

CRESCENTA VALLEY WATER DISTRICT

2700 FOOTHILL BOULEVARD
LA CRESCENTA, CALIFORNIA

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

To be held on

April 19, 2018 at 9:00 AM

Posted April 17, 2018 at 9:00 AM

Call to Order

Adoption of Agenda

Information Items

1. Status of Groundwater Wells and Well Capacity
2. Award of Contract - Replacement of Encinal Booster B Pump and Motor Assembly, Project E-992
3. Status of Stormwater Recharge Project at CVC Park
4. FY 17/18 CIP - Project Status:
 - Oak Creek Reservoir Rehabilitation Project
 - Well #2 Re-activation and Nitrate Treatment Plant Project
 - Brookhill Pipeline Project
 - Well 10 Rehabilitation Project
5. FY 18/19 CIP – Budget Update

Public Comments

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.

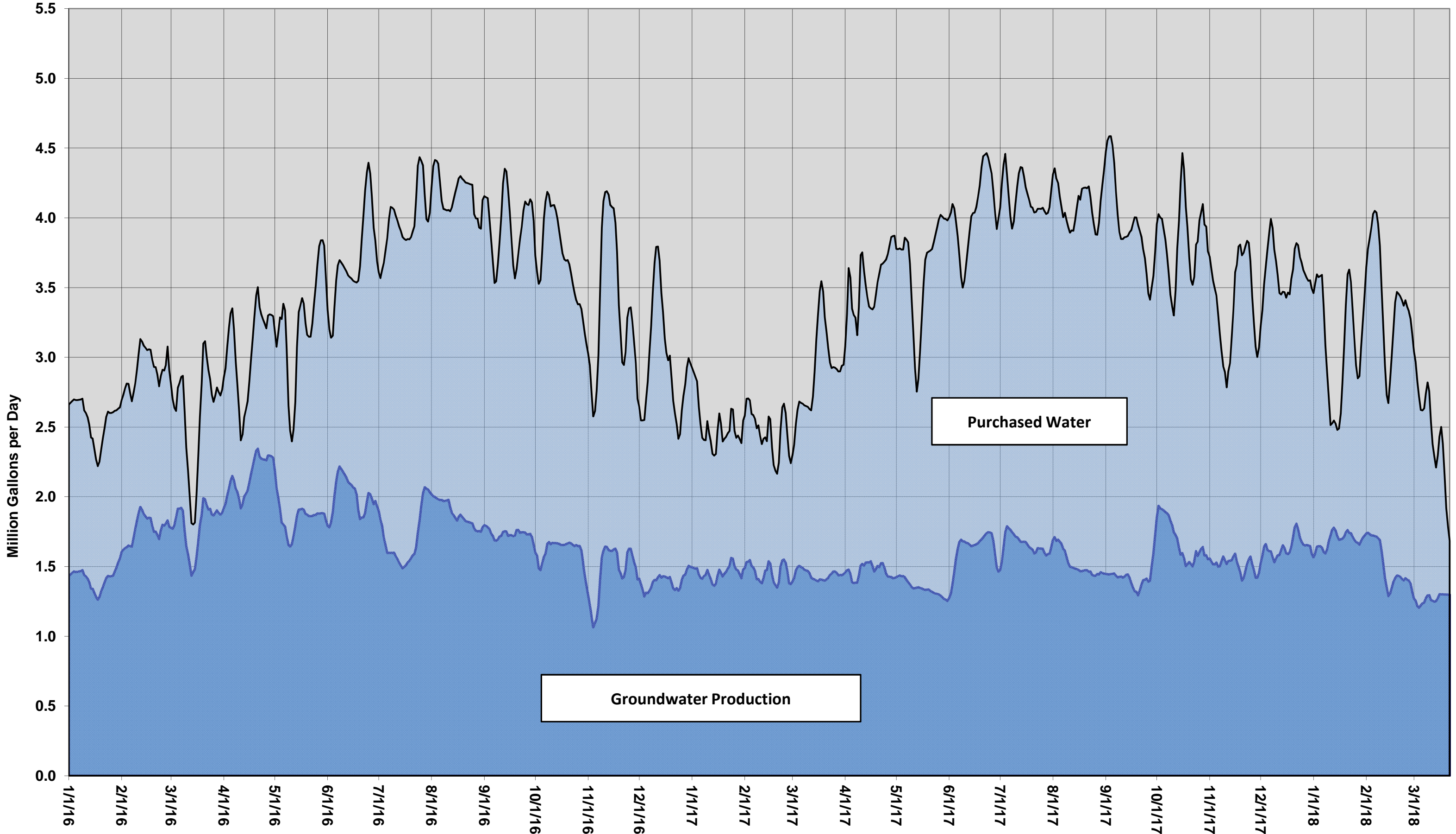
Committee Member's Request for Future Agenda Items

Next Engineering Committee Meeting – May 24, 2018

Adjournment

Water Production Chart 2016 - 2018

■ Groundwater Production (MGD) □ Total Water (MGD)



CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 2
April 19, 2018

To: Engineering Committee
From: Brook Yared, M.S., P.E. – Senior Engineer
Subject: Award of Contract – Replacement of Encinal Booster B Pump and Motor Assembly, Project E-992

INFORMATION ITEM:

1. Replacement of Encinal Booster B Pump and Motor Assembly, Project E-992 – Consideration and motion to authorize the General Manager to award a contract to the lowest responsible bidder General Pump Company at a cost of \$21,317, establish a contingency amount of \$2,150 (10% of contract) to cover the cost of unforeseen or additional work and to find said project exempt from the provisions of the California Environmental Quality Act (CEQA).

