CRESCENTA VALLEY WATER DISTRICT

2700 FOOTHILL BOULEVARD
LA CRESCENTA, CALIFORNIA

To be held on
August 31, 2021 at 11:00 AM

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

Posted August 30, 2021 at 10:00 AM

TELECONFERENCING NOTICE

[This meeting will be held by teleconference only.]

Pursuant to the provisions of Executive Order N-08-21 issued by Governor Gavin Newsom on June 11, 2021, a local legislative body is authorized to hold public meetings via teleconference.

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: 858 5019 9903

[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/85850199903

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. 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. Final FY 20/21 Capital Improvement Project Budget

2. Unplanned Project - Zone 4 to Zone 3 Pressure Reducing Station at Foothill Blvd & Cloud Ave.

3. New Project - New Zone 7 to Zone 5 Pressure Reducing Station as part of Clark High School/GUSD improvements.

4. FY 20/21 Capital Improvement Project Budget

Committee Member's Request for Future Agenda Items

Next Engineering Committee Meeting – September 21, 2021, at 2:30 pm

Adjournment

CRESCENTA VALLEY WATER DISTRICT
STAFF REPORT

Information Item No. 1

To: Engineering Committee August 31, 2021

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

Subject: **Project Update – August 2021 - FY 20/21 Water Capital Improvement Program**

BACKGROUND:

The Board approved the FY 20/21 Water Budget at the June 9, 2020, meeting with $2.3M available for CIP projects. The Board also agreed to pursue refinancing CVWD's existing bond debt and requesting additional funding, totaling $5M, for FY 20/21 CIP. The $5M Bond process was completed on September 15, 2020.

DISCUSSION:

The following is the **August 2021** update of the progress and schedule for the FY 20/21 CIP projects. Project costs are shown on the attached Updated Project Cost Summary:

1. **Steel Reservoir Rehabilitation – Rosemont Reservoir** – This project is for the structural repairs and re-coating of the reservoir interior to maintain the District's water storage capacity and to increase the life expectancy of the steel tank.
   Progress: Construction is complete, reservoir back in service
   Final retention being held until site clean-up.

2. **Annual Pipeline Replacement** – This project is for the replacement of steel pipelines that are at least 50-years old or older in a timely manner.

   A. **Projects 1 & 2:** Replacement of 4-inch & 6-inch pipelines on the 2400 & 2500 Blocks of Janet Lee (Project 1), and the 4300 Block of Rosemont (Project 2).
   Progress: Construction is complete, pipelines are back in service & project costs are being finalized for FY 20/21.

   B. **Projects 3:** Replacement of 8-inch pipeline on the 3400 & 3500 Blocks of Encinal (Project 3)
   Progress: Construction is complete, pipelines are back in service & project costs have been finalized.

   C. **Projects 4**: Replacement of 4-inch, 6-inch & 8-inch pipelines on the 4800 Block of Dyer, 2800 Block of El Caminito, 4800 Block of Glenwood, 2800 Block of Stevens and 2700 Block of Paraiso Way (Project 4).

   Project Schedule: Under Construction; final project costs to be included in FY 21/22.
   - September 24, 2021 – Anticipate work to be completed.

3. **Local Hazard Mitigation Plan** - CVWD was awarded a grant from Cal OES and FEMA to prepare a Local Hazard Mitigation Plan (LHMP). The total grant amount to prepare a local hazard mitigation plan is $165,000, with $125,000 grant funding from FEMA and $40,000 funding from CVWD.

   Progress: Tetra Tech completed the Final LHMP.

   Project Schedule: Complete
   - August 2021 – LHMP submitted to Cal OES.
   - September 2021 – Grant Applications due

4. **New Emergency Generator at La Granada Sewer Lift Station** – Installation of a new emergency electrical generator at the sewer lift station.

   Progress: Cannon and staff have completed the design and project was awarded to Affordable Generator Services.
   Project Schedule: Behind Schedule

- LA County Parks & Recreation Department – preliminary license agreement - 9/06/21
- September 2021 – Construction to begin. Anticipated delivery date for emergency generator.

5. **Advanced Metering Infrastructure (AMI) Program** – This project has two (2) components: 1) replacement of ¾" & 1" meters with new Sensus iPERL "Smart Meters" in Pressure Zone 2, and 2) installation of the AMI network communication system.

   Progress: Field crews have replaced around 537, ¾-inch & 1-inch, water meters for FY 20/21. Esource completed RFQ, and the contract was awarded to Aqua Metric for the AMI network communication system.

   Project Schedule: On Schedule
   - Completed AMI network communication system & installation of 100 meters.

6. **Groundwater Well Rehabilitation** – This project is for the rehabilitation of Well 12, which was last rehabilitated in 2010.

   Progress: Construction complete and Well 12 placed back into service on June 23, 2021

7. **Replacement of SCADA Communication Radio Network** – CVWD has an existing radio communication network that operates on the 900 MHz radio frequency. In the past year, the radio system has seen interference with other communication devices, and the equipment, which was installed 7 years ago, has been malfunctioning, which indicates it is nearing the end of its useful life.

   Progress: SCADA radio feasibility study complete; Staff working on Request for Proposal.

8. **New Pressure Reducing Valve (PRV) Station & Upgrade Ramsdell/Mayfield Mixing Station** – This project includes installing a new PRV station near the intersection of Mayfield Ave. and Ramsdell Ave. and upgrading the Ramsdell/Mayfield Mixing Station. The new PRV Station is needed to provide water from Zone 2 to Zone 1 when Encinal Reservoir and the Ramsdell/Mayfield Mixing Station are out of service. To meet the current FY 20/21 CIP schedule, staff will need assistance from a consulting firm to complete the specifications and advertise for bids.

   Progress: Staff and Cannon have started on the design
   Project Schedule: Behind Schedule
   - Under Design - Cannon
   - October 2021 – Advertise for Bids.

9. **Replacement of Supervisory Control and Data Acquisition (SCADA) System Upgrade** – CVWD has an existing SCADA system with RTU/PLCs that were installed at each of the District's facilities in 1996. The SCADA system provides information on the status of the water system, controls for pump operation, and communication of alarms to the System Operators. The upgraded SCADA system will include upgrading equipment, programing, and integration based on industry standards, which can be repaired and/or replaced by various consultants/contractors.

   Progress: Kick-off meeting for Pilot Project.
   Project Schedule: Behind Schedule.

