

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

September 5, 2017 at 6:00 PM

Posted September 1, 2017 at 3:00 pm

Call to Order

Adoption of Agenda

Information Items

1. Status of Groundwater Wells and Well Capacity
2. Award of Contract for Construction of CVWD's Well 2 and Related Facilities at Orduño Reservoir, Project E-956
3. Amendment to Contract for Additional Engineering and Construction Support Services for CVWD's Well 2 and Related Facilities at Orduño Reservoir, Project E-956
4. Discussion - Preliminary Project Schedule – Update to 2007 CVWD Water Master Plan
5. Future Board Meeting Action Items – September 19, 2017
 - Advertisement for Bids – Emergency Electrical Generator at Wastewater Lift Station, Project S-962
 - Advertisement for Bids – 8-inch Water Main Replacement – 2700, 3000 & 3100 Blocks of Brookhill Ave, Project E-982
 - Award of Contract – Steel Reservoir Rehabilitation at Oak Creek #1 & #2 Reservoirs, Project E-970

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.

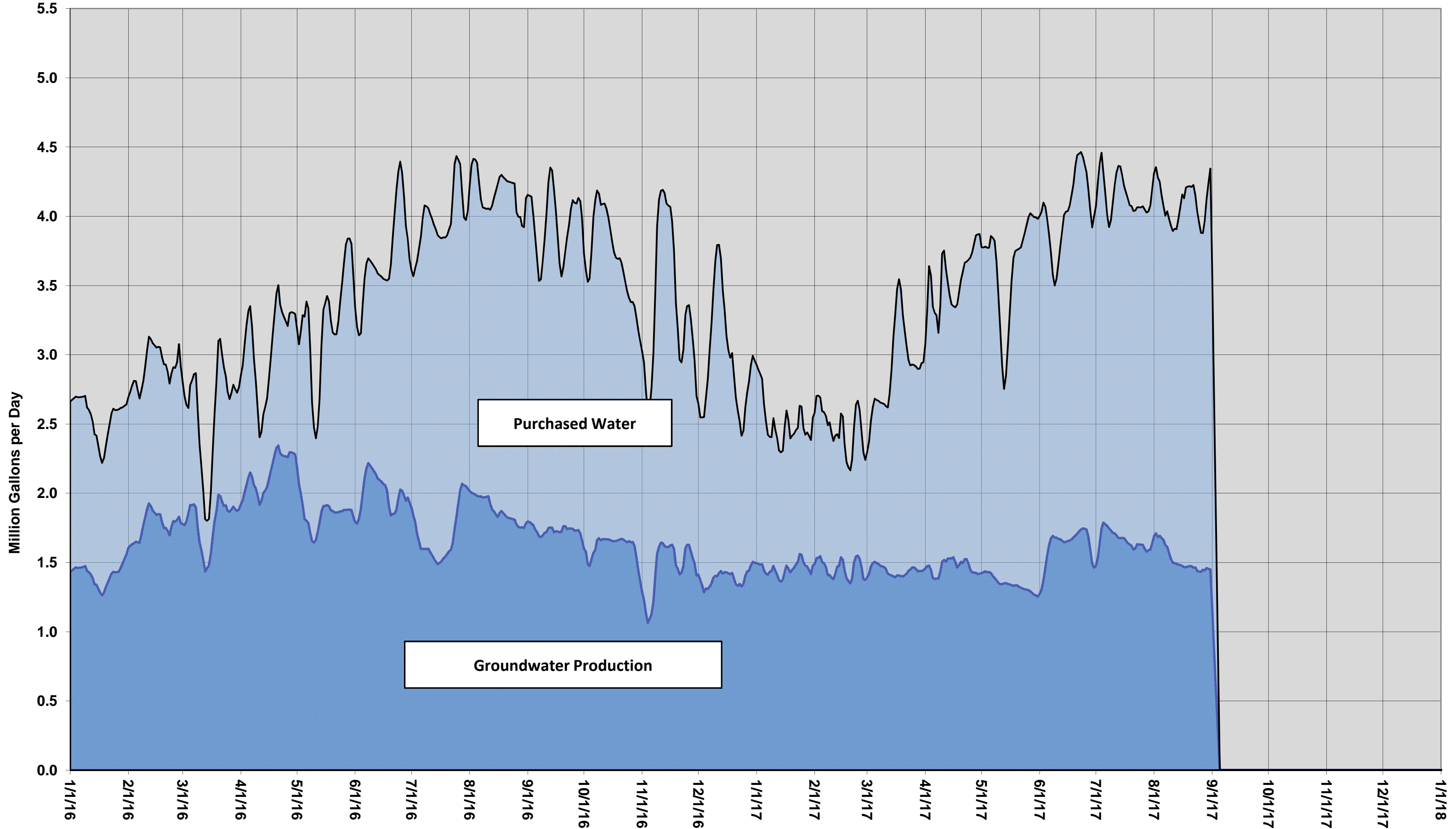
Committee Member's Request for Future Agenda Items

Next Engineering Committee Meeting – September 28, 2017

Adjournment

Water Production Chart 2016 - 2017

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



CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 2

September 5, 2017

To: Honorable President and Members of the Board of Directors

From: David S. Gould, P.E. – District Engineer

Subject: Award of Contract for the Construction of Well 2 and Related Facilities, Project E-956

INFORMATION ITEM:

CVWD's Well 2 and Related Facilities, Project E-956 – Consideration and motion to authorize the General Manager to award a contract to the lowest responsible bidder, California Building Evaluation & Construction, Inc. for the construction of Well 2 and related facilities at a cost of \$1,245,501 and establish a contingency amount of \$124,550 (10% of contract) to cover the cost of unforeseen or additional work.

