

CRESCENTA VALLEY WATER DISTRICT

2700 Foothill Boulevard
La Crescenta, California

Agenda for the
Regular Meeting of the Board of Directors
of the Crescenta Valley Water District
to be held on October 7, 2014 at 6:00 p.m.

Posted: October 3, 2014 at 3:00 p.m.

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

Call to Order and Determination of Quorum

Pledge of Allegiance

Adoption of Agenda

Closed Session

- Public Employee Appointment (§54957)
 - Title: General Manager
- Conference with Legal Counsel
 - Initiation of litigation pursuant to paragraph (4) of subdivision (d) of Section 54956.9: One case.

Public Comments

At this time the public shall have an opportunity to comment on any non-agenda item relevant to the subject matter jurisdiction of the Board. This opportunity is non-transferable and speakers are limited to one three (3) minute comment.

Foothill Municipal Water District Report

1. Report on activities at Foothill Municipal Water District.

Consent Calendar

1. Consideration and approval of the Minutes of the Adjourned Regular Meeting on September 23, 2014.

Action Calendar

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

1. Discussion of Board Vacancy – Discussion and possible motion regarding procedure for filling the pending vacancy on the Board of Directors.
2. Resolution No. 720 – Consideration and motion to adopt Resolution No. 720 supporting Proposition 1 – The Water Quality, Supply and Infrastructure Improvement Act of 2014.
3. Permission to Fill a Pending Staff Vacancy – Consideration and motion to authorize the General Manager to begin the process to fill a pending staff vacancy due to retirement.

4. **Replacement of Motor Control Center at Oak Creek Reservoir, Project E-931** – Consideration and motion to authorize the General Manager to advertise for bids for the replacement of the motor control center at Oak Creek Reservoir with an engineer's estimate for construction of \$293,700 and to find said project exempt from the provisions of the California Environmental Quality Act (CEQA).
5. **Ocean View Reservoir Overflow/Drain Pipe, Project M-934** – Discussion of the replacement of overflow/drain pipe for Ocean View Reservoir.
6. **AC Pavement Replacement on Ocean View Blvd., Project M-934** - Consideration and motion to authorize the General Manager to advertise for bids for the replacement of the AC pavement on Ocean View Blvd with an engineer's estimate for construction of \$58,300 and to find said project exempt from the provisions of the California Environmental Quality Act (CEQA).
7. **Discussion on Draft Agreement with Glendale Water and Power on the Rockhaven Well Project, Project E-940** – Discussion on Draft Agreement for the proposed Rockhaven Well, Project E-940.

Information Items

Written Communications to District

Staff Reports

Secretary-Treasurer

1. Cash and Investments –October 7, 2014.

General Manager

1. Administrative Report.

District Engineer

1. Water Production Report – September 2014.
2. Report on Administrative and Field Operations.

Program Specialist

1. Report of Water Conservation issues.

Information Technology

1. Report of Information Technology issues.

Attorney

1. Report on legal and related matters relevant to the District.

Reports of Committees

Engineering Committee

1. Report of Engineering Committee meeting held on October 3, 2014.

Finance Committee

1. Consideration of financial issues affecting the District.

Employee Relations Committee

1. Consideration of employee relations issues affecting the District.

Policy Committee

1. Consideration of policy issues affecting the District.

Community Relations/Water Conservation Committee

1. Consideration of community/water conservation issues affecting the District.

Emergency Planning Committee

1. Consideration of emergency planning issues affecting the District.

Director's Oral Reports

Report on issues, meetings, or activities attended by Directors.

Board Members' Request for Future Agenda Items

Adjournment

CRESCENTA VALLEY WATER DISTRICT
ADJOURNED REGULAR MEETING, BOARD OF DIRECTORS
September 23, 2014

Pursuant to the order of the Board of Directors of the Crescenta Valley Water District, made at the Regular Meeting of September 9, 2014, an Adjourned Regular Meeting was held on September 23, 2014, at 7:00 p.m. at the District office at 2700 Foothill Blvd., La Crescenta, California, with President James D. Bodnar presiding.