10. **Stormwater Recharge Program** - Stormwater Recharge Project at Crescenta Valley County Park (CVC Park) includes the design and installation of a stormwater infiltration system within CVC Park that will direct stormwater from the Verdugo Wash into infiltration galleries for groundwater recharge. The focus will be to coordinate with the City of Los Angeles on stormwater rights.

    Progress: Met with LADWP, and staff working on alternatives regarding water rights.
    Project Schedule: On Schedule

11. **Rehabilitation Surge Tank at Glenwood** – This project is the rehabilitation of the surge tank at the Glenwood Operations Facility. A preliminary design was completed in 2017.
    Progress: Project put on hold
12. **16-inch Manifold and Valve Replacement at Oak Creek Reservoir** – CVWD's operations staff observed a leak on the underside of the existing inlet/outlet pipeline manifold that joins Oak Creek #1 and #2 reservoirs. The inlet/outlet manifold was installed 1961 and is a critical junction point as it allows influent water to fill each reservoir.
    Progress: Complete.
13. **Annual Booster Pump Replacement** – This project was originally planned to replace Markridge Booster 25. However, Booster B at Paschall was shut down due to what appears to be mechanical failure. Staff is working with the pump contractor that replaced the pump in 2018 to remove and replace the pump.
    Progress: Complete
14. **Facility Improvement Program** – This project is for the installation of a new roof on the existing 70 ft diameter concrete reservoir at Encinal for material and equipment storage. Staff will be preparing an RFP for a consulting firm to perform the structural design of the new roof.
    Progress: Complete

SUMMARY:

Attached for review is a summary of project costs including costs spent to date, cost committed to for the remainder of the year, and the total cost for each project.

Prepared & submitted by:

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

Attachment: FY 20/21 Capital Improvement Project Program - Cost Update: 8/25/21

FY 20/21 Capital Improvement Project Program Cost Update: 08/25/21	Recorded FY 19/20	Budget FY 20/21	FY 20/21 Cost to date from 7/1/20 to 06/30/21	FY 20/21 Cost Committed - Transfer to FY 21/22	Projected FY 20/21	Comments
Capital Improvement Project Summary						**Costs - Budget vs. Actual**
1. Water Supply	$ 300,375	$ 170,000	$ 157,768	$ -	$ 157,768	($12,232)
2. Water Storage	$ 498,530	$ 480,000	$ 663,607	$ -	$ 663,607	$183,607
3A. Water Distribution - Pipeline	$ 1,126,030	$ 2,300,000	$ 1,924,636	$ 552,865	$ 2,477,501	$177,501
3B. Water Distribution - Other	$ 10,892	$ 710,000	$ 133,014	$ -	$ 133,014	($576,986)
4. Water Treatment	$ 469,205	$ -	$ 54,073	$ -	$ 54,073	$54,073
5. Technology	$ 152,597	$ 1,070,000	$ 581,691	$ -	$ 581,691	($488,309)
6. Public Safety/Emergency Response	$ 5,810	$ 165,000	$ 134,549	$ 30,451	$ 165,000	$0
7. Facilities & Planning	$ -	$ 105,000	$ 3,956	$ -	$ 3,956	($101,044)
Capital Improvement Projects - Total	$ 2,563,438	$ 5,000,000	$ 3,653,293	$ 583,316	$ 4,236,610	($763,390)
Bond Financing - CIP	$ -	$ 2,695,174	$ 2,569,497	$ 552,865	$ 3,122,362	
Water Fund Financing - CIP	$ 2,563,438	$ 2,304,826	$ 1,083,796	$ 30,451	$ 1,114,248	
Total Financing - CIP	$ 2,563,438	$ 5,000,000	$ 3,653,293	$ 583,316	$ 4,236,610	

FY 20/21 Capital Improvement Project Program Cost Update: 08/25/21	Recorded FY 19/20	Budget FY 20/21	FY 20/21 Cost to date from 7/1/20 to 06/30/21	FY 20/21 Cost Committed - Transfer to FY 21/22	Projected FY 20/21	Comments	
1. Water Supply							
A. Groundwater Water Supply							
i. Well Rehabilitation							
Well 7 Rehabilitation	$ 102,696						
Well 16 Rehabilitation	$ 103,713						
Well 11 Rehabilitation	$ 14,694	$ -	$ 56,106	$ -	$ 56,106	Complete - FY 19/20; Paid - FY 20/21	
Well 12 Rehabilitation		$ 95,000	$ 97,944	$ -	$ 97,944	Complete - FY 20/21; Paid - FY 20/21; Amount shown includes Final Retention Payment	
ii. New Wells							
Re-Activate Well 2 - Construction	$ 79,272						
iii. Groundwater Basin Recharge							
Stormwater Recharge Project at CVC Park - Planning		$ 75,000	$ 3,718	$ -	$ 3,718	Continuing Project - Planning Stage; Budget $75K; Used $3,718	
WS Total	$ 300,375	$ 170,000	$ 157,768	$ -	$ 157,768	Water Supply - Under Budget by $12,232 or 7%	
2. Water Storage							
A. Reservoir Rehabilitation							
i. Steel Reservoir Re-Coating/Roof/Vents Rehabilitation							
Markridge	$ 498,530	$ -	$ 367	$ -	$ 367	Complete - FY 19/20; Paid in FY 20/21	
Rosemont		$ 480,000	$ 608,059	$ -	$ 608,059	Project over budget by $128,059	
Oak Creek - 16" Manifold Repair		$ -	$ 55,181	$ -	$ 55,181	Unplanned Project - Additional Cost - $55,181	
WS Total	$ 498,530	$ 480,000	$ 663,607	$ -	$ 663,607	Water Storage - Over Budget by $183,607 or 38%	
3. Water Distribution							
A. Pipeline Replacement							
3200 & 3300 Blocks of Brookhill	$ 623,009						
4700 & 4800 Block of Pennsylvania	$ 503,021						
2400 & 2500 Block of Janet Lee - Project 1		$ 538,000	$ 634,227	$ -	$ 634,227	Project 1 & 2 combined - 66% E-1009 & 34% E-1019; Total Project Cost - $960,950	
Project 2		$ 280,000	$ 326,723	$ -	$ 326,723	$142,950 Over Budget; Total Length - 2,300 LF = $418/LF	
Project 3		$ 707,000	$ 787,928	$ -	$ 787,928	Total Length - 1,660 LF = $475/LF; Over Budget by $80,928	
Project 4		$ 775,000	$ 175,758	$ 552,865	$ 728,623	Total Length - 1,925 LF = $379/LF; Under Budget by $46,377	
Annual Pipeline Replacement		$ 2,300,000	$ 1,924,636	$ 552,865	$ 2,477,501	FY 20/21 - Total Length - 5,885 LF; Final Total Cost/LF = $421/LF; Total Over Budget by $177,501 or 8%; Original Budget - $390/LF	
C. Booster Pump System							
i. Annual Pump /Motor Replacement							
Boosters - Glenwood 32 & 33	$ 4,384	$ -	$ 85,951	$ -	$ 85,951	Complete - FY 19/20; Paid - FY 20/21	
Booster Replace - Booster B at Paschall		$ 75,000	$ 20,385	$ -	$ 20,385	Completed - FY 20/21	
D. Pressure Reducing Stations							
PRS - Zone 2 to Zone 1	$ 6,508	$ 150,000	$ 26,677	$ -	$ 26,677	- Budgeted - $150,000 include in-house design & construction - Combined this project with Upgrade - Ramsdell Mixing Station project for a total budget cost of $600,000. - Hired consultant in March 21; Used $26,677 for design services - Total Project Costs FY 16/17 to FY 19/20 = $60,468	- Continued Project in FY 21/22 - Re-evaluation of Project Scope and Cost - FY 20/21 Unused Budget of $573,322 put back into Water Fund Reserves - FY 21/22 Budget - Reallocated Project Cost = $729,000
i. Water Surge Control							
Rehabilitation Surge Tank at Glenwood		$ 35,000	$ -	$ -	$ -	Project deferred to a future CIP budget	FY 20/21 Unused Budget of $35,000 put back into Water Fund Reserves
iii. Misc.							