BACKGROUND:

Encinal Booster B Pump (Encinal B) was designed to operate at 1000 gpm with a 60 Hp motor and was last rehabilitated in January 1997. The existing pump and motor assembly has been in service for over 40,000 hours, which is beyond its useful life and was included in the FY 17/18 CIP budget. CVWD could save slightly more than \$2,000 annually in electricity costs by upgrading to a new more efficient pump and motor assembly according to the most recent pump efficiency test.

Staff has determined that replacing the existing pump with a slightly smaller pump (less capacity), this will provide for more efficient operation and cost savings to the District. Encinal B is critical for the distribution of water in the hotter summer months to Oak Creek Reservoir (Zone 4), and with the new pump installed CVWD would be increasing system reliability, while minimizing operational costs going into the future.

DISCUSSION:

On March 26, 2018, staff sent out a Request for Quotes (RFQ) to seven (7) pump contractors for the replacement of the existing pump and motor assembly for Encinal Booster B. A Pre-Bid meeting was held on April 11, 2018 and there were a total of three (3) attending contractors. The bid opening for the project was held on April 18, 2018 and the results are as follows:


	<u>Bidder</u>	<u>Total Bid Amount</u>
Lowest	General Pump Company	\$ 21,317.00
2 nd	Legend Pump and Well Services	\$ 26,360.00
3 rd	Best Drilling and Pump	\$ 27,150.00

The engineer's estimate was \$29,500 and the low bid was 27.7% lower than the engineer's estimate.


RECOMMENDATION:

Staff recommends that the Engineering Committee approve the request for quote and awarding the contract for the new pump assembly at CVWD's Encinal Reservoir at the April 24, 2018 Board meeting.

Prepared by:


Brook Yared, P.E.
Senior Engineer

Submitted by:


David S. Gould, P.E.
District Engineer

Attachments:

1 – Bid Summary

CRESCENTA VALLEY WATER DISTRICT

Title: Replacement of Encinal Booster B Pump and Motor Assembly
 E-Job No: E-992
 Engr's Est.: \$29,500
 Proj. Manager: Brook Yared

BID LOCATION: CVWD's Main Office
 TIME: 2:00 PM
 DATE: 4/18/2018
 BY: BY CHECKED: DSG

DATE: 4/18/2018

				Engineers Estimate		General Pump		Legend Pump Services		Best Pump and Drilling	
ITEM	DESCRIPTION	QUANTITY		UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT
1	Mobilization and Demobilization	1	LS	\$1,500.00	\$1,500.00	\$3,303.00	\$3,303.00	\$5,520.00	\$5,520.00	\$2,500.00	\$2,500.00
2	Remove Existing Pump and Motor Assembly	1	LS	\$4,500.00	\$4,500.00	\$2,100.00	\$2,100.00	\$5,800.00	\$5,800.00	\$3,500.00	\$3,500.00
3	New Vertical Turbine Pump	1	Hr	\$12,000.00	\$12,000.00	\$3,899.00	\$3,899.00	\$6,152.00	\$6,152.00	\$6,650.00	\$6,650.00
4	New Vertical Turbine Motor	1	LS	\$6,500.00	\$6,500.00	\$4,424.00	\$4,424.00	\$5,173.00	\$5,173.00	\$4,500.00	\$4,500.00
5	Discharge Head, Column Pipe and Additional Equipment	1	LF	\$3,000.00	\$3,000.00	\$5,191.00	\$5,191.00	\$3,185.00	\$3,185.00	\$5,000.00	\$5,000.00
6	Field Balancing, Start-up and Testing	1	LS	\$2,000.00	\$2,000.00	\$2,400.00	\$2,400.00	\$800.00	\$800.00	\$5,000.00	\$5,000.00
				EE	\$29,500.00	LOW	\$21,317.00	2ND	\$26,630.00	3RD	\$27,150.00
							-27.7%		-9.7%		-8.0%

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 3

April 19, 2018

To: Engineering Committee
From: David S. Gould, P.E. – District Engineer
Subject: Project Update - Crescenta Valley County Park Stormwater Recharge Project, E-985

INFORMATION ITEM:

Status of Stormwater Recharge Facility Project at Crescenta Valley County Park

BACKGROUND:

The Crescenta Valley County Park (CVC Park) Stormwater Recharge Project Facility Feasibility Study (Study) was completed in March 2017. The Study provided important groundwater flow data and geologic information. This study concluded that portions of CVC Park can be utilized for stormwater capture for groundwater recharge to reduce fluctuation in groundwater levels during dry and wet rainfall years. Use of stormwater runoff for groundwater recharge will also help improve groundwater quality, increase water-supply reliability and improve surface water quality in downstream receiving waters.