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

Directors:

James D. Bodnar
Kerry D. Erickson
Kenneth R. Putnam
Kathleen M. Ross
Judy L. Tejeda

Attorney:

Thomas S. Bunn

General Manager:

Dennis Erdman

Secretary-Treasurer:

Ron L. Mitchell

District Engineer:

David S. Gould

Others Present:

Mark Hass, IT Manager
Wendy Holloway, Customer Accounts Supervisor
Christy Scott, Program Specialist
Larry Byers, Superintendent
Bryan Jones, Construction Supervisor

PLEDGE OF ALLEGIANCE

President Bodnar opened the meeting by leading the Board and staff in reciting the Pledge of Allegiance.

ADOPTION OF AGENDA

It was moved by Director Ross, seconded by Director Erickson and carried by a 5-0 vote that the Agenda for the Adjourned Regular Meeting of September 23, 2014 be adopted as presented.

PUBLIC COMMENT – None

FOOTHILL MUNICIPAL WATER DISTRICT REPORT – Mr. Atwater, FMWD Board President welcomed Kathy Ross to the FMWD Board. He reported that at the Board Meeting on September 22, 2014, the City of Pasadena is working on an EIR document for a recycled water project. He congratulated CVWD for their turf rebate program and said that MWD is up to \$100 million in rebates. This fall, starting in October, MWD will be discussing the 10 year contract for the rate structure. Also, Diamond Valley Lake is less than half full from the 3 year drought.

CONSENT CALENDAR

It was moved by Director Ross, seconded by Director Erickson and carried by a 5-0 vote to approve the Minutes of the Regular Board Meeting held on September 9, 2014, and to authorize attendance for the ACWA Fall Conference to be held December 3-5, 2014 in San Diego, CA.

It was moved by Director Erickson, seconded by Director Tejeda and carried by a 5-0 vote to approve the Ratification the Disbursements for August 2014 which consisted of:

Payment of demands against the Crescenta Valley Water District on or before August 31, 2014 the same having been approved by the General Manager, Dennis A. Erdman, and heretofore paid, be ratified and approved subject to audit, in the aggregate sum of Seven Hundred Eighty Five Thousand One Hundred Ninety Nine Dollars and Seventy Seven cents (785,199.77), which is composed of the individual items set forth herein.

ACTION CALENDAR

Purchase of a Replacement Small Dump Truck, Project C-948 – Mr. Gould reported that the District's small dump truck (Unit 13) was involved in an accident last June 2014. The chassis was severely damaged and the drive shaft was broken. ACWA/JPIA declared Unit 13 as a total loss. Unit 13 is a Ford F-550 truck with a 3 cubic yard dump bed and is used for hauling equipment for installation of water services, transporting traffic control, and shoring and hauling base material to the job sites. Staff prepared a request for quote (RFQ) for the purchase of a replacement truck and sent it to three (3) Ford dealerships. Galpin Ford of North Hills provided the lowest quote for Unit 13 at a cost of \$42,603. The existing dump bed is still in workable condition and staff requested a quote from California Truck Equipment Company to remove and re-install the dump bed on to the replacement truck for \$9,050. ACWA/JPIA which declared Unit 13 a total loss, has issued a check for \$22,787 for the replacement vehicle. It is staff's recommendation to authorize the General Manager to purchase the replacement truck and the truck body modification for a cost of \$51,653.00.

It was moved by Director Ross, seconded by Director Tejeda and carried by a 5-0 vote to approve Project C-948 and authorize the General Manager to purchase a replacement vehicle for the small dump truck (Unit 13) from Galpin Ford, and body modification from California Truck Equipment Company at a total cost of \$51,653.00

8-Inch Water Main Replacement on the 2900 Blocks of Paraiso Way and Santa Carlotta St. – Project E-947 – Mr. Gould reported that the District is proceeding with its water main pipeline replacement program for FY 2014/15 with the replacement of old pipelines. This project is the final portion of an overall 3-year water main replacement project within the same area. These pipelines are 4-inch and 8-inch diameter water mains which were installed between 1947 and 1960 and have a high number of leaks. The design is completed for the pipeline project and is ready for advertising for bids. The anticipated project schedule is to award a contract at the Board meeting on October 21, 2014 and have construction begin in early January 2015. There are currently no fire hydrants on the 2900 Blocks of Paraiso Way and Santa Carlotta due to under sized pipeline. Staff has been working with the residents to place new fire hydrants at locations

which will have the least impact on the street. The project must meet the fire hydrant spacing as required by the Los Angeles County Fire Department. Staff is also working on a public outreach program for the project. The construction cost estimate including materials, soils engineer, staff engineering and inspection and contingencies are estimated at \$598,500. This project is exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15301 of the CEQA Guidelines. It is staff's recommendation to authorize the General Manager to advertise for bids for this project. Staff will advertise the project in the McGraw-Hill Dodge Construction News and will send out plans to selected contractors.