BACKGROUND:

CVWD received a grant from the Department of Water Resources (DWR) to reactivate Well 2 and construct a new nitrate removal treatment facility. The project will utilize a local water resource, increase CVWD's ability to use its adjudicated rights within the Verdugo Basin, reduce CVWD's dependence on imported water from MWD and reduce nitrate levels within the Verdugo Basin.

The project includes installation of a new 150 gpm submersible pump and motor, onsite piping, a pre-fabricated operations building, electrical and telemetry system, on-site storm drain line, on-site sewer line drain to waste, and on-site improvements. The project also includes the installation of a nitrate removal treatment facility (by APTwater) within a pre-fabricated "carport-type" structure, which will treat the groundwater below the MCL and remove nitrates from the Verdugo Basin.

APTwater was awarded a contract on December 8, 2015 for the design and installation of the ARoNite Nitrate Removal Treatment System for Well 2 for a total cost of \$625,000.

Royal Wholesale Electric was awarded a contract on May 16, 2017 at a cost of \$98,547 to provide the electrical motor control center (MCC), which has a long lead-time and will assist with the project schedule.

DISCUSSION:

Bid Opening:

On July 11, 2017, the Board authorized the General Manager to advertise for bids for the subject project. A mandatory pre-bid meeting was held on August 8, 2017, which was attended by seven (7) contractors. CVWD specifications indicate that only contractors who attend this meeting are allowed to bid on the project.

On August 30, 2017, at 2:00 PM, the District opened and read the following bid proposals for this project:

| | <u>Bidder</u> | <u>Total Bid Amount</u> |
|-----|--|--------------------------------|
| Low | California Building Evaluation & Construction, Inc | \$1,245,501 |
| 2 | Pacific Hydrotech Corp. | \$1,472,240 |
| 3 | PPC Construction | \$1,599,130 |

California Building Evaluation & Construction (CBEC) of Buena Park, CA was the apparent lowest responsible bidder for the project. The engineer's estimate was \$907,300 and the low bid was \$338,501 or 37% higher than the engineer's estimate.

Staff has previously worked with CBEC on the construction of CVWD's Well 16 facility and the installation of the Motor Control Center (MCC) at Oak Creek Reservoir. Staff was satisfied with the progress of these projects and change orders were minimal.

The 2nd lowest bidder has raised questions regarding CBEC's bid proposal, legal counsel is reviewing the questions and will provide more information at the Board meeting.

Review – Bid Proposal:

Staff reviewed CBEC's bid proposal and cost breakdown and compared it to CVWD's cost estimate. In general, the engineer's cost estimate was low for the site preparation, on-site infrastructure, pipelines, building equipment, electrical temporary power, and the nitrate bldg roof structure. Where the engineer's estimate was high was on the installation of the electrical system and the pre-fabricated operations building.

Staff also looked at reducing the limits of work of the project and/or work that could be completed by CVWD's crews. However, the cost savings will be about \$60,000 to \$70,000 since the majority of work is specialized.

Staff contacted the contractors that did not provide a bid to ask why they did not bid on the project. The general response was that they currently had a backlog of projects and could not meet the District's deadline of May 2018.

Revised Project Cost and Funding:

The bid proposal from CBEC was \$1,245,501, which was over the engineer's cost estimate of \$907,000. The entire project costs including the contractor's bid proposal plus construction contingency, quality control inspection services, soils engineer, additional engineering and construction support services, permitting costs with Glendale, procurement of equipment and contingencies has been adjusted to \$2,522,000. The current project budget is \$2,025,000, which is \$462,000 less than required to complete the project.

Staff reviewed the FY 17/18 CIP program to see if any other projects could be deferred to next year and determined that deferring of projects especially pipeline replacement will not be in the best interest of the District.

As an alternative, staff is recommending transferring \$500,000 from the MTBE reserve funds to make up the budget shortfall. Staff's reasoning is that if MTBE returns, it will most likely be detected in the existing wells along the southerly part of the basin and not in the area of Well 2. The balance in the MTBE reserve fund as of July 1, 2017 was \$5.8M and this transfer request will reduce the MTBE reserve to \$5.3M. Staff evaluated the potential cost of purchasing additional imported water if MTBE levels increased above the secondary standard of 5 ppb. Staff evaluation concluded that CVWD would need about \$3.7M for the purchase of additional imported water and that the transfer of MTBE funds should not adversely affect the District.

A comprehensive technical/financial analysis of the long-term MTBE reserve fund needs will be presented to the Engineering and Finance Committees in October 2017.

Local Resources Program (LRP) funding:

Staff discussed the Local Resources Program (LRP) funding application with a representative from Metropolitan Water District (MWD) and it was determined that CVWD does not qualify for LRP since the project unit cost is less than the MWD prevailing water rate.