DISCUSSION:

The next step will be to construct the facilities to divert stormwater flow and dry weather runoff into underground infiltration basins for groundwater recharge and reduce surface water runoff into the Verdugo Wash.

The following is a summary of project tasks over the next three to six months:

- **Preliminary Conceptual Plan & Cost Estimate:** Staff and its consultants (AMEC Foster Wheeler and John Robinson Consulting) will be working on a preliminary conceptual plan to locate the infiltration galleries within CVC Park, creating a “Green” street on Dunsmore Ave, south of Honolulu, add a native landscaping garden, and possible upgrades to CVC Park. The “Green” Street concept could include swales with native landscaping and under drains to direct stormwater flow within the street to the infiltration galleries. Staff is also preparing a preliminary construction cost estimate including a benefit/cost analysis for review and discussion with the Engineering Committee.
 - AMEC Foster Wheeler is currently under contract for \$25,000 to provide a preliminary conceptual plan and a preliminary construction cost estimate.
 - Staff requested a proposal from John Robinson Consulting to provide project coordination with AMEC, Los Angeles County, and City of Glendale, including DWR on grant program and determining CEQA requirements. The proposal was for \$19,800 and it will provide the additional manpower needed to proceed with the project as staff’s workload has shifted until a new GM has been hired.
- **Presentation to Board of Directors:** Staff and its consultants are planning to make a presentation to the Board of Directors to discuss the project, the preliminary conceptual plan and preliminary construction cost estimate for review. Staff’s goal will be to get Board acceptance of the project before proceeding with the next set of tasks.
- **Permit from State Water Resources Control Board, Division of Water Rights:** Consultants will meet with the SWRCB, Division of Water Rights to determine the water rights permitting and licensing requirements.

- Permitting is the process of filing an application to request that the SWRCB authorize the development of a water diversion project by issuing a permit. A permit provides the legal authorization to develop the project and divert water in accordance with conditions and within a time schedule.
- Licensing is the process of reviewing a permitted project that is complete to confirm the amount of water put to beneficial use and that the permit conditions were met. A license is the final confirmation of the water right and remains effective as long as its conditions are met and beneficial use continues.
- Meeting with Stakeholders: Consultants will be meeting with stakeholders such as City of Glendale, Los Angeles County Department of Parks and Recreation (LACDPW) and Los Angeles County Department of Public Works (LACDPR) to get input on the preliminary conceptual plan and discuss the possibility of providing funding for the project.
- Grant Funding: Consultants will be looking into getting grant funding under Proposition 1, Integrated Regional Water Management (IRWM) Grant program. Accordingly to the DWR website, the next round of grant applications are due in December 2018, However, it does not specify the amount of funding available or cost sharing (i.e. 50% matching funds).
- CEQA documentation: Consultants will look into the scope of work for CEQA documentation in anticipation of the grant application requirements, this will also involve LACDPW and LACDPR. The limits of the CEQA work will be defined by the final conceptual plan and assist staff in determining the scope of work.

The key element to proceeding is the Board's approval of the project, the preliminary conceptual plan and preliminary construction cost estimate for the installation of infiltration galleries to capture the stormwater underneath CVC Park. In addition, staff will need to present the time table for getting permits and licensing from the SWRCB, Division of Water Rights.

RECOMMENDATION:

It is staff's recommendation that the Engineering Committee give input on the proposed tasks and time frame towards the implementation of the CVC Park Stormwater Recharge project.

Prepared & Submitted by:



David S. Gould, P.E.
District Engineer

Attachments:

Infiltration Gallery Locations



Preliminary Design of Recharge Galleries

Components include:

- ▶ Diversion structure
- ▶ Piping
- ▶ Sediment removal vault
- ▶ Gallery pipes



Crescenta Valley Water District

Design and Construction Schedule for FY 17/18

Project	E-Job No.	July					August					September					October					November					December					January					February					March					April					May					June				
		3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	5	12	19	26	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25								
FY 16/17 - Carryover Projects																																																													
Re-Activate Well 2 - Design/Construction	E-956	Design					Bidding					AC	Shop Drawing					Construction																																											
Ocean View Chlorination Station - SCADA	E-733																																				Design					Construction																			
Lower Pickens Canyon Crossing & Slope	E-957																AC	Landscaping Slope																																											
4200 - 4300 Blocks of Pennsylvania (Mills Pumphouse)	E-972	Construction																																																											
SCADA RTU Replace - Equipment & Integration	E-939	SCADA - HMI - Design															SCADA - HMI - Intergradation																																												
Seismic Sensors & Valve Actuators - Duns/Pickens	E-976																																				Construction - Pickens																								
FY 17/18 - Projects																																																													
Well 5 Rehabilitation	E-983	AC	Shop Draw			Construction																																																							
Well 10 Rehabilitation	E-987											Design					Bidding					AC	Shop Drawing Review					Construction																																	
Re-Activate Well 2 - Design/Construction	E-956	Design					Bidding					AC	Shop Drawing					Construction																																											
Stormwater Recharge Project - Preliminary Design	E-985																										Preliminary Design																																		
Oak Creek #1 & #2 Rehabilitation	E-970	Design					Bidding					AC	Shop Drawing					Construction - Oak Creek #1															Construction - Oak Creek #2																												
2700, 3000 & 3100 Block of Brookhill & 5000 Block of La Crescenta	E-982	Design										Bidding										AC											Construction																												
Encinal B & C Booster Pump Replacement	E-992																										Design					Bidding					AC	Construction																							
Ramsdell Mixing Station - Rehabilitation	E-977																										Design										Bidding																								
SCADA RTU Replace - Equipment	E-939																															Design																													

Legend	
- Request - Proposal	AC
- Project Design	- Award of Contract
- Preliminary Design	- Shop Drawing Review
- Bidding	- Construction
	- Project Complete

Capital Improvement Project Program FY 17-18 Budget - Update 4/15/18	Recorded FY 16/17	Carryover from FY 16/17 to FY 17/18	Budget FY 17/18	Total Project Budget FY 17/18 with FY 16/17 Carryover	Cost to date 7/1/17 - 4/15/18	Cost Committed - 4/15/18/18 - 6/30/18	Cost Remaining for FY 17/18	Project Total Cost for FY 17/18	Carryover from FY 17/18 to FY 18/19
FY 17/18 Capital Improvement Project Summary									
1. Water Supply	\$ 523,485	\$ 530,040	\$ 1,185,300	\$ 1,715,340	\$ 1,213,060	\$ 606,469	\$ (229,189)	\$ 1,819,529	\$ 274,800
2. Water Storage	\$ 13,689	\$ 306,310	\$ 594,000	\$ 900,310	\$ 284,528	\$ 696,872	\$ (81,090)	\$ 981,400	\$ -
3. Water Distribution	\$ 1,037,336	\$ 336,000	\$ 805,000	\$ 1,141,000	\$ 458,344	\$ 822,581	\$ (139,925)	\$ 1,280,925	\$ -
4. Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5. Technology	\$ 140,054	\$ 61,000	\$ -	\$ 61,000	\$ 13,193	\$ 47,807	\$ -	\$ 61,000	\$ -
6. Public Safety/Emergency Response	\$ 71,886	\$ 25,000	\$ -	\$ 25,000	\$ -	\$ -	\$ 25,000	\$ -	\$ -
7. Facilities & Planning	\$ 68,368	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Improvement Projects - Total	\$ 1,854,818	\$ 1,258,350	\$ 2,584,300	\$ 3,842,650	\$ 1,969,125	\$ 2,173,729	\$ (425,204)	\$ 4,142,854	\$ 274,800
Budget Shortfall							\$ (425,204)		
Well 2 Project - Transfer from MTBE Fund							\$ 500,000		
Brookhill Pipeline - Transfer from Water Reserves							\$ 75,000		
Oak Creek Rehab - Transfer from Water Reservices							\$ 90,000		
Total - Transfers							\$ 665,000		
Revised Budget Amount Remaining							\$ 239,796		