It was moved by Director Ross, seconded by Director Tejeda and carried by a 5-0 vote to approve Project E-947 and to authorize the General Manager to advertise for bids for the 8-Inch Water Main Replacement on the 2900 Blocks of Paraiso Way and Santa Carlotta St. and find this exempt from CEQA.

FY 2015/15 Sewer Main Re-Lining Project, Project S-942 – Mr. Gould reported that CVWD's Wastewater Division has been employing a Closed Circuit Television (CCTV) system to inspect sewer lines throughout the collection system, as part of the District's Sewer System Management Plan (SSMP). Over the course of the last several years, multiple segments of sewer main have been observed to be in need of repair. Sewer main re-lining is a very low cost way to rehabilitate aging or ailing portions of collection systems as well as reduce inflow and infiltration. This avoids costly excavation and show to be less of a disturbance to the public. The project will include cleaning and inspection of each segment prior to the liner installation and a post installation inspection to verify the adhesion of the lining to the sewer pipe wall. This project is scheduled to start in November 2014 and be completed in December 2014. Staff asks for consideration and motion to authorize the General Manager to advertise for bids for this project with an Engineers estimate of \$87,800 for completion of Project S-942, and also find this subject project exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15301 of the CEQA Guideline. Staff will send bid documents to contractors specializing in sewer re-lining.

Following discussion:

It was moved by Director Ross, seconded by Director Tejeda and carried by a 5-0 vote to approve Project S-942 and to authorize the General Manager to advertise for bids for the sewer main re-lining at a cost of \$87,800 and find this exempt from CEQA.

Discussion of Board Vacancy – Mr. Bunn reported on the procedure to fill the vacancy and the timing. Director Ross intends to submit a written resignation with a date of December 5, 2014, which is the date she will take office at FMWD's Board. The Government Code Section 1780 gives you 60 days after the written resignation to fill the vacancy, and 15 days to notify the Los Angeles County Clerk's office. Once the formal resignation has been submitted, the District may begin the process of appointing a new Board of Director. The Government Code also states that the District must post a notice of vacancy in 3 or more conspicuous places in the District at least 15 days before the appointment is made. The Board has requested that the notice be placed at the District Office, the Library, Ralph's Grocery Store, the CV Weekly and the Glendale Newspress.

Following discussion:

It was moved by Director Ross, seconded by Director Tejeda and carried by a 5-0 vote that once the letter of resignation is received, Mr. Mitchell is authorized to advertise and post in 3 locations and in the newspaper.

INFORMATION ITEMS – Desert Sun: Coachella Valley Water District considers potential chromium-6 strategies.

WRITTEN COMMUNICATIONS TO DISTRICT – Dennis Erdman received a letter from a customer thanking the District and especially Dennis Maxwell for the support and information for their plumbing issues regarding their sewer lines.

REPORTS OF PERSONNEL

SECRETARY-TREASURER – Mr. Mitchell provided the Summary of Cash and Investment report which contained the following items:

Investment Portfolio Summary – as of September 23, 2014:

Cash Accounts	(\$251,590)
Great Pacific Securities	\$39,772
Bond Debt Service Fund Acct	\$243,336
Local Agency Investment Fund	\$1,743,760
Federal Farm Credit (78)	\$491,545
Federal Farm Credit (81)	\$971,150
Federal Farm Credit (83)	\$496,540
Federal Farm Credit (86)	\$958,680
Federal Farm Credit (87)	\$496,810
US Treasury (92)	\$947,190
US Treasury (93)	\$947,190
Federal Farm Credit (94)	\$945,680
Federal Farm Credit (95)	\$580,152

MTBE Contingency Funds

Local Agency Investment Fund	\$2,694,779
Great Pacific Securities	\$178,303
Federal Farm Credit (M-17)	\$998,830
Federal Farm Credit (M-19)	\$989,350
Federal Farm Credit (M-25) NEW	\$1,001,710
Federal Farm Credit (M-26) NEW	\$1,043,969
US Treasury (M-27) NEW	\$998,805
Federal Farm Credit (M-28) NEW	\$1,002,380
Federal Farm Credit (M29) NEW	\$1,010,180

Fund Balances at May 31, 2014

Water	\$14,427,225.93
Wastewater	\$4,568,803.25

GENERAL MANAGER – Mr. Erdman reported that he had been out of the office for 8 days and had no written report, however, he reported that there has been 122 days since the last lost time accident.