Cost/Benefit Analysis:

The original benefit-cost analysis prepared by staff with respect to annual savings for purchasing less imported water showed a payback period of 7 years for CVWD's capital investment. Staff adjusted the benefit-cost analysis with the revised total budget and it showed a payback period of 11 years.

RECOMMENDATION:

It is staff's recommendation to award the contract for the subject project to the lowest responsible bidder, California Building Evaluation & Construction at a cost of \$1,245,501 and establish a 10% contingency fund of \$124,550. It is also staff's recommendation to transfer \$500,000 from the MTBE reserve fund to provide the additional funding need for the project.

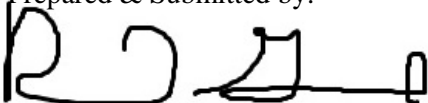
ENVIRONMENTAL REVIEW:

A California Environmental Quality Act (CEQA) Negative Declaration was approved on October 6, 2015.

FUNDING AVAILABILITY:

| Account Description | Grant Cost Breakdown |
|---|-----------------------------|
| Greater Los Angeles County IRWM 2015 Solicitation Implementation Grant | \$1,825,000 |
| <i>Amount reimbursed from Grant (39%)</i> | <i>\$705,775</i> |
| <i>CVWD Costs (61%)</i> | <i>\$1,119,225</i> |
| Breakdown of Project Costs | |
| Approved Contract – SA Associated - Engineering Services | (\$197,000) |
| Approved Contract – APTwater for ARoNite Nitrate Treatment System | (\$625,000) |
| Approved Contract – Royal Wholesale Electric for MCC & Switch Board | (\$98,547) |
| Contractor's Bid Proposal – Well 2 Facilities | (\$1,245,501) |
| 10% Contingency | (\$124,550) |
| Quality Control Inspection Services | (\$141,475) |
| Estimate Cost – Soil Inspection, Permitting Fees, construction staking, and Misc work | (\$89,927) |
| Total Estimated Cost for Design & Construction | (\$2,522,000) |
| Amount Remaining for Well 2 Project | (\$697,000) |
| Transfer of funds from Pipeline Replacement (Move the replacement of the pipeline on 3200 & 3300 Blocks of Brookhill to FY 18/19) | \$235,000 |
| Transfer of Funds from CVWD's MTBE Reserves | \$500,000 |
| Remaining Funds | \$38,000 |

Prepared & Submitted by:



David S. Gould, P.E.
 District Engineer

Attachments:

1. Bid Summary

CRESCENTA VALLEY WATER DISTRICT

Title: Well 2 and Related Facilities at 4029 Lowell Ave

BID LOCATION:

CVWD's Office

E-Job No: Project E-956

E-972

TIME:

2:00 PM

Engineer's Estimate:

\$907,000

DATE:

8/30/17

Project Manager:

David Gould

BY:

DG

CHECKED:

JR

DATE:

8/30/17

| ITEM | DESCRIPTION | QUANTITY | | Engineers Estimate | | California Bldg Eval Const | | Pacific Hydrotech | | PPC Construction | |
|------|--|----------|----|--------------------|--------------|----------------------------|----------------|-------------------|----------------|------------------|----------------|
| | | | | UNIT | AMOUNT | UNIT | AMOUNT | UNIT | AMOUNT | UNIT | AMOUNT |
| 1 | Mobilization and Demobilization (5%) | 1 | LS | \$45,000.00 | \$45,000.00 | \$50,000.00 | \$50,000.00 | \$71,000.00 | \$71,000.00 | \$78,000.00 | \$78,000.00 |
| 2 | Site Preparation | 1 | LS | \$27,000.00 | \$27,000.00 | \$65,000.00 | \$65,000.00 | \$23,200.00 | \$23,200.00 | \$28,320.00 | \$28,320.00 |
| 3 | Earthworks (Grading) | 1 | LS | \$21,000.00 | \$21,000.00 | \$28,000.00 | \$28,000.00 | \$40,000.00 | \$40,000.00 | \$61,530.00 | \$61,530.00 |
| 4 | On Site AC Paving | 7100 | SF | \$3.86 | \$27,400.00 | \$6.25 | \$44,375.00 | \$6.00 | \$42,600.00 | \$6.60 | \$46,860.00 |
| 5 | On Site Concrete Paving | 320 | SF | \$15.16 | \$4,850.00 | \$20.15 | \$6,448.00 | \$19.00 | \$6,080.00 | \$15.00 | \$4,800.00 |
| 6 | Furnish and install Concrete Swale | 110 | LF | \$75.00 | \$8,250.00 | \$33.60 | \$3,696.00 | \$55.00 | \$6,050.00 | \$60.00 | \$6,600.00 |
| 7 | Furnish and install 6" AC berm | 100 | LF | \$15.00 | \$1,500.00 | \$30.80 | \$3,080.00 | \$36.00 | \$3,600.00 | \$25.00 | \$2,500.00 |
| 8 | 1-inch Water Service with backflow device, valves, meter & | 1 | LS | \$5,000.00 | \$5,000.00 | \$21,000.00 | \$21,000.00 | \$6,900.00 | \$6,900.00 | \$14,145.00 | \$14,145.00 |
| 9 | 12-inch PVC Storm Drain with catch basins, connections & | 270 | LF | \$177.78 | \$48,000.00 | \$229.60 | \$61,992.00 | \$228.00 | \$61,560.00 | \$272.00 | \$73,440.00 |
| 10 | Furnish & install 4" ABS sewer include excavation, backfill | 20 | LF | \$75.00 | \$1,500.00 | \$123.00 | \$2,460.00 | \$83.00 | \$1,660.00 | \$125.00 | \$2,500.00 |
| 11 | Furnish & install 6" ABS sewer including cleanouts, manholes | 185 | LF | \$216.22 | \$40,000.00 | \$308.00 | \$56,980.00 | \$128.00 | \$23,680.00 | \$289.00 | \$53,465.00 |
| 12 | Furnish & install Polycast Heavy Duty Sewer trench with g | 50 | LF | \$92.00 | \$4,600.00 | \$84.00 | \$4,200.00 | \$435.00 | \$21,750.00 | \$195.00 | \$9,750.00 |
| 13 | Furnish and install 6" Magmeter including Vault & appurte | 1 | EA | \$11,500.00 | \$11,500.00 | \$28,000.00 | \$28,000.00 | \$22,900.00 | \$22,900.00 | \$19,070.00 | \$19,070.00 |
| 14 | Furnish & install 36" RCP (manhole) with grate and inner c | 1 | EA | \$5,500.00 | \$5,500.00 | \$16,800.00 | \$16,800.00 | \$9,000.00 | \$9,000.00 | \$9,670.00 | \$9,670.00 |
| 15 | Furnish & install 150 gpm Submersible Well Pump with ap | 1 | LS | \$22,000.00 | \$22,000.00 | \$36,000.00 | \$36,000.00 | \$31,700.00 | \$31,700.00 | \$29,930.00 | \$29,930.00 |
| 16 | Furnish & install above ground 4-inch steel discharge pipin | 1 | LS | \$26,000.00 | \$26,000.00 | \$33,000.00 | \$33,000.00 | \$40,000.00 | \$40,000.00 | \$23,200.00 | \$23,200.00 |
| 17 | Furnish & install 4-inch Steel Well Bypass Piping includin | 1 | LS | \$7,500.00 | \$7,500.00 | \$20,000.00 | \$20,000.00 | \$21,100.00 | \$21,100.00 | \$17,800.00 | \$17,800.00 |
| 18 | Furnish & install 4-inch Steel Pipe from Nitrate Bldg to Ex | 20 | LF | \$250.00 | \$5,000.00 | \$750.00 | \$15,000.00 | \$509.00 | \$10,180.00 | \$731.00 | \$14,620.00 |
| 19 | Furnish & install 6-inch Steel Water Pipe, including fitting | 90 | LF | \$111.11 | \$10,000.00 | \$775.00 | \$69,750.00 | \$267.00 | \$24,030.00 | \$296.00 | \$26,640.00 |
| 20 | Install Concrete Foundation for Nitrate Bldg including exc | 1 | LS | \$20,000.00 | \$20,000.00 | \$36,000.00 | \$36,000.00 | \$68,000.00 | \$68,000.00 | \$60,250.00 | \$60,250.00 |
| 21 | Install 6-foot high chain link around Nitrate Bldg includin | 90 | LF | \$133.33 | \$12,000.00 | \$28.00 | \$2,520.00 | \$169.00 | \$15,210.00 | \$200.00 | \$18,000.00 |
| 22 | Contractor to coordinate, delivery and unload ARoNite Nit | 1 | LS | \$15,000.00 | \$15,000.00 | \$18,500.00 | \$18,500.00 | \$8,800.00 | \$8,800.00 | \$33,150.00 | \$33,150.00 |
| 23 | Install Concrete Foundations for Operations Bldg includin | 1 | LS | \$25,000.00 | \$25,000.00 | \$25,000.00 | \$25,000.00 | \$90,000.00 | \$90,000.00 | \$46,350.00 | \$46,350.00 |
| 24 | Furnish & install equipment for Chlorine Room including c | 1 | LS | \$25,000.00 | \$25,000.00 | \$28,000.00 | \$28,000.00 | \$13,600.00 | \$13,600.00 | \$11,700.00 | \$11,700.00 |
| 25 | Furnish & install 1-inch Schedule 80 PVC socket welded c | 160 | LF | \$55.00 | \$8,800.00 | \$22.50 | \$3,600.00 | \$84.00 | \$13,440.00 | \$89.00 | \$14,240.00 |
| 26 | Furnish & install Operations Building's ventilation, Restroc | 1 | LS | \$35,000.00 | \$35,000.00 | \$64,500.00 | \$64,500.00 | \$31,100.00 | \$31,100.00 | \$15,000.00 | \$15,000.00 |
| 27 | Furnish & install Electrical Transformer pad (15' x 15' x 8" | 1 | LS | \$13,000.00 | \$13,000.00 | \$14,500.00 | \$14,500.00 | \$15,200.00 | \$15,200.00 | \$12,250.00 | \$12,250.00 |
| 28 | Furnish & install Electrical Conduit, Junction Boxes and T | 1 | LS | \$37,000.00 | \$37,000.00 | \$7,000.00 | \$7,000.00 | \$17,800.00 | \$17,800.00 | \$26,800.00 | \$26,800.00 |
| 29 | Furnish & install Retaining Concrete Wall including excava | 1 | LS | \$48,000.00 | \$48,000.00 | \$48,000.00 | \$48,000.00 | \$77,200.00 | \$77,200.00 | \$91,840.00 | \$91,840.00 |
| 30 | Furnish and install automatic chain link swing gate includi | 1 | LS | \$10,000.00 | \$10,000.00 | \$10,500.00 | \$10,500.00 | \$21,800.00 | \$21,800.00 | \$24,840.00 | \$24,840.00 |
| 31 | Miscellaneous: include install H2 Generator and Air Comp | 1 | LS | \$4,000.00 | \$4,000.00 | \$22,500.00 | \$22,500.00 | \$9,100.00 | \$9,100.00 | \$21,250.00 | \$21,250.00 |
| 32 | Miscellaneous items include Solid metal plaque with prop | 1 | LS | \$1,000.00 | \$1,000.00 | \$11,200.00 | \$11,200.00 | \$6,000.00 | \$6,000.00 | \$900.00 | \$900.00 |
| 33 | Demolition - Electrical | 1 | LS | \$7,600.00 | \$7,600.00 | \$15,000.00 | \$15,000.00 | \$2,400.00 | \$2,400.00 | \$6,400.00 | \$6,400.00 |
| 34 | Motor Control Center and Switchboard (Labor only) | 1 | LS | \$25,000.00 | \$25,000.00 | \$8,500.00 | \$8,500.00 | \$14,700.00 | \$14,700.00 | \$11,100.00 | \$11,100.00 |
| 35 | Temporary Power and Controls | 1 | LS | \$22,000.00 | \$22,000.00 | \$40,000.00 | \$40,000.00 | \$46,000.00 | \$46,000.00 | \$49,730.00 | \$49,730.00 |
| 36 | Power Distribution & Lighting | 1 | LS | \$15,000.00 | \$15,000.00 | \$58,000.00 | \$58,000.00 | \$79,000.00 | \$79,000.00 | \$72,500.00 | \$72,500.00 |
| 37 | Conduits and Wires | 1 | LS | \$20,000.00 | \$20,000.00 | \$14,000.00 | \$14,000.00 | \$69,000.00 | \$69,000.00 | \$51,300.00 | \$51,300.00 |
| 38 | Other Electrical labor and Miscellaneous Materials | 1 | LS | \$8,000.00 | \$8,000.00 | \$22,400.00 | \$22,400.00 | \$12,700.00 | \$12,700.00 | \$15,700.00 | \$15,700.00 |
| 39 | Start-Up & Testing, Manuals, and Training | 1 | LS | \$6,000.00 | \$6,000.00 | \$10,000.00 | \$10,000.00 | \$8,200.00 | \$8,200.00 | \$7,000.00 | \$7,000.00 |
| 40 | Furnish and Install Pre-fabricated carport style structure for | 1 | LS | \$28,000.00 | \$28,000.00 | \$55,000.00 | \$55,000.00 | \$52,300.00 | \$52,300.00 | \$48,600.00 | \$48,600.00 |
| 41 | Furnish and Install Pre-fabrication Operations Building | 1 | LS | \$200,000.00 | \$200,000.00 | \$165,000.00 | \$165,000.00 | \$333,700.00 | \$333,700.00 | \$437,390.00 | \$437,390.00 |
| | | | | | | | | | | | |
| | | | | EE | \$907,000.00 | LOW | \$1,245,501.00 | 2ND | \$1,472,240.00 | 3RD | \$1,599,130.00 |