FY 20/21 Capital Improvement Project Program Cost Update: 08/25/21	Recorded FY 19/20	Budget FY 20/21	FY 20/21 Cost to date from 7/1/20 to 06/30/21	FY 20/21 Cost Committed - Transfer to FY 21/22	Projected FY 20/21	Comments	
Upgrade - Ramsdell Mixing Station		$ 450,000	$ -	$ -	$ -	- Combined this project & PRS - Zone 2 to Zone 1 project for a total budget cost of $600,000.	- See comments above for re-evaluation of project costs
WD Total	$ 1,136,922	$ 3,010,000	$ 2,057,650	$ 552,865	$ 2,610,515	Water Distribution - Budget for projects completed = $2,375.000 - Actual costs for projects completed - $2,583,837 - Over Budget - $208,837	Water Distribution - Budget for projects continued to FY 21/22 = $635,000 - Actual costs project continued to FY 21/22 = $26,888 - Unused Budget of $573,322 put back into Water Fund Reserves
4. Water Treatment							
C. Disinfection - Convert to Chloramines							
Conversion to Chloramination	$ 469,205	$ -	$ 54,073	$ -	$ 54,073	Unplanned Project - Additional Cost including design services and water quality testing.	
WT Total	$ 469,205	$ -	$ 54,073	$ -	$ 54,073	Water Treatment - Over Budget by $54,073	
5. Technology							
A. Automated Meter Information (AMI) System							
AMI - 3/4" to 1" - Smart Meters	$ 83,590	$ 50,000	$ 123,852	$ -	$ 123,852	Completed - Installation of 485 - 3/4" & 118 - 1" meters; Over Budget by $73,852	
AMI - Communication		$ 150,000	$ 271,705	$ -	$ 271,705	Completed - FY 20/21; Over Budget by 121,708	
B. Supervisory Control and Data Acquisition (SCADA)							
Communication Radio Network		$ 260,000	$ 77,101	$ -	$ 77,101	SCADA Radio - Completed Radio Feasibility Study - Budget for SCADA Radio = $260,000 - Actual cost for SCADA Radio = $77,101	- Re-evaluation of Project Scope and Cost - FY 20/21 Unused Budget of $182,899 put back into Water Fund Reserves - FY 21/22 Budget - Reallocated Project Cost = $125,000
SCADA Replacement - Design	$ 69,007						
SCADA Replacement - Installation		$ 610,000	$ 109,033	$ -	$ 109,033	SCADA Upgrade - SCADA PLC Upgrades & Support Pilot Program = $35,000 Budget for SCADA Upgrade - $610,000 Actual Cost for SCADA Upgrade - $109,033	- Total Project Cost - FY 13/14 to FY 20/21 = $427,147 - Re-evaluation of Project Scope & Cost - FY 20/21 Unused Budget of $500,967 put back into Water Fund Reserves - FY 21/22 Budget - Reallocated Project Cost = $374,000
TECH Total	$ 152,597	$ 1,070,000	$ 581,691	$ -	$ 581,691	Technology - Budget for Project Completed = $200,000 - Actual Costs = $395,557 - Over Budget - $195,557	Technology - Budget for projects continued to FY 21/22 = $499,000

FY 20/21 Capital Improvement Project Program Cost Update: 08/25/21	Recorded FY 19/20	Budget FY 20/21	FY 20/21 Cost to date from 7/1/20 to 06/30/21	FY 20/21 Cost Committed - Transfer to FY 21/22	Projected FY 20/21	Comments	
6. Public Safety/Emergency Response							
Dunsmore/Pickens - Seismic Sensors	$ 5,810						
D. Miscellaneous							
FEMA Local Hazard Mitigation Plan		$ 165,000	$ 134,549	$ 30,451	$ 165,000	Completed Local Hazard Mitigation Plan Waiting on comments from Cal/OES & FEMA to finalize LHMP FEMA/Cal OES Grant - $124,990; CVWD - $41,664 = $166,654 Reimbursement to date: $68,608.50; Remaining in Grant = $56,382	
SF/ER Total	$ 5,810	$ 165,000	$ 134,549	$ 30,451	$ 165,000	Tetra Tech Contract - $122,709; CVWD - $43,945 Tetra Tech- Paid to date - $92,258; Remaining - $30,451	
7. Facilities & Planning							
Roof for Old Encinal - Storage Bldg		$ 105,000	$ 3,956	$ -	$ 3,956	Project Cancelled	FY 20/21 Unused Budget of $108,956 put back into Water Fund Reserves
F & P Total	$ -	$ 105,000	$ 3,956	$ -	$ 3,956	Facilities & Planning - Under Budget by $101,044	
Capital Improvement Projects - Total	$ 2,563,438	$ 5,000,000	$ 3,653,293	$ 583,316	$ 4,236,610	Under Budget - $763,390 or 15%	