Capital Improvement Project Program FY 17-18 Budget - Update 4/15/18	Recorded FY 16/17	Carryover from FY 16/17 to FY 17/18	Budget FY 17/18	Total Project Budget FY 17/18 with FY 16/17 Carryover	Cost to date 7/1/17 - 4/15/18	Cost Committed - 4/15/18/18 - 6/30/18	Cost Remaining for FY 17/18	Project Total Cost for FY 17/18	Carryover from FY 17/18 to FY 18/19
1. Water Supply									
A. Groundwater									
i. Well Rehabilitation									
Well 7 Rehabilitation	\$ -	\$ -							
Well 8 Rehabilitation	\$ 44,385	\$ -							
Well 5 Rehabilitation			\$ 60,000	\$ 60,000	\$ 69,388	\$ -	\$ (9,388)	\$ 69,388	\$ -
Well 10 Rehabilitation			\$ 85,000	\$ 85,000	\$ 72,385	\$ 5,500	\$ 7,115	\$ 77,885	\$ -
ii. New Wells									
Re-Activate Well 2 - Design	\$ 101,394	\$ -	\$ 160,300	\$ 160,300	\$ 135,462	\$ 24,838		\$ 160,300	\$ -
Re-Activate Well 2 - Construction	\$ 189,960	\$ 530,040	\$ 880,000	\$ 1,410,040	\$ 918,465	\$ 491,575	\$ (125,000)	\$ 1,410,040	\$ 274,800
B. Imported Water									
Ocean View Chlorination St (Grant - Matching Funds)	\$ 4,464								
Ocean View - Equip. (Grant - Matching Funds)	\$ 40,567								
Ocean View - Elect (Grant - Matching Funds)	\$ 30,356								
Ocean View - Final	\$ 58,073	\$ -	\$ -	\$ -	\$ 13,394	\$ 50,306	\$ (63,700)	\$ 63,700	\$ -
C. Groundwater Basin Recharge									
Storm Water Recharge Study (Grant - Matching Funds)	\$ 54,286	\$ -	\$ -	\$ -					
Stormwater Recharge Project - Design			\$ -	\$ -	\$ 3,966	\$ 34,250	\$ (38,216)	\$ 38,216	\$ -
WS Total	\$ 523,485	\$ 530,040	\$ 1,185,300	\$ 1,715,340	\$ 1,213,060	\$ 606,469	\$ (229,189)	\$ 1,819,529	\$ 274,800
2. Water Storage									
A. Reservoir Rehabilitation									
i. Steel Reservoir Re-Coating/Roof/Vents Rehabilitation									
Oak Creek #1 & #2 - Roof/Air Vents/Recoat	\$ 13,689	\$ 306,310	\$ 594,000	\$ 900,310	\$ 284,528	\$ 696,872	\$ (81,090)	\$ 981,400	\$ -
B. Reservoir Water Quality									
C. New Reservoir Water Storage									
WS Total	\$ 13,689	\$ 306,310	\$ 594,000	\$ 900,310	\$ 284,528	\$ 696,872	\$ (81,090)	\$ 981,400	\$ -

Capital Improvement Project Program FY 17-18 Budget - Update 4/15/18	Recorded FY 16/17	Carryover from FY 16/17 to FY 17/18	Budget FY 17/18	Total Project Budget FY 17/18 with FY 16/17 Carryover	Cost to date 7/1/17 - 4/15/18	Cost Committed - 4/15/18/18 - 6/30/18	Cost Remaining for FY 17/18	Project Total Cost for FY 17/18	Carryover from FY 17/18 to FY 18/19
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3. Water Distribution

A. Pipeline Replacement

<i>Lower Pickens Canyon Crossing & Slope - 600 LF</i>	\$ 494,936	\$ 60,000	\$ -	\$ 60,000	\$ 89,512	\$ 3,000	\$ (32,512)	\$ 92,512	\$ -
<i>4200 - 4400 Block - Penn - 1,450 LF</i>	\$ 214,527	\$ 225,000	\$ -	\$ 225,000	\$ 236,896	\$ -	\$ (11,896)	\$ 236,896	\$ -
<i>2700 Block - Brookhill - 800 LF</i>			\$ 220,000	\$ 220,000	\$ 35,687	\$ 215,725	\$ (31,412)	\$ 251,412	\$ -
<i>5100 Block of La Crescenta - 400 LF</i>			\$ 100,000	\$ 100,000	\$ 16,221	\$ 98,060	\$ (14,281)	\$ 114,281	\$ -
<i>3000 Block of Brookhill - 800 LF</i>			\$ 220,000	\$ 220,000	\$ 35,688	\$ 215,724	\$ (31,412)	\$ 251,412	\$ -
<i>3100 Block of Brookhill - 800 LF</i>			\$ 220,000	\$ 220,000	\$ 35,688	\$ 215,724	\$ (31,412)	\$ 251,412	\$ -

B. New Pipelines

C. Booster Pump System

i. Annual Pump /Motor Replacement

<i>Booster 12 at Markridge</i>	\$ 31,086	\$ -							
<i>Boosters - Encinal B & C</i>			\$ 45,000	\$ 45,000	\$ -	\$ 32,000	\$ 13,000	\$ 32,000	\$ -

iii. Misc.

<i>Repairs to Ramsdell Mixing Station</i>	\$ 34,288	\$ 51,000	\$ -	\$ 51,000	\$ 8,652	\$ 42,348	\$ -	\$ 51,000	\$ -
WD Total	\$ 1,037,336	\$ 336,000	\$ 805,000	\$ 1,141,000	\$ 458,344	\$ 822,581	\$ (139,925)	\$ 1,280,925	\$ -

4. Water Treatment

A. Nitrate Removal

B. Chlorine Disinfection

C. Convert to Chloramines

F. MTBE Removal

WT Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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5. Technology

A. Automated Meter Information (AMI) System

B. Supervisory Control and Data Acquisition (SCADA) System

<i>SCADA RTU Replace - Equipment & Integration</i>	\$ 140,054	\$ 61,000	\$ -	\$ 61,000	\$ 13,193	\$ 47,807	\$ -	\$ 61,000	\$ -
TECH Total	\$ 140,054	\$ 61,000	\$ -	\$ 61,000	\$ 13,193	\$ 47,807	\$ -	\$ 61,000	\$ -