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 3
September 5, 2017

To: Honorable President and Members of the Board of Directors
From: David S. Gould, P.E. – District Engineer
Subject: **Amendment No. 1 for Additional Engineering and Construction Support Services for CVWD's Well 2 and Related Facilities at Ordunio Reservoir, Project E-956**

INFORMATION ITEM

CVWD's Well 2 and Related Facilities at Ordunio Reservoir, Project E-956 – Consideration and motion to authorize the General Manager to amend the existing professional service agreement with SA Associates, Inc. to provide additional engineering services and construction support services for CVWD's Well 2 and related facilities at Ordunio Reservoir for a not-to-exceed cost of \$71,600.

BACKGROUND:

CVWD received a grant from the Department of Water Resources (DWR) to reactivate Well 2 and construct a new nitrate removal treatment facility. The project will utilize a local water resource, increase CVWD's ability to use its adjudicated rights within the Verdugo Basin, reduce CVWD's dependence on imported water from MWD and reduce nitrate levels within the Verdugo Basin.

In October 2015, SA Associates (SA) was awarded a professional service agreement (PSA) for the design of CVWD's Well 2 and Related Facilities at a cost of \$114,000 with a contingency amount of \$11,400 to cover the cost of additional work.

SA Associates completed the design services and prepared bid documents. The project was advertised for contractor bids in July 2017.

DISCUSSION:

Additional Engineering Services:

SA was involved in a number of changes that CVWD initiated during the design process including preparing plans and specifications for pre-ordering of the electrical motor control center, specifying pre-fabricated buildings, re-locating the buildings to better fit the site which resulted in retaining walls to protect the existing trees, new automatic entrance gate, and coordination of the AroNite nitrate treatment removal system.