Crescenta Valley Water District

FY 20/21 Capital Improvement Project

Capital Improvement Project Program	Budget FY 20/21	Final FY 20/21	Category	Bond (B) or PayGo (P)	Cumulative Estimated Costs	Completion Date	Project Description
Bond Proceeds							
Annual Pipeline Replacement - 1.0 Mile	$ 2,300,000	$ 1,924,636	Water Distribution	B	$ 1,924,636	Jun-21	**Pipeline Replacement** - Pipelines that are greater than 50 years old - 5,280 LF
AMI - 3/4" to 1" - Smart Meters & AMI Communication Network	$ 200,000	$ 395,557	Technology	B	$ 2,320,193	Jun-21	**Advanced Metering Infrastructure (AMI) -** 1) Install 1,000 3/4" or 1" water meters - in Zones 1 & 2 & 2) Install AMI Network Communication System
Steel Reservoir Rehabilitation - Rosemont	$ 195,174	$ 249,304	Water Storage	B	$ 2,569,497	Feb-21	**Reservoir Rehabilitation** - Structural repairs and re-coating at Rosemont Reservoir during low demand (Winter) season (41% of total - Bond Financing; 59% of total - PayGo)
Bond Proceeds Subtotal	$ 2,695,174	$ 2,569,497					
Pay-Go							
PRS - Zone 2 to Zone 1/Upgrade - Ramsdell Mixing Station	$ 600,000	$ 26,677	Water Distribution	P	$ 26,677	Jun-21	**New Pressure Reducing Station & Upgrade Ramsdell Mixing Station** - PRS for water from Zone 2 to zone 1 & Upgrade to Ramsdell Mixing Station
Replacement - SCADA System	$ 610,000	$ 109,033	Technology	P	$ 135,710	Jun-21	**Replacement of SCADA System** - Replacement of RTU/PLC Equipment at 26 sites including equipment, programing, integration and testing
Well 12 Rehabilitation	$ 95,000	$ 154,050	Water Supply	P	$ 289,761	Feb-21	**Well Rehabilitation -** Remove & Inspect Well Pump & Casing, Chemical Treatment Well Casing, Pump Test, New Pump & Motor
Replacement - SCADA Communication Radio Network	$ 260,000	$ 77,101	Technology	P	$ 366,862	Jun-21	**Replacement of SCADA Radio Communication System** - Replace 900 MHz radios with upgraded 5.8GHz radios
FEMA Local Hazard Mitigation Plan	$ 165,000	$ 134,549	Public Safety/ Emerg. Resp.	P	$ 501,411	Jun-21	**FEMA Grant** - **$125,000 grant**, $40,000 CVWD to prepare a local hazard mitigation plan
Annual Booster Pump Replacement	$ 75,000	$ 106,336	Water Distribution	P	$ 607,747	Apr-21	**Booster Pump Replacement** - Replace 15-yr and older booster pump with new pump assembly and high efficiency motor - Replace 1 per year
Stormwater Recharge CVC Park - Planning	$ 75,000	$ 3,718	Water Supply	P	$ 611,465	Jun-21	**Stormwater Recharge** - Concept plan, grant funding options and coordination with stakeholders
New Roof for Old Encinal - Storage Bldg	$ 105,000	$ 3,956	Facilities & Planning	P	$ 615,421	May-21	**Facilities -** Installation of a new roof; convert old concrete reservoir to storage facilities bldg.
Rehabilitation Surge Tank at Glenwood	$ 35,000	$ -	Water Distribution	P	$ 615,421	Apr-21	**Rehabilitation of water surge tank** - replacement of piping & appurtenances and recoating at Glenwood
Oak Creek - 16" Manifold Repair	$ -	$ 55,181	Water Storage	P	$ 670,602	Nov-20	**Oak Creek Reservoir** - Repair to 16" manifold and new 16" Valves
Conversion to Chloramination	$ -	$ 54,073	Water Treatment	P	$ 724,675	Aug-20	**Conversion to Chloramination** - Additional work at Well #2 & Pickens Canyon Tunnel
Steel Reservoir Rehabilitation - Rosemont	$ 284,826	$ 359,122	Water Storage	P	$ 1,083,797	Feb-21	**Reservoir Rehabilitation** - Structural repairs and re-coating at Rosemont Reservoir during low demand (Winter) season. (41% of total - Bond Financing; 59% of total - PayGo)
Pay-Go Subtotal	$ 2,304,826	$ 1,083,797					
Total CIP	$ 5,000,000	$ 3,653,293					

CRESCENTA VALLEY WATER DISTRICT
STAFF REPORT

Information Item No. 2

To: Engineering Committee August 31, 2021

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

Subject: **Unplanned Project - upgrade of Zone 4 to Zone 3 Pressure Reducing Station at Foothill Blvd & Cloud Ave.**

BACKGROUND:

CVWD has an existing pressure reducing valve station (PRS) that automatically delivers water from Pressure Zone 4 (high pressure) to Pressure Zone 3 (low pressure) when additional water demands are needed in Zone 3, such as during peak water demands or for fire protection. The PRS was installed in the 1980's and is located in front of ACE Hardware Store, near the southwest corner of Foothill Blvd and Cloud Ave. The PRS was used from November 2020 to May 2021, when the Rosemont Reservoir was out of service during rehabilitation.

In June 2021, a leak developed on the existing pipeline inside the vault and CVWD's crew responded and shutdown the PRS. The crew discovered that the 8-inch steel pipeline from the PRS to Cloud Ave was in extremely bad condition and was taken out of service.

DISCUSSION:

The existing PRS has been in service for over 40 years and there are two (2) underground vaults, one with the pressure control valve and the other with piping. The photos show that the top of vaults has corroded over the years and crews have done minor repairs to make sure the lids are level with the sidewalk. The pressure control valve was serviced prior to the start of the Rosemont reservoir project and operated well through the rehabilitation project. The contractor, Hydrotech, advised that the pressure control valve was in bad condition and recommended that it be replaced. Also, when the PRS was in service, we were unsure about the amount of water that flowed through the PRS to meet Zone 3 demands, since there is no equipment to measure flow or to monitor the pressure.

Staff evaluated alternatives either to repair the piping or to upgrade the entire PRS to meet today's standards including a new pressure reducing valve, piping, vaults, and monitoring equipment. It was concluded from discussion with engineering and operations staff that since the PRS is a vital link in the water distribution system providing additional water flow from Zone 4 from Zone 3 and considering its current age and condition, the entire PRS should be upgraded.

The Engineering Department staff's time is currently dedicated towards implementation of the FY 21/22 CIP program. As this represents an unplanned project, the assistance of a consulting engineering firm is needed with design and implementation of this project. Staff met in the field with Gary Roepke and Tina Kuah from Cannon to go over a preliminary scope of work for upgrading the PRS.