Capital Improvement Project Program FY 17-18 Budget - Update 4/15/18	Recorded FY 16/17	Carryover from FY 16/17 to FY 17/18	Budget FY 17/18	Total Project Budget FY 17/18 with FY 16/17 Carryover	Cost to date 7/1/17 - 4/15/18	Cost Committed - 4/15/18/18 - 6/30/18	Cost Remaining for FY 17/18	Project Total Cost for FY 17/18	Carryover from FY 17/18 to FY 18/19
6. Public Safety/Emergency Response									
A. Emergency Electrical Generators									
B. Water Storage									
<i>Dunsmore/Pickens - Seismic Sensors & Valve Actuators</i>	\$ 71,886	\$ 25,000	\$ -	\$ 25,000	\$ -	\$ -	\$ 25,000	\$ -	\$ -
SF/ER Total	\$ 71,886	\$ 25,000	\$ -	\$ 25,000	\$ -	\$ -	\$ 25,000	\$ -	\$ -
7. Facilities & Planning									
A. Main Office									
B. Glenwood Plant									
D. Reservoir Site Improvements									
F & P Total	\$ 68,368	\$ -	\$ -	\$ -					
Capital Improvement Projects - Total	\$ 1,854,818	\$ 1,258,350	\$ 2,584,300	\$ 3,842,650	\$ 1,969,125	\$ 2,173,729	\$ (425,204)	\$ 4,142,854	\$ 274,800

Crescenta Valley Water District

FY 18/19 Capital Improvement Project Program Cost Estimate and Funding Levels

Capital Improvement Project Program	Budget FY 18/19	Category	Priority A, B, & C	Priority Level	Cumulative Costs	Project Description
<i>Well 7, 11 & 14 Rehabilitation</i>	\$ 225,000	Water Supply	A	1	\$ 225,000	Remove & Inspect Well Pump & Casing, Chemical Treatment Well Casing, Pump Test, New Pump & Motor Increase Well Capacity for 3 wells from 310 gpm to 600 gpm
<i>New Chlorination Station at Pickens Canyon Reservoir</i>	\$ 75,000	Water Quality	A	2	\$ 300,000	Install new Sodium Hypochlorite disinfection system for Pickens Canyon Tunnel with chlorine analyzer
<i>Paschall - New Chlorine Analyzer</i>	\$ 40,000	Water Quality	A	3	\$ 340,000	Install New Chlorine Analyzer at Paschall to aid in monitoring breakpoint chlorination
<i>Water Aeration System - Shields and Edmund 2 Reservoirs</i>	\$ 150,000	Water Quality	A	4	\$ 490,000	Install In-Tank Aeration System for TTHM Removal at Shields & Edmund 2 Reservoirs
<i>3200 & 3300 Blocks of Brookhill - 1,600 LF</i>	\$ 640,000	Water Distribution	A	5	\$ 1,130,000	Replace 71 year old 4" pipeline with 8 leaks in the last 7 years with a new 8-inch water main with new fire hydrants - 1,600 LF
<i>2400 & 2500 Block of Janet Lee - 1,200 LF</i>	\$ 480,000	Water Distribution	A	6	\$ 1,610,000	Replace 67 year old 6" pipeline with new 8-inch water main and replace water services with yoke assemblies (part of water meter replacement program) - 1,150 LF
<i>Rehabilitation Surge Tank at Glenwood Plant</i>	\$ 65,000	Water Distribution	A	7	\$ 1,675,000	Rehabilitation surge tank including replacement of piping & appurtenances and recoating of interior
<i>Installation of New Surge Tank at Mills Plant</i>	\$ 75,000	Water Distribution	A	8	\$ 1,750,000	Installation of new surge tank including piping & appurtenances
<i>Boosters - Glenwood Booster 32 & 33</i>	\$ 75,000	Water Distribution	A	9	\$ 1,825,000	Replace Glenwood Booster 32 & 33 with a new 800 gpm pump assembly and 40 HP motor
FY 18/19 - Preliminary Budget - Projects 1 - 9 - 5.9%						
<i>SCADA RTU Replace - Equipment & Integration</i>	\$ 200,000	Technology	A	10	\$ 2,025,000	Replacement of SCADA System - Equipment
FY 18/19 - Preliminary Budget - Projects 1 - 10 - 6.9%						
<i>Ordunio - Seismic Sensors & Valve Actuators</i>	\$ 100,000	Public Safety/ Emerg. Resp.	A	11	\$ 2,125,000	Install New Seismic Sensor & Valve Actuator on Ordunio Reservoir Inlet/Outlet Valves
<i>Encinal Reservoir - Concrete Rehabilitation</i>	\$ 175,000	Water Storage	B	12	\$ 2,300,000	Inspection and rehabilitation of Concrete Reservoir - Work during winter season. Last rehabilitation - 1983
<i>Upgrade Paschall Booster Station & MCC upgrade - Design</i>	\$ 150,000	Water Distribution	B	13	\$ 2,450,000	Design Services for upgrading the Paschall Booster Station and replacement/upgrade of Motor Control Center
<i>Stormwater Recharge Project - Design</i>	\$ 150,000	Water Supply	B	14	\$ 2,600,000	Preliminary Design, Grant Application and Coordination with stakeholders for Proposed Stormwater Recharge Project at CVC Park
<i>Ocean View - Site Improvements - Design</i>	\$ 100,000	Facilities & Planning	C	15	\$ 2,700,000	Design services for improvements for site drainage, street accessibility and use for storage
<i>Roof for Old Encinal - Storage Bldg - Design & Construction</i>	\$ 175,000	Facilities & Planning	C	16	\$ 2,875,000	Design and construction of new roof and appurtenances to convert old reservoir to storage facility.
<i>Cathodic Protection Inspection & Replacement</i>	\$ 125,000	Water Storage	C	17	\$ 3,000,000	Inspection and replacement of the cathodic protection system on steel tanks (14 total)
FY 18/19 - Preliminary Budget - Projects 1 - 17						