Staff had included in the PSA, a contingency amount of \$11,400 to cover any additional costs that may have occurred during the design process. Staff requested a fee adjustment letter from SA for the additional work requested. SA's adjustment letter request was for a total of \$46,000. Staff reviewed the request and determined that the time spent and the corresponding fee was reasonable for the additional work requested. The amount requested as part of Amendment No. 1 to the agreement is \$34,600.

Construction Support Services:

Staff requested a proposal from SA to provide construction support services during the construction of CVWD's Well 2 and Related Facilities. The scope of services included:

- Attending pre-Construction meeting
- Review of shop drawings, which is estimated to be twenty-five (25) submittals
- Response to requests for information and requests for clarification from the contractor which will occur during project
- Review of change orders (if requested by staff)
- Field visits to site including for testing and installation of electrical system, confirm material delivered to site such as pump, chemical system, building and review of site improvements.
- Attendance at meetings with staff and contractor that require input from SA
- Assisting staff with the startup (i.e. electrical) and commission of project
- Preparing As-Built drawings based on redline markups drawings from the contractor

SA provided a proposal to provide the construction support services as discussed above a cost not-to-exceed of \$37,000.

RECOMMENDATION:

Staff recommendation is to amend the existing professional service agreement with SA Associates, Inc. to provide additional engineering services and construction support services for CVWD's Well 2 and related facilities at Ordunio Reservoir for a not-to-exceed cost of \$71,600.

ENVIRONMENTAL REVIEW:

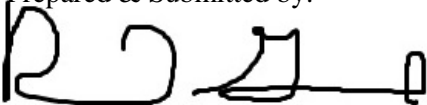
N/A

FUNDING AVAILABILITY:

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

| Account Description | Grant Cost Breakdown |
|---|-----------------------------|
| Greater Los Angeles County IRWM 2015 Solicitation Implementation Grant | \$1,825,000 |
| <i>Amount reimbursed from Grant (39%)</i> | <i>\$705,775</i> |
| <i>CVWD Costs (61%)</i> | <i>\$1,119,225</i> |
| Breakdown of Project Costs | |
| Approved Contract – SA Associated - Engineering Services | (\$125,400) |
| Additional Engineering & Construction Support Services | (\$71,600) |
| Approved Contract – APTwater for ARoNite Nitrate Treatment System | (\$625,000) |
| Approved Contract – Royal Wholesale Electric for MCC & Switch Board | (\$98,547) |
| Contractor's Bid Proposal – Well 2 Facilities | (\$1,245,501) |
| 10% Contingency | (\$124,550) |
| Quality Control Inspection Services | (\$141,475) |
| Estimate Cost – Soil Inspection, Permitting Fees, construction staking, and Misc work | (\$89,927) |
| Total Estimated Cost for Design & Construction | (\$2,522,000) |
| Amount Remaining for Well 2 Project | (\$697,000) |
| Transfer of funds from Pipeline Replacement (Move the replacement of the pipeline on 3200 & 3300 Blocks of Brookhill to FY 18/19) | \$235,000 |
| Transfer of Funds from CVWD's MTBE Reserves | \$500,000 |
| Remaining Funds | \$38,000 |

Prepared & Submitted by:



David S. Gould, P.E.
District Engineer

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 4
September 5, 2017

To: Engineering Committee
From: David S. Gould, P.E. – District Engineer
Subject: Preliminary Project Schedule – Update to 2007 CVWD Water Master Plan

INFORMATION ITEM:

Discussion - Preliminary Project Schedule – Update to 2007 CVWD Water Master Plan

BACKGROUND:

At the August 15, 2017 Engineering Committee meeting, Director Putnam discussed the 2007 Water Master Plan (WMP) and if staff intends to update the WMP within the next year. Director Putnam's concerns were that the 2007 WMP did not address the recent drought conditions relative to reduced water demands and updating future water demands based on the last 10 years of water demand data.

Staff indicated that an updated WMP was included in the FY 18/19 administrative consultants' budget and will provide a preliminary schedule and estimated cost at the next Engineering Committee meeting.

The 2007 Water Master Plan prepared by Civiltec Engineering was an update of the 1994 Water Master Plan. Civiltec started the work in December 2004 and completed it in September 2007. The scope of work included the following:

- Planning of future capital improvements
- Projected future water demands for year 2010, 2015 & 2020
- Future water production strategies
- Future water supplies
- Additional water storage
- Improvements to the existing booster pump system
- Future water quality issues
- Financial/budget considerations.

The 2007 WMP created a new water distribution model using H₂O_{Net} including inputting the existing water pipelines through GIS. The 2007 WMP used 2004 water demands for the analysis and that was the basis for the recommendations.

The initial cost for the 2007 WMP was \$220,420 and the scope of work increased as more information was needed to complete the WMP, which included additional study of water surge in the system, detailed land use study, calibrating model versus SCADA information that amounting to a final cost of \$312,240.