Project Budget:

Cannon prepared a preliminary design scope of work with a budget of $111,200 and staff prepared a preliminary construction cost estimate of $418,800. This proposed project is not a budgeted FY 21/22 CIP project and the preliminary design and construction costs for the project are estimated to be $530,000.

FY 21/22 Budget Review with Unplanned Project:

Staff reviewed the original 2-year $10M CIP budget that includes the $5M in bond proceeds versus the final FY 20/21 CIP costs to determine if there is funding available for this project. The FY 21/22 CIP budget was set at $5.2M for the coming year. The 2-year total CIP projected costs will be about $9.3M, which is less than the original $10M. There is approximately $700,000 available for this project.

Project Schedule:

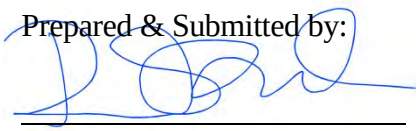
Staff reviewed the project schedule with goal to complete the design in December 2021 and complete construction by July 2022 as shown in the schedule below.

Upgrade to Z4 to Z3 Pressure Reducing Station Project E-103X				
Task	**State Date**	**End Date**	**Days**	**Comments**
Field Mtg with Cannon	7/19/2021	7/21/2021	2	
Draft RFP from Cannon	7/21/2021	8/3/2021	13	
Staff Report for Eng. Committee	8/3/2021	8/27/2021	24	
Engineering Committee	**8/27/2021**	**8/31/2021**	4	
Staff Report	8/31/2021	9/9/2021	9	
Board Meeting - Award Contract	**9/9/2021**	**9/14/2021**	**5**	
Kickoff Mtg	9/14/2021	9/23/2021	9	
Preliminary Engineering	9/23/2021	11/1/2021	39	9 Weeks
Final Submittal	11/1/2021	12/7/2021	36	5 Weeks
Staff Report	12/7/2021	12/9/2021	2	
Board Meeting - Advertise For Bid	12/9/2021	12/14/2021	5	
Send out to Contractors	12/14/2021	12/15/2021	1	
Pre-Bid Meeting	12/15/2021	1/12/2022	28	
Bid Opening	1/12/2022	1/19/2022	7	
Staff Report	1/19/2022	1/21/2022	2	
Board Meeting - Award Contract	1/21/2022	1/25/2022	4	
Shop Drawings	1/25/2022	3/22/2022	56	8 Weeks
Fabrication - Vault	3/22/2022	5/2/2022	41	6 Weeks
Start Construction	5/2/2022	5/2/2022	0	
End Construction	5/2/2022	7/1/2022	60	8 1/2 Weeks
Punchlist	7/1/2022	7/8/2022	7	

RECOMMENDATION:

Since time is of the essence, staff is recommending proceeding with the design portion of the upgrade to the pressure reducing station at Foothill Blvd & Cloud Ave. After completion of design, staff will review the construction cost estimate and adjusting the FY 21/22 CIP. Staff is also recommending that an action item be placed on the next Board meeting to award a design contract to Cannon.

Prepared & Submitted by:



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

Attachments:

1. Preliminary Cost Estimate

g:\engineering committee\2021 ec memo\08-31-21 ecm memo - cloud prv.docx

New PRV - Zone 4 to Zone 3
Preliminary Design and Construction Cost Estimate

ID No.	Description	Quantity		Unit Cost	Cost
1	Excavation and Backfill (pipeline & appurtenances)	100	LF	$100	$10,000
2	Resurfacing Trench	1,125	SF	$10	$11,250
3	Install 8" CML & CMC Steel Water Pipeline	100	LF	$110	$11,000
4	Install New 8” PRS Vault and appurtenant construction	1	LS	$140,000	$140,000
5	Provide traffic control for the Project	1	LS	$12,750	$12,750
	Subtotal				$185,000
	Contingency	20%			$37,000
	Total Construction				$222,000
SCADA/Electrical Upgrades					
1	Mobilization	1	LS	$3,000	$3,000
2	Power Source	1	LS	$7,500	$7,500
3	SCADA Cabinet	1	LS	$2,500	$2,500
4	RTU/PLC	1	LS	$3,000	$3,000
5	Conduits & Wiring	1	LS	$7,500	$7,500
6	Programing & Integration	1	LS	$12,500	$12,500
7	Misc	1	LS	$10,000	$10,000
	Subtotal				$46,000
	Contingency	20%			$9,200
	Total Construction				$55,200
Preliminary Design and Construction Costs					
1	Construction				$222,000
2	SCADA/Electrical Upgrades				$55,200
3	CVWD Costs				$21,000
4	Consultant				$123,200
5	Inspection				$103,400
6	Soils Engineering				$3,000
7	Misc				$2,200
	Subtotal				$530,000

CVWD Costs

	HR	RATE	AMT
BY	60	$110	$6,600
JB	40	$65	$2,600
CO	20	$75	$1,500
PH	10	$80	$800
DG	10	$135	$1,350
Permits	1	$8,150	$8,150
TOTAL			**$21,000**

Consultant

Cannon	1	$111,198	$111,198
Principal	0	$225	$0
Senior	0	$195	$0
Staff	0	$150	$0
Misc	1	$802	$802
Subtotal			$112,000
Contingency		10%	$11,200
Total			$123,200

Inspection

Principal	40	$225	$9,000
Senior	80	$195	$15,600
Staff (14 weeks)	560	$120	$67,200
Misc	1	$2,200	$2,200
Subtotal			$94,000
Contingency		10%	$9,400
Total			$103,400

CRESCENTA VALLEY WATER DISTRICT
STAFF REPORT

Information Item No. 3

To: Engineering Committee August 31, 2021

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

Subject: **Installation of a New Zone 7 to Zone 5 Pressure Reducing Station**

BACKGROUND:

In 2019, the Glendale Unified School District (GUSD) inquired regarding the availability of water service for a new facility they were considering building at Clark Magnet High School (Clark).

GUSD was working with Glendale Water and Power (GWP), and it was found that there is not sufficient water supply and pressure in the area to provide fire protection for the proposed building by GWP. GUSD requested that Crescenta Valley Water District (CVWD) investigate whether CVWD had the infrastructure available to provide Clark with enough water supply and pressure for fire protection.

After consulting with Akel Engineering with respect to hydraulics in the area, staff determined that, with the installation of a new pressure reducing station between Zone 7 and Zone 5, a new fire service could be installed that would provide enough water availability to allow for the addition of a new robotics lab building at Clark. The new pressure reducing station will be located on the Southeast corner of the intersection of Santa Carlotta St. and Cloudsdale Ave. (see location map).