Capital Improvement Project Program FY 18-19 Budget - Update 4/19/18	Carryover from FY 17/18	Budget FY 18/19	Forecast FY 19/20	Forecast FY 20/21	Forecast FY 21/22	Forecast FY 22/23	Forecast FY 23/24
FY 18/19 Capital Improvement Project Summary							
1. Water Supply	\$ 275,000	\$ 225,000	\$ 150,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 375,000
2. Water Storage	\$ -	\$ -	\$ 175,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 810,000
3. Water Distribution	\$ 125,000	\$ 1,335,000	\$ 1,300,000	\$ 1,410,000	\$ 1,925,000	\$ 1,575,000	\$ 1,690,000
4. Water Treatment	\$ -	\$ 265,000	\$ 160,000	\$ 125,000	\$ 500,000	\$ 200,000	\$ -
5. Technology	\$ -	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -
6. Public Safety/Emergency Response	\$ -	\$ -	\$ 100,000	\$ 165,000	\$ -	\$ 175,000	\$ -
7. Facilities & Planning	\$ -	\$ -	\$ 415,000	\$ -	\$ 125,000	\$ 250,000	\$ 125,000
Capital Improvement Projects - Total	\$ 400,000	\$ 2,025,000	\$ 2,300,000	\$ 2,500,000	\$ 3,350,000	\$ 3,000,000	\$ 3,000,000

Capital Improvement Project Program FY 18-19 Budget - Update 4/19/18		Carryover from FY 17/18	Budget FY 18/19	Forecast FY 19/20	Forecast FY 20/21	Forecast FY 21/22	Forecast FY 22/23	Forecast FY 23/24
1. Water Supply								
A. Groundwater								
i. Well Rehabilitation								
	<i>Well 5 Rehabilitation</i>	\$ -						
	<i>Well 10 Rehabilitation</i>	\$ -						
	<i>Well 7 Rehabilitation</i>		\$ 75,000					
	<i>Well 11 Rehabilitation</i>		\$ 75,000					
	<i>Well 14 Rehabilitation</i>		\$ 75,000					
	<i>Well Rehabilitation (2 Wells per year)</i>			\$ 150,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000
ii. New Wells								
	<i>Re-Activate Well 2 - Construction</i>	\$ 275,000	\$ -					
	<i>Well 18 (Sycamore House) - Design</i>							\$ 175,000
WS Total		\$ 275,000	\$ 225,000	\$ 150,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 375,000
2. Water Storage								
A. Reservoir Rehabilitation								
i. Steel Reservoir Re-Coating/Roof/Vents Rehabilitation								
	<i>Oak Creek #1 & #2 - Roof/Air Vents/Recoat</i>	\$ -						
	<i>Markridge - Roof/Air Vents/Recoat</i>			\$ 600,000				
	<i>Rosemont - Roof/Air Vents/Recoat</i>				\$ 600,000			
	<i>Eagle Canyon - Roof/Air Vents/Recoat</i>					\$ 600,000		
	<i>Edmund #2 - Roof/Air Vents/Recoat</i>							\$ 600,000
ii. Concrete Reservoir Rehabilitation								
	<i>Encinal Reservoir - Concrete Rehabilitation</i>		\$ -	\$ 175,000				
iv. Overflow & Drain System Upgrade								
	<i>Overflow/Drain System Assessment Study</i>							\$ 85,000
B. Reservoir Water Quality								
i. Water Mixing System								
	<i>Reservoir Water Quality & Mixing System Study</i>							\$ 125,000
C. New Reservoir Water Storage								
	<i>Ocean View #2 Reservoir (Top of Ocean View) - Feasibility Study</i>							\$ 75,000
WS Total		\$ -	\$ -	\$ 175,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 810,000
3. Water Distribution								
A. Pipeline Replacement								
	<i>3200 & 3300 Blocks of Brookhill - 1,600 LF</i>	\$ -	\$ 640,000					
	<i>2400 & 2500 Block of Janet Lee - 1,200 LF</i>	\$ -	\$ 480,000					
	<i>Annual Pipeline Replacement - 3,000 LF</i>			\$ 1,150,000	\$ 1,250,000	\$ 1,500,000	\$ 1,500,000	\$ 1,600,000