DISCUSSION:

Preliminary Project Schedule:

Staff has prepared a preliminary project schedule for the 2019 Water Master Plan as shown in Exhibit "A". The scope of work for the 2019 WMP will need to be updated and possibly include a study for a new reservoir and distribution system for the north end of Ocean View Blvd, water age using chlorine residual analysis, conversion of chlorine to chloramination, water surge analysis and subjects that have been previously discussed at the Engineer Committee and at Board Meetings. The major milestone dates from the project schedule are shown below:

- 12/7/17 Review Scope of Work and Request for Proposal with Engineering Committee
- 02/6/18 Award consultant contract
- 06/19/18 50% Preliminary 2019 WMP Report
- 12/1/18 100% 2019 WMP Report
- 03/19/19 Final Report

The goal for the 2019 WMP will be to complete the report and provide recommendations for capital improvement project in FY 19/20 water budget and for the next 10-years.

Preliminary Cost Estimate:

The project cost for the 2007 WMP was \$312,240, which included creating the water distribution model and GIS mapping of the water distribution system. The updated WMP will be able to utilize these as the basis for updating the model, so there may be some cost savings by not having to re-creating the hydraulic model.

Staff has included the 2019 WMP as a study in the FY 18/19 water budget under Administrative Consultants, which also could include the surge analysis study and chlorine/THM Study for a total preliminary cost shown of \$205,000 (See Exhibit B). However, after reviewing the 2007 WMP costs, the estimate costs shown appears not to be sufficient to complete the study.

Staff reviewed the preliminary cost again and estimated that the 2019 WMP will cost between \$400,000 and \$450,000 based on an estimated increase in consultant hourly rates after reviewing the 2004 proposals.

Options for 2019 WMP:

Option1: Proceed with the preparation of the updated 2019 WMP per the project schedule:

- Prepare the Request for Proposal
- Send out to Consultants
- Award Contract
- Obtain data information
- Dedicate one FTE to work with Consultant
- Complete the 50% preliminary report by June 2018
- Estimated cost for FY 17/18 - \$160,000
- Defer the Cathodic Protection Inspection & Study - \$36,510
- Increase the FY 17/18 Administrative Consultants from \$131,000 to \$254,490
- Complete the Final Report by March 2019
- Increase the FY 18/19 Administrative Consultants from \$265,000 to \$350,000

Option2: Determine scope of work in Phases and complete over 2-year period:

- Review 2004 WMP scope of work
- Prepare preliminary scope of work
- Break major tasks into phases and prepare scope
- Prepare an updated project schedule
- Review scope and cost at a future Engineering Committee meeting

RECOMMENDATION:

Staff recommends Option 2, which will allow staff to create the 2019 WMP scope of work in a timely fashion and provide for proper budgeting of funds for it.

ENVIRONMENTAL REVIEW:

N/A

FUNDING AVAILABILITY:

N/A

Prepared & Submitted by:



David S. Gould, P.E.
District Engineer

Attachments:

1. Exhibit A - 2019 Water Master Plan preliminary project schedule
2. Exhibit B - Administrative Consultants summary

Preliminary Schedule - 2019 Water Master Plan

| Task | Start Date | End Date | Days | Comments |
|--|------------------|------------------|-----------|---------------------------|
| Prepare Request for Proposal | 10/19/17 | 12/3/17 | 45 | |
| Staff Report | 12/3/17 | 12/5/17 | 2 | |
| Engineering Committee | 12/5/17 | 12/7/17 | 2 | Review RFP |
| Proposal Due | 12/7/17 | 1/27/18 | 51 | |
| Staff Report | 1/27/18 | 1/29/18 | 2 | |
| Engineering Committee | 1/29/18 | 1/31/18 | 2 | Consultant Ranking |
| Staff Report | 1/31/18 | 2/2/18 | 2 | |
| Board Meeting - Award of Contract | 2/2/18 | 2/6/18 | 4 | |
| Kickoff Meeting | 2/6/18 | 2/20/18 | 14 | |
| Data Request to CVWD | 2/20/18 | 3/6/18 | 14 | |
| Receive Data Request from CVWD | 3/6/2018 | 5/5/2018 | 60 | |
| 50% Preliminary Report Memo Submittal | 5/5/2018 | 6/19/2018 | 45 | |
| CVWD Comments - 50% Preliminary Report Memo | 6/19/2018 | 7/4/2018 | 15 | |
| 90% Report Submittal | 7/4/2018 | 10/2/2018 | 90 | |
| CVWD Comments - 90% Report | 10/2/2018 | 11/1/2018 | 30 | |
| 100% Report Submittal | 11/1/2018 | 12/1/2018 | 30 | |
| CVWD Comments - 100% Report | 12/1/2018 | 1/15/2019 | 45 | |
| Final Report | 1/15/2019 | 2/25/2019 | 41 | |
| Staff Report | 2/25/2019 | 2/27/2019 | 2 | |
| Engineering Committee | 2/27/2019 | 3/13/2019 | 14 | Review Report |
| Staff Report | 3/13/2019 | 3/15/2019 | 2 | |
| Board - Accept 2020 Water Master Plan | 3/15/2019 | 3/19/2019 | 4 | |