DISTRICT ENGINEER

Water Production – For the period of September 1 through September 21, 2014, water production averaged 97.1 million gallons per day, which is **7.9% less** than the daily average production of the same period in 2013. This is **6.6% less** from the daily average production of the previous five years.

Rainfall: September 2014	0.00"
Season-to-date:	9.07"

Administrative and Field Operations – Mr. Gould provided a memorandum and discussed the following:

Rainfall Update – 0.00" for September 2014. Rainfall total for 2013-14 is at 9.07".

Report on Engineering:

CIP Projects – Well Rehabilitation, E-934 – Well 11 – Postponed to November 2014. Ocean View Chlorination Project – Piping project – Construction started. Oak Creek MCC – Finalizing Project for bidding. Eagle Canyon – Booster B – Award of Contract. Pipeline Replacement – 8-inch water main on the 2900 Blocks of Paraiso Way and Santa Carlotta, and 4800 Block of Glenwood Avenue – Advertise for bid.

Crescenta Valley County Park -Local Groundwater Assistance Grant – Flow Monitoring in Verdugo Wash – Completed, working on calibration. Monitoring Wells – Pre Bid – 1 bidder; project delayed until October 2014. Task for meeting September 24, 2014.

Glendale – Rockhaven Well – Grant application under review by DWR. Met on September 11, 2014 to review cost analysis and agreement. Cost analysis and Agreement to be reviewed at October 7, 2014 Board Meeting.

Ocean View Overflow/Drain Line – Reviewing Options and Cost Estimate with Civiltec.

Verdugo/Montrose Water Main Break – Met with Glendale on September 16, 2014.

FMWD Issues – No report.

ULARA – Cost Sharing Agreement and MOU. Watermaster – finalizing 3-year extension to 2018. Legal Services – RFP as requested by City of LA. PSA to be presented at November 18, 2014 Board Meeting.

Water Meter Replacement Program: FY 14/15 Water Meter Replacement Program – replaced 100 meters to date. Staff reviewing alternative to accelerate meter replacement with Engineering Committee.

Report on Administrative and Field Operations:

Well Status – Well production capacity – at 2.4 MGD.

Booster Pumps – Markridge – Booster 11A needs to be replaced.

Glenwood Nitrate Plant – No Report.

Water Quality – No Report.

Mills Plant – No Report.

Reservoirs/Booster Stations – No Report.

Field Maintenance and Operations update for September 9 – September 21, 2014

Water lateral leaks & repairs

- 2754 Brookhill
- 2716 Stevens
- 3055 Brookhill
- 5428 Ocean View
- 5911 Canyonside
- 3055 Fairesta

Water Main Leaks – No Report.

Fire Hydrant Replacement – No Report.

Developer Projects – No Report.

General Maintenance – No Report.

SCADA/Telemetry System – No Report.

Sewer Maintenance – 2400 & 2500 Blocks of Upper Terrace and Janet Lee. 2300 & 2500 Blocks of Frances, Teasley, and Henrietta. 5000 Block of Humphrey Way and Circle Vista. 2300 & 2400 Blocks of Caracas & Chapman. 2300 Blocks of Orange Cove, Panorama & El Moreno. 4800 & 4900 Blocks of El Sereno. 2300 Blocks of Los Amigos. 4800 & 5000 Blocks of Briggs. 2300 Block of Mountain. 2300 & 2400 Blocks of Whittier, Orange & Laughlin.

PROGRAM SPECIALIST – Ms. Scott reported that there has been more turf rebates in the months of July and August 2014 than any year on record.