In addition, a new steel pipeline that connects the upper and lower zones to the new PRS will need to be constructed. The new vault will also include electrical/telemetry equipment for the operation and monitoring of the site. The PRS would be a new source of water into Zone 5 during times of high demand, such as for fire protection.

DISCUSSION:

Staff discussed with representatives from GUSD that CVWD will coordinate the design and construction of the project and that GUSD will reimburse CVWD for the entire cost of the project. In addition, GUSD requested that the new PRS be installed and place it into service before the 22/23 school year begins in Fall of 2022.

To facilitate GUSD's request, CVWD would need to hire a consulting firm to provide surveying and engineering design services for the installation of the new PRS with a new vault, new transmission main, and any other appurtenant materials. Additionally, the project requires that a new fire service lateral be constructed along the northside of Clark. As this represents an unplanned/unbudgeted project, the assistance of a consulting engineering firm is needed with design and implementation of this project and the design costs will be reimbursed by GUSD.

Staff sent a request for proposal (RFP), after discussing the scope of work with GUSD, to a group of preselected consultants on August 3, 2021. A pre-proposal meeting was held on August 12, 2021, with five (5) consulting engineering firms were in attendance and four (4) proposal were received on August 27, 2021

Engineering Firm	Proposal
Civiltec Engineering	$39,880
MKN Associates	$69,589
Tetra Tech	$85,890
Cannon	$102,679

Project Budget:

The preliminary cost estimate for this project is $373,000 and since this request was made by GUSD, all costs associated with this Project will be paid for by GUSD. Staff will meet with GUSD to finalize the design and construction costs prior to any approvals by CVWD's Board of Directors.

Project Schedule:

Staff reviewed the project schedule with the goal to complete the design in December 2021 and complete construction by April 2022 as shown below.

Task	Date
Pre-Proposal Meeting – Web Conference	August 12, 2021 – 10:00 am
Proposal Due	August 27, 2021
Award of Contract	September 14, 2021
Kick Off Meeting	September 16, 2021
Board Approval – Advertisement for Bids	November 19, 2021
Pre-Bid Meeting	December 1, 2021
Bid Opening	December 8, 2021
Board Approval – Award of Contract	December 14, 2021
Start Construction	January 3, 2022

RECOMMENDATION:

Since time is of the essence, staff is recommending after discussion with GUSD, to proceed with the design and installation for the new the pressure reducing station at Santa Carlotta and Cloudsdale for GUSD. Staff is also recommending that an action item be placed on the September 14, 2021, Board meeting to award a design contract to the highest rated consulting firm after staff. Prior to staff's recommendation, GUSD will provide their assessment and ranking of the proposals. Staff is also requesting that the FY 21/22 CIP be increased by an additional $373,000 to cover the upfront cost of the project that CVWD will later be reimbursed by GUSD.

Prepared by:

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

Submitted by:

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

Attachments:

1. Location Map
2. Preliminary Cost Estimate

g:\engineering committee\2021 ec memo\08-31-21 ecm memo - clark magnet hs prv.docx

Legend

Existing System:

- wsvalve
- whyd
- wmain
- wlatline
- StreetCenterline

- New 8-inch CMC x CML Steel Water Main
- New Pressure Reducing Station w/ New H20 Vault
- New Fire Service per CVWD Std Dwg 40-03 to service Clark Magnet High School

D-21-G2
Clark Magnet High School

Crescenta Valley Water District

CRESCENTA VALLEY WATER DISTRICT
STAFF REPORT

Information Item No. 4

To: Engineering Committee August 31, 2021

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

Subject: Update for FY 21/22 Capital Improvement Project Budget and Consultants

---

BACKGROUND:

Staff has been discussing the FY 21/22 Capital Improvement Project (CIP) budget with respect to the Long-Term Infrastructure and Funding Roadmap, including future financing through the PayGo option. The Board has tentatively agreed to the FY 21/22 CIP budget, and the following is an update of projects and status of design.

DISCUSSION:

There are several CIP projects that need the assistance of outside consultants to begin design services so that construction can start in October or November 2021 instead of starting after January 2022. Shown below are the proposed projects and status update:

1. Design consultant for the new pipelines on the 2800 to 3100 Blocks of Los Olivos; 3200 Block of Alabama 4700 & 4800 Blocks of Cheryl & 3300 Block of Thelma St.
    a. ***Tetra Tech working with staff on potholing plan and pipeline alignment.***
2. Design consultant for a new Pressure Reducing Station & Rehabilitation of the Ramsdell Mixing Station.
    a. ***Staff reviewing preliminary design of Ramsdell Mixing Station Vault***
3. Design consultant for the steel reservoir rehabilitation at Edmund #2.
    a. ***Harper & Associates Engineering finalizing design.***
    b. ***Advertise for bid on September 14, 2021, Board Meeting***
4. Design consultant for the replacement of SCADA communication radio network.
    a. ***Staff finalizing the Request for Quote (RFQ) for installation of new radios and antennas.***
    b. ***RFQ to be sent out September 16, 2021, and due back-on October 6, 2021***
5. Design consultant for the replacement of SCADA Equipment, Programing & Integration.
    a. ***Staff working with Apex Manufacturing Services (APEX) on Pilot Program.***
6. Consultant to assist operations staff with conversion, monitoring and standard operating procedures for the conversion to chloramines.
    a. ***Staff working on Request for Proposal.***
7. Consultant to prepare a Wastewater Master Plan, with Wastewater Treatment Plant Feasibility Study.
    a. ***Staff working on preliminary Scope of Work.***

Staff will be bringing action items to future Board meetings for approval of consultant contracts. Staff is estimating about $250,000 to $300,000 of consulting fees will be spent prior to the October 2021 approval of the CIP budget.

FY 2021/21 CIP Budget

See attached for updated CIP Budget

RECOMMENDATION:

Staff is recommending to the Engineering Committee that staff move forward with preparing and awarding design consultant contracts prior to the final adoption of the FY 21/22 CIP Budget.