Goal - Complete 2019 Water Master Plan before FY 19/20 Preliminary CIP Budget in March 2019

| FY 17/18 Administration Consultants | | | |
|--|------------------|-----------------|------------------|
| Project Name | Water | Sewer | Total |
| GIS - Update | \$5,000 | \$5,000 | \$10,000 |
| Reservoir Site Topo Boundary Survey | \$0 | \$0 | \$0 |
| Grant Admin | \$30,000 | \$0 | \$30,000 |
| Grant Stormwater Recharge Project | \$20,000 | \$0 | \$20,000 |
| Chlorine/Chloramination Study | \$0 | \$0 | \$0 |
| Wastewater Master Plan | \$0 | \$45,000 | \$45,000 |
| Pressure Reducing Station Study | \$0 | \$0 | \$0 |
| Cathodic Protection Inspection & Study | \$36,510 | \$0 | \$36,510 |
| Source Water Protection Plan | \$39,490 | \$0 | \$39,490 |
| Total | \$131,000 | \$50,000 | \$181,000 |
| FY 18/19 Administration Consultants | | | |
| Project Name | Water | Sewer | Total |
| GIS - Update | \$5,000 | \$5,000 | \$10,000 |
| Reservoir Site Topo Boundary Survey | \$10,000 | \$0 | \$10,000 |
| Hydraulic Study | \$20,000 | \$0 | \$20,000 |
| Grant Proposals | \$25,000 | \$0 | \$25,000 |
| Water Master Plan Update | \$125,000 | \$0 | \$125,000 |
| Surge Analysis Study | \$45,000 | \$0 | \$45,000 |
| Water Quality - Chlorine/THM Study | \$35,000 | \$0 | \$35,000 |
| Total | \$265,000 | \$5,000 | \$270,000 |
| FY 19/20 Administration Consultants | | | |
| Project Name | Water | Sewer | Total |
| GIS - Update | \$5,000 | \$5,000 | \$10,000 |
| Reservoir Site Topo Boundary Survey | \$12,500 | \$0 | \$12,500 |
| Grant Proposals | \$25,000 | \$0 | \$25,000 |
| Reservoir Water Quality & Mixing System Study | \$35,000 | \$0 | \$35,000 |
| Reservoir Interior/Exterior Coating Inspection | \$25,000 | \$0 | \$25,000 |
| Fixed Asset Study | \$10,000 | \$10,000 | \$20,000 |
| Total | \$112,500 | \$15,000 | \$127,500 |
| FY 20/21 Administration Consultants | | | |
| Project Name | Water | Sewer | Total |
| GIS - Update | \$5,000 | \$5,000 | \$10,000 |
| Reservoir Site Topo Boundary Survey | \$15,000 | \$0 | \$15,000 |
| Hydraulic Study | \$10,000 | \$0 | \$10,000 |
| Grant Proposals | \$35,000 | \$0 | \$35,000 |
| CMMS Study | \$20,000 | \$20,000 | \$40,000 |
| Bench-Marking Study | \$20,000 | \$20,000 | \$40,000 |
| LAFCO/Overlap Area Study with GWP | \$20,000 | \$20,000 | \$40,000 |
| Total | \$125,000 | \$65,000 | \$190,000 |

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 5
September 5, 2017

To: Engineering Committee
From: David S. Gould, P.E. – District Engineer
Subject: Discussion of Future Board Meeting Action Items

INFORMATION ITEM:

Future Board Meeting Action Items – September 19, 2017

- Advertisement for Bids – Emergency Electrical Generator at Wastewater Lift Station, Project S-962
- Advertisement for Bids – 8-inch Water Main Replacement – 2700, 3000 & 3100 Blocks of Brookhill Ave, Project E-982
- Award of Contract – Steel Reservoir Rehabilitation at Oak Creek #1 & #2 Reservoirs, Project E-970

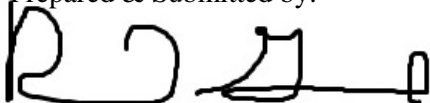
BACKGROUND:

Staff has three (3) projects that will be placed on the September 19, 2017 Board Meeting agenda for approval. The next Engineering Committee meeting is schedule for September 28, 2017 and therefore to meet the CIP project schedule, Staff would like to briefly describe each project before the next Engineering Committee meeting.

DISCUSSION:

1. Advertisement for Bids – Emergency Electrical Generator at Wastewater Lift Station, Project S-962
 - The project design is 90% complete
 - Engineer's Cost Estimate - \$72,000
 - Project Schedule
 - 9/19/17 – Advertise for Bid
 - 10/17/17 – Award Contract
 - 12/4/17 – Mobilization
 - 2/2/18 – Complete Project
2. Advertisement for Bids – 8-inch Water Main Replacement – 2700, 3000 & 3100 Blocks of Brookhill Ave, Project E-982
 - The project design is 90% complete
 - Engineer's Cost Estimate - \$615,000
 - Project Schedule
 - 9/19/17 – Advertise for Bid
 - 10/17/17 – Award Contract
 - 11/13/17 – Mobilization
 - 3/2/18 – Complete Project
3. Award of Contract – Steel Reservoir Rehabilitation at Oak Creek #1 & #2 Reservoirs, Project E-970
 - Engineer's Cost Estimate - \$688,000
 - Project Schedule
 - 9/13/17 - Bid Opening
 - 11/6/17 – Mobilization – Oak Creek #1
 - 2/26/18 – Mobilization – Oak Creek #2
 - 6/5/18 – Complete Project

Prepared & Submitted by:



David S. Gould, P.E.
District Engineer