INFORMATION TECHNOLOGY – No Report

ATTORNEY – Mr. Bunn reported that the Governor has signed the Groundwater Management bill which requires each ground water basin to have an agency to step up and assume ground water management authority and prepare a ground water sustainability report each year. Right now it is still under local regulations through these agencies, but if there are failures with the agencies to manage the ground water the State could step in. Governor Brown has said that he is going to support a bill in the next session to simplify the adjudication process. In the legislative

session, a bill was passed to amend the Urban Water Management Planning Act, and the next report is due July 1, 2016. Senator Wolk thinks it is important for the Districts to report the distribution system water loss through the UWMP as up to 10% of water is lost through the distribution system. Mr. Bunn also reported on sewage sludge saying that Los Angeles disposes its sewage sludge in Kern County. In 2006, Kern County had an initiative to stop the disposal and Los Angeles sued saying it is unconstitutional. The courts said Los Angeles could continue until a decision is made. Eight years later, it has gone to Federal Court, State Court and then to the California Supreme Court. The Supreme Court said that they only had 30 days and since it has been 78 days the Supreme Court is throwing out some of the claims. Now it has gone back to the Trial Court.

REPORTS OF COMMITTEES

Engineering Committee – Mr. Gould reported that the Committee will meet on October 3, 2014 at 8:00 a.m.

Finance Committee – Director Bodnar reported that the Committee had not met; however a meeting will be scheduled as needed.

Employee Relations Committee – Director Ross reported that the Committee had no met; however a meeting will be scheduled as needed.

Policy Committee – Director Ross reported that the Committee met on September 16, 2014 and discussed a possible change to the current rate structure for large lots and what defines a large lot. They will meet again on October 14, 2014 at 9:00 a.m.

Community Relations/Water Conservation Committee – Ms. Scott reported that the Committee met on September 16, 2014 and reviewed the District's website.

Emergency Planning Committee – Director Bodnar reported that the Committee had not met; however a meeting will be scheduled as needed.

DIRECTORS ORAL REPORTS

Director Ross reported that she attended the FMWD Board Meeting on September 22, 2014 and saw the presentation from the City of Pasadena regarding non-potable water. She also participated in the 9/11 Parade.

Director Erickson reported that one of his neighbors was having electrical issues and a few weeks ago he had water issues. Also in the LA Times he reported on an article regarding the water main breaks and how one person says it is more common in the summer and another person says it is more common in the winter. He also has requested that staff provide a copy of the monthly water report that is sent to the State.

Director Bodnar reported on September 8th he attended the MWD Strategic meeting and on September 11, he attended the 9/11 event at Bob Smith Toyota. On September 20th he ran a 5k fun run.

Director Tejeda – No Report

Director Putnam reported the Central Basin Municipal Water District and the Central Basis Replenishment District revised their Watermaster agreement of 2012. They reserved extra capacity for storage for disadvantaged communities.

CLOSED SESSION – Director Bodnar reported that in the closed session the Board has authorized the General Manager to enter into a recruitment contract with The Mathis Group for the new General Manager. It was moved by Director Ross, seconded by Director Tejeda and carried by a 5-0 vote at a cost of \$15,950 and expenses not to exceed \$3,000 and a retainer to be paid in the amount of \$7,500.

ADJOURNMENT

There being no other business to come before the Board at 10.02 p.m., it was moved by Director Ross, seconded by Director Erickson and carried that the meeting be adjourned to October 7, 2014 at 7:00 p.m.

APPROVED

James D. Bodnar
President

Ron L. Mitchell
Secretary-Treasurer

CRESCENTA VALLEY WATER DISTRICT

BOARD OF DIRECTORS - STAFF REPORT

Action Item No.2
October 7, 2014

To: Honorable President and Members of the Board of Directors
From: Ron L. Mitchell – Secretary-Treasurer
Subject: Resolution No. 720

ACTION ITEM:

Resolution No. 720 – Consideration and motion to adopt Resolution No. 720 supporting Proposition 1 – The Water Quality, Supply, and Infrastructure Improvement Act of 2014.

BACKGROUND:

Following bipartisan action by the Legislature, Governor Brown recently signed a bill that will place Proposition 1, the Water Quality, Supply, and Infrastructure Improvement Act of 2014 on the November ballot. This bond downsizes and replaces the \$11.14 billion water bond previously set for the ballot.

This bond measure provides funding for new surface and groundwater storage projects, regional water reliability, sustainable groundwater management and cleanup, water recycling, water conservation, watershed protection and safe drinking water, particularly for disadvantaged communities. The bond supports the comprehensive, statewide water plan adopted in late 2013.

It was reported by FMWD President Richard Atwater at our September 23rd meeting that the FMWD board has passed a resolution of support for Proposition 1 at their last meeting. It was the consensus of this Board for staff to bring back a similar resolution for the CVWD Board to act upon.