Prepared & submitted by:

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

g:\engineering committee\2021 ec memo\08-31-21 ecm memo - fy 21-22 capital improvement project update 3.docx

5-yr PayGo Pipeline - Pyramid - 20 yrs Bonds for Water Supply Projects Updated - 08/25/21	Recorded FY 19/20		Budget FY 20/21	Final FY 20/21		Budget FY 21/22	Forecast FY 22/23	Forecast FY 23/24	Forecast FY 24/25	Forecast FY 25/26
5-Year Capital Improvement Project Summary										
1. Water Supply	$ 300,375		$ 170,000	$ 157,768		$ 135,000	$ 165,000	$ 118,000	$ 122,000	$ 130,000
2. Water Storage	$ 498,530		$ 480,000	$ 663,607		$ 590,000	$ 600,000	$ 775,000	$ 800,000	$ 825,000
3A. Water Distribution - Pipeline - Pyramid - 20 yrs	$ 1,126,030		$ 2,300,000	$ 1,924,636		$ 3,152,865	$ 3,130,000	$ 3,730,000	$ 4,440,000	$ 5,320,000
3B. Water Distribution - Other	$ 10,892		$ 710,000	$ 133,014		$ 781,000	$ 125,000	$ 180,000	$ 95,000	$ 100,000
4. Water Treatment	$ 469,205		$ -	$ 54,073		$ 75,000	$ -	$ -	$ -	$ -
5. Technology	$ 152,597		$ 1,070,000	$ 581,691		$ 1,019,000	$ 815,000	$ 831,000	$ 620,000	$ -
6. Public Safety/Emergency Response	$ 5,810		$ 165,000	$ 134,549		$ 30,450	$ 215,000	$ 166,000	$ 173,000	$ -
7. Facilities & Planning	$ -		$ 105,000	$ 3,956		$ -	$ 150,000	$ -	$ -	$ -
Capital Improvement Projects - Total	$ 2,563,439		$ 5,000,000	$ 3,653,293		$ 5,783,315	$ 5,200,000	$ 5,800,000	$ 6,250,000	$ 6,375,000
Bond Financing - CIP	$ -		$ 2,695,174	$ 2,569,497		$ 2,304,826	$ -	$ -	$ -	$ -
Water Distribution - Pipeline Total						$ 3,152,865	$ 3,130,000	$ 3,730,000	$ 4,440,000	$ 5,320,000
Remaining CIP						$ 2,630,450	$ 2,070,000	$ 2,070,000	$ 1,810,000	$ 1,055,000
Water Fund Financing - CIP	$ 2,563,439		$ 2,304,826	$ 1,083,796		$ 3,478,489	$ 5,200,000	$ 5,800,000	$ 6,250,000	$ 6,375,000
Total Financing - CIP	$ 2,563,439		$ 5,000,000	$ 3,653,293		$ 5,783,315	$ -	$ -	$ -	$ 6,375,000

5-yr PayGo Pipeline - Pyramid - 20 yrs Bonds for Water Supply Projects Updated - 08/25/21	Recorded FY 19/20	Budget FY 20/21	Final FY 20/21	Budget FY 21/22	Forecast FY 22/23	Forecast FY 23/24	Forecast FY 24/25	Forecast FY 25/26
1. Water Supply								
A. Groundwater Water Supply								
i. Well Rehabilitation								
Well 7 Rehabilitation	$ 102,696							
Well 16 Rehabilitation	$ 103,713							
Well 11 Rehabilitation	$ 14,694	$ -	$ 56,106					
Well 12 Rehabilitation		$ 95,000	$ 97,944					
Well 14 Rehabilitation				$ 105,000				
Well Rehabilitation (1 Well per year)					$ 115,000	$ 118,000	$ 122,000	$ 130,000
ii. New Wells								
Re-Activate Well 2 - Construction	$ 79,272							
iii. Groundwater Basin Recharge								
Stormwater Recharge Project at CVC Park - Planning		$ 75,000	$ 3,718	$ 30,000				
Storm water Recharge Project at CVC Park - Design					$ 50,000			
WS Total	$ 300,375	$ 170,000	$ 157,768	$ 135,000	$ 165,000	$ 118,000	$ 122,000	$ 130,000
2. Water Storage								
A. Reservoir Rehabilitation								
i. Steel Reservoir Rehabilitation								
Markridge	$ 498,530		$ 367					
Rosemont		$ 480,000	$ 608,059					
Oak Creek - 16" Manifold Repair			$ 55,181					
Edmund #2				$ 590,000				
Goss Canyon #1					$ 600,000			
Goss Canyon #2						$ 625,000		
Shields							$ 650,000	
Eagle Canyon								$ 825,000
B. Reservoir Water Quality								
i. Water Quality Mixing System								
Reservoir Mixing System - 2 Reservoirs						$ 150,000		
Reservoir Mixing System - 2 Reservoirs							$ 150,000	
WS Total	$ 498,530	$ 480,000	$ 663,607	$ 590,000	$ 600,000	$ 775,000	$ 800,000	$ 825,000

5-yr PayGo Pipeline - Pyramid - 20 yrs Bonds for Water Supply Projects Updated - 08/25/21	Recorded FY 19/20	Budget FY 20/21	Final FY 20/21	Budget FY 21/22	Forecast FY 22/23	Forecast FY 23/24	Forecast FY 24/25	Forecast FY 25/26
3. Water Distribution								
A. Pipeline Replacement								
3200 & 3300 Blocks of Brookhill	$ 623,009							
4700 & 4800 Block of Pennsylvania	$ 503,021							
FY 20/21 Pipeline Replacement		$ 2,300,000	$ 1,924,636	$ 552,865				
Annual Pipeline Replacement				$ 2,600,000	$ 3,130,000	$ 3,730,000	$ 4,440,000	$ 5,320,000
C. Booster Pump System								
i. Annual Pump /Motor Replacement								
Boosters - Glenwood 32 & 33	$ 4,384							
Boosters - Glenwood 32 & 33			$ 85,951					
Annual Booster Replace - 1 Booster		$ 75,000	$ 20,385	$ 53,000	$ 85,000	$ 90,000	$ 95,000	$ 100,000
ii. Pump Station Upgrade								
Paschall Booster Station - Technical Memoradum Study								
D. Pressure Reducing Stations								
PRS - Zone 2 to Zone 1	$ 6,508	$ 150,000	$ 26,677					
PRS - Upgrade Zone 4 to Zone 3								
New PRS - Zone 7 to Zone 5								
E. Miscellaneous Projects								
i. Water Surge Control								
Rehabilitation Surge Tank at Glenwood		$ 35,000	$ -		$ 40,000			
Rehabilitation Surge Tank at Mills Plant								
ii. Street/Utility/ Meter Adjustment & Upgrade								
iii. Misc.								
Upgrade - Ramsdell Mixing Station	$ -	$ 450,000	$ -	$ 728,000				
Mills Plant - Aeration Tower						$ 90,000		
F. Water Distribution Studies								
WD Total	$ 1,136,922	$ 3,010,000	$ 2,057,650	$ 3,933,865	$ 3,255,000	$ 3,910,000	$ 4,535,000	$ 5,420,000
4. Water Treatment								
A. Nitrate Removal								
C. Disinfection - Convert to Chloramines								
Conversion to Chloramination	$ 469,205	$ -	$ 54,073	$ 75,000				
WT Total	$ 469,205	$ -	$ 54,073	$ 75,000	$ -	$ -	$ -	$ -