Capital Improvement Project Program FY 18-19 Budget - Update 4/19/18	Carryover from FY 17/18	Budget FY 18/19	Forecast FY 19/20	Forecast FY 20/21	Forecast FY 21/22	Forecast FY 22/23	Forecast FY 23/24
C. Booster Pump System							
i. Annual Pump /Motor Replacement							
<i>Boosters - Encinal B & C</i>	\$ -						
<i>Boosters - Glenwood 32 & 33</i>		\$ 75,000					
<i>Boosters - Paschall B</i>			\$ 75,000				
<i>Boosters - Booster 26 at CH</i>				\$ 75,000			
<i>Boosters - Ocean View B & Booster 25 at Markridge</i>					\$ 75,000		
<i>Annual Booster Replacement - 2 Boosters</i>						\$ 75,000	\$ 90,000
iv. MCC Replacement							
<i>MCC upgrade at Paschall - - Design & Construction</i>		\$ -	\$ -	\$ 85,000	\$ 350,000		
E. Miscellaneous Projects							
i. Water Surge Control							
<i>Rehabilitation Surge Tank at Glenwood</i>		\$ 65,000					
<i>Rehabilitation Surge Tank at Mills Plant</i>		\$ 75,000					
iii. Misc.							
<i>Repairs to Ramsdell Mixing Station</i>	\$ 125,000						
<i>Mills Plant - Aeration Tower Rehabilitation</i>			\$ 75,000				
WD Total	\$ 125,000	\$ 1,335,000	\$ 1,300,000	\$ 1,410,000	\$ 1,925,000	\$ 1,575,000	\$ 1,690,000
4. Water Treatment							
A. Nitrate Removal							
i. Glenwood							
<i>Replace Ion Exchange Resin at Glenwood</i>					\$ 500,000		
iii. Ordunio							
<i>Replace Bio Remediation AroNite Media at Ordunio</i>						\$ 200,000	
B. Chlorine Disinfection							
<i>New Chlorination Station at Pickens Canyon Reservoir</i>		\$ 75,000					
<i>Paschall - New Chlorine Analyzer</i>		\$ 40,000					
<i>New Chlorination Station at Markridge Reservoir</i>			\$ 75,000				
<i>Edmund #1 & Shields - Chlorine Analyzers</i>				\$ 125,000			
C. Convert to Chloramines							
<i>Conversion to Chloramination Disinfection Feasibility</i>			\$ 85,000				
D. Federal and State Regulations							
<i>TTHM Removal - In-Tank Aeration - Shields & Edmund 2 Reservoirs</i>		\$ 150,000					
WT Total	\$ -	\$ 265,000	\$ 160,000	\$ 125,000	\$ 500,000	\$ 200,000	\$ -

Capital Improvement Project Program FY 18-19 Budget - Update 4/19/18	Carryover from FY 17/18	Budget FY 18/19	Forecast FY 19/20	Forecast FY 20/21	Forecast FY 21/22	Forecast FY 22/23	Forecast FY 23/24
5. Technology							
B. Supervisory Control and Data Acquisition (SCADA) System							
SCADA RTU Replace - Equipment & Integration	\$ -	\$ 200,000	\$ -				
TECH Total	\$ -	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -
6. Public Safety/Emergency Response							
A. Emergency Electrical Generators							
New Emergency Electrical Generator - Mills Plant			\$ 100,000				
New Emergency Electrical Generator - Field						\$ 50,000	
B. Water Storage							
Ordunio - Seismic Sensors & Valve Actuators		\$ -					
Oak Creek #1 & #2 - Seismic Sensors & Valve Actuators				\$ 165,000			
Encinal & Ocean View - Seismic Sensors & Valve Actuators						\$ 125,000	
SF/ER Total	\$ -	\$ -	\$ 100,000	\$ 165,000	\$ -	\$ 175,000	\$ -
7. Facilities & Planning							
A. Main Office							
Expansion with New Roof with Solar Panels			\$ -		\$ 125,000		
D. Reservoir Site Improvements							
Ocean View - Site Improvements		\$ -	\$ 265,000				
Roof for Old Encinal - Storage Bldg		\$ -	\$ 150,000				
Pickens - Access Road Improvements						\$ 250,000	\$ 125,000
F & P Total	\$ -	\$ -	\$ 415,000	\$ -	\$ 125,000	\$ 250,000	\$ 125,000
Capital Improvement Projects - Total	\$ 400,000	\$ 2,025,000	\$ 2,300,000	\$ 2,500,000	\$ 3,350,000	\$ 3,000,000	\$ 3,000,000