Staff has included an attachment from ACWA that provides a fact sheet about the bond and a summary of key funding areas. This bond may provide the District an opportunity to receive funds for future projects or we could receive indirect benefits by way of funding for FMWD or MWD projects that could reduce the need for imported water and become more sustainable.

RECOMMENDATION

Staff recommends that the Board adopt Resolution No. 720 supporting Proposition 1 the Water Quality, Supply, and Infrastructure Improvement Act of 2014.

Prepared by:

Submitted by:



Ron L. Mitchell
Secretary-Treasurer



Dennis Erdman
General Manager

RESOLUTION NO. 720

RESOLUTION OF THE BOARD OF DIRECTORS OF CRESCENTA VALLEY WATER DISTRICT SUPPORT OF PROPOSITION 1 – THE WATER QUALITY, SUPPLY, AND INFRASTRUCTURE IMPROVEMENT ACT OF 2014

WHEREAS, California is in a severe, multi-year drought and faces a growing list of challenges associated with aging infrastructure, climate change, population growth and other factors; and

WHEREAS, water managers and top leaders including Governor Jerry Brown agree that we need a comprehensive, statewide water plan to create a more resilient water system and meet the coequal goals of improved water supply reliability and ecosystem health; and

WHEREAS, the Legislature has approved and Governor Brown has signed the Water Quality, Supply and Infrastructure Improvement Act of 2014, which will appear as Proposition 1 on the November 4 ballot and provide much-needed funding to advance a statewide comprehensive water plan to secure our water future; and

WHEREAS, if approved by voters, the measure would provide \$7.545 billion in bond funding for new surface and groundwater storage projects, regional water reliability, sustainable groundwater management and cleanup, water recycling, water conservation, watershed protection and safe drinking water, particularly for disadvantaged communities, and other programs the Association of California Water Agencies and its members have long advocated as a part of a statewide comprehensive plan; and

WHEREAS, ACWA's Board of Directors voted unanimously to formally support Proposition 1 in a special meeting on Aug. 19, 2014; and

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Crescenta Valley Water District formally supports the Proposition 1 – The Water Quality, Supply, and Infrastructure Improvement Act of 2014 on the November 2014 ballot.

PASSED, APPROVED, AND ADOPTED at a Regular Meeting of the Board of Directors of Crescenta Valley Water District held on October 7, 2014, Resolution No. 720 was adopted by the following vote:

AYES:

NOES:

None

ATTEST:

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

Secretary of the Board of Directors

STATE OF CALIFORNIA)
)
) **ss.**
COUNTY OF LOS ANGELES)

I, RON MITCHELL, Secretary of the Crescenta Valley Water District, DO HEREBY CERTIFY that the foregoing is a full, true and correct copy of Resolution No. 720 of the Board of Directors of Crescenta Valley Water District adopted at a Regular Meeting held on October 7, 2014, and that the same has not been amended or repealed.

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

DATED: October 7, 2014

(S E A L)



WATER BOND 2014 **THE TIME IS NOW**

Proposition 1 – The Water Quality, Supply and Infrastructure Improvement Act of 2014

Fact Sheet

The Water Quality, Supply and Infrastructure Improvement Act of 2014 is a \$7.545 billion general obligation bond measure set for the November 2014 ballot. If approved by voters, the measure would provide funding for new surface and groundwater storage projects, regional water reliability, sustainable groundwater management and cleanup, water recycling, water conservation, watershed protection and safe drinking water, particularly for disadvantaged communities.

Proposition 1 is the product of more than five years of discussions and negotiations among state lawmakers, stakeholders and others to craft a responsible bond measure to fund needed investments as part of a statewide comprehensive water plan for California. The measure was approved by the Legislature and signed by Gov. Jerry Brown on Aug. 13.

Supported by a broad coalition of water, business, conservation, labor and agriculture organizations, the \$7.545 billion bond replaces an \$11.14 billion measure previously slated for the November ballot.

Key Funding Areas

Surface and Groundwater Storage - \$2.7 billion

- Continuous appropriation for above-and below-ground water storage projects.

Regional Water Reliability - \$810 million

- Integrated regional water management: \$510 million.
- Stormwater capture: \$200 million.
- Water conservation: \$100 million.

Safe Drinking Water - \$520 million

- Leverages federal funds for safe drinking water and clean water programs and for disadvantaged communities.
- Small Community Wastewater Program: \$260 million.
- Drinking Water Public Infrastructure: \$260 million.