5-yr PayGo Pipeline - Pyramid - 20 yrs Bonds for Water Supply Projects Updated - 08/25/21	Recorded FY 19/20	Budget FY 20/21	Final FY 20/21	Budget FY 21/22	Forecast FY 22/23	Forecast FY 23/24	Forecast FY 24/25	Forecast FY 25/26
5. Technology								
A. Automated Meter Information (AMI) System								
AMI - 3/4" to 1" - Smart Meters	$ 83,590	$ 50,000	$ 123,852	$ 233,000	$ 19,200			
1-1/2" & 2" Smart Meters					$ 250,800	$ 263,475	$ 16,250	
3" & 4" Smart Meters				$ 200,000				
AMI - Meter Lids					$ 545,000	$ 567,525	$ 603,750	
AMI - Communication		$ 150,000	$ 271,705					
AMI - Customer Service Interface				$ 87,000				
B. Supervisory Control and Data Acquisition (SCADA) System								
Communication Radio Network		$ 260,000	$ 77,101	$ 125,000				
SCADA Replacement - Design	$ 69,007							
SCADA Replacement - Installation		$ 610,000	$ 109,033	$ 374,000				
C. Graphical Information System (GIS)								
TECH Total	$ 152,597	$ 1,070,000	$ 581,691	$ 1,019,000	$ 815,000	$ 831,000	$ 620,000	$ -
6. Public Safety/Emergency Response								
B. Water Storage								
Dunsmore/Pickens - Seismic Sensors	$ 5,810							
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		$ 165,000	$ 134,549	$ 30,450				
SF/ER Total	$ 5,810	$ 165,000	$ 134,549	$ 30,450	$ 215,000	$ 166,000	$ 173,000	$ -
7. Facilities & Planning								
D. Reservoir Site Improvements								
Roof for Old Encinal - Storage Bldg		$ 150,000	$ 3,956					
Facilities Maintenance Master Plan					$ 150,000			
F & P Total	$ -	$ 105,000	$ 3,956	$ -	$ 150,000	$ -	$ -	$ -
Capital Improvement Projects - Total	$ 2,563,439	$ 5,000,000	$ 3,653,293	$ 5,783,315	$ 5,200,000	$ 5,800,000	$ 6,250,000	$ 6,375,000

Crescenta Valley Water District

FY 21/22 Capital Improvement Project Summary - Bond & PayGo Funding

Capital Improvement Project Program	Budget FY 21/22	Category	Bond (B) or PayGo (P)	Cumulative Estimated Costs	Completion Date	Project Description
Bond Financing						
Fy 21/22 Annual Pipeline Replacement & Carryover from FY 20/21	**$ 2,569,497**	**Water Distribution**	**B**	**$ 2,569,497**	**Jun-22**	**Pipeline Replacement** - Pipelines that are greater than 50 years old (82% Bond Financing & 18% PayGo)
Pay-Go						
Annual Pipeline Replacement - 1.0 Mile	**$ 583,368**	**Water Distribution**	**P**	**$ 583,368**	**Jun-22**	**Pipeline Replacement** - Pipelines that are greater than 50 years old (82% Bond Financing & 18% PayGo)
Steel Reservoir Rehabilitation - Edmund #2	**$ 590,000**	**Water Storage**	**P**	**$ 1,173,368**	**Feb-22**	**Reservoir Rehabilitation** - Structural repairs and re-coating at Edmund #2 Reservoir during low demand (Winter) season
Well 14 Rehabilitation	**$ 105,000**	**Water Supply**	**P**	**$ 1,278,368**	**Mar-22**	**Well Rehabilitation -** Remove & Inspect Well Pump & Casing, Chemical Treatment Well Casing, Pump Test, New Pump & Motor
Replacement - SCADA Communication Radio Network	**$ 374,000**	**Technology**	**P**	**$ 1,652,368**	**Dec-22**	**Replacement of SCADA System** - Pilot Program; final replacement of RTU/PLC Equipment including equipment, programing, integration and testing
Upgrade - SCADA Radio Communication	**$ 125,000**	**Technology**	**P**	**$ 1,777,368**	**Jul-22**	**Replacement of SCADA Radio Communication System** - Replace 900 MHz radios with upgraded 5.8GHz radios
Annual Booster Pump Replacement	**$ 53,000**	**Water Distribution**	**P**	**$ 1,830,368**	**Apr-22**	**Booster Pump Replacement** - Replace 15-yr and older booster pump with new pump assembly and high efficiency motor - Replace 1 per year
AMI - Install Smart Meters, 3" & 4" Meters and Customer Engagement Platform	**$ 520,000**	**Technology**	**P**	**$ 2,350,368**	**May-22**	**Advanced Metering Infrastructure (AMI) -** Install 3/4" & 1" Meters; install 3" & 4" meters (Grant Funding) & Customer Engagement Platform
Stormwater Recharge CVC Park - Planning	**$ 30,000**	**Water Supply**	**P**	**$ 2,380,368**	**Jun-22**	**Stormwater Recharge** - Concept plan, grant funding options and coordination with stakeholders
Conversion to Chloramines	**$ 75,000**	**Water Quality**	**P**	**$ 2,455,368**	**Mar-22**	**Disinfection - Convert disinfection system from Free Chlorine to Chloramines**
Upgrade to Ramsdell Mixing Station & New PRS - Zone 2 to Zone 1	**$ 728,000**	**Water Distribution**	**P**	**$ 3,183,368**	**Jul-22**	**New Pressure Reducing Station & Upgrade Ramsdell Mixing Station** - PRS for water from Zone 2 to Zone 1 & Upgrade to Ramsdell Mixing Station
Finalize - FEMA Local Hazard Mitigation Plan	**$ 30,450**	**Public Safety/Emergency Response**	**P**	**$ 3,213,818**	**Nov-21**	**FEMA Grant** - **$125,000 grant**, $40,000 CVWD to prepare a local hazard mitigation plan**.** Finalizing Project and apply from FEMA grants
Pay-Go Subtotal	**$ 3,213,818**					
Total CIP	**$ 5,783,315**					