               | \$ -                                                    | \$ -                  |
| <b>Capital Improvement Projects - Total</b>                            |                                     |        | \$    | 3,453,712            | \$ 5,657,350       | \$ 1,401,243                                       | \$ 3,686,137                                            | \$ 5,087,379          |