Water Recycling - \$725 million

Prepared by the Association of California Water Agencies

www.acwa.com

- Statewide water recycling projects and activities.

Groundwater Sustainability - \$900 million

- Prevent and reduce groundwater contaminants: \$800 million.
- Provide sustainable groundwater management planning and implementation: \$100 million.

Watershed Protection, Ecosystem Restoration, State Settlements - \$1.495 million

- Conservancies: \$327.5 million.
- Wildlife Conservation Board: \$200 million (restoration of flows).
- Department of Fish and Wildlife: \$285 million (out of Delta, no mitigation on BDCP).
- Department of Fish and Wildlife: \$87.5 million (in-Delta with constraints).
- State settlement obligations including CVPIA: \$475 million.
- Rivers and Creeks: \$120 million.

Statewide Flood Management - \$395 million

- Statewide flood management projects and activities: \$100 million.
- For Delta levee subvention programs and Delta flood protection projects: \$295 million.

General Provisions

- Funding eligibility requires urban or agricultural water management plans and compliance with 2009 Water Conservation Act.
- Bay Delta Conservation Plan neutral.
- Protects existing water rights and reaffirms area of origin protections.

CRESCENTA VALLEY WATER DISTRICT

BOARD OF DIRECTORS - STAFF REPORT

Action Item No.3
October 7, 2014

To: Honorable President and Members of the Board of Directors
From: Dennis A. Erdman – General Manager
Subject: Permission to Fill a Pending Staff Vacancy

ACTION ITEM:

Permission to Fill a Pending Staff Vacancy – Consideration and motion to authorize the General Manager to post a notice of vacancy for the position of “Buyer/Storekeeper” and recruit to fill this position and authorize the salary range (six steps) for this position to be \$4,012 per month to \$5,121 per month.

BACKGROUND:

Under the operations Department at CVWD there is a position listed as “Plant Coordinator” which reports to the Superintendent. This position is currently filled by Roy Spaulding who has worked in this job for over twenty three (23) years. Roy has announced his intention to retire from CVWD at the end of January, 2015.

I have consulted with superintendent Larry Byers and determined that this is an opportune time to review and revise the “Plant Coordinator” job description and to consider revising the job title to more accurately reflect the work done by this individual. The current job description was last revised in 2001. The new job title proposed for this position is “Buyer/Storekeeper”. Both the old and proposed new job descriptions are included with this agenda bill. The job description change was reviewed with bargaining unit representatives and the new job description presented met with bargaining unit acceptance. One item of note is the change to require the individual holding this position to be certified as a distribution operator.

I am also requesting that if the Board gives permission to fill this pending vacancy, that we are able to bring this new person on board around January 1, 2015 to allow some time for Roy to train them on our purchasing system and other details of the job. There will be some savings in salary between Roy and the new person over the remainder of the fiscal year and should offset the cost of having two people perform the duties for one month. This issue was discussed and received support from the Employee Relations Committee previously.

FINANCIAL IMPACTS

The present salary range for this position is \$3,955 - \$5,048 per month. It is recommended that along with the job description revision, that the salary range be changed to \$4,012 - \$5,121 per month, which is the same salary range as the Utility Worker II. At the top step, this change represents an annual increase of \$876. A new hire in this position will normally be brought in at the first step (\$4,012) of the proposed salary schedule which is \$1,036 lower than the incumbent’s salary and will result in a savings in fiscal year 2014/15 of approximately \$5,000.

RECOMMENDATION

Staff recommends that the Board authorize the General Manager to begin the recruitment process for the Buyer/Storekeeper position with the goal to have the person in place by January 1, 2015.

Prepared & Submitted by:



Dennis Erdman
General Manager

BUYER/STOREKEEPER

(REVISED AUGUST 2014)

Definition/Summary

Under the supervision of the District's Superintendent of Operations and Maintenance, the Buyer/Storekeeper orders, receives, stores, and distributes materials and equipment at a central warehouse; operate warehouse equipment; and operate a vehicle in the pick-up and delivery of materials. Also reports attendance information to the Accounting Department.

Essential Functions

- Orders, receives, inspects, counts, and stores materials and supplies.
- Verifies the accuracy of shipments, resolving problems and discrepancies.
- Operates warehouse equipment (including a forklift) in connection with the receipt, storage, and issue of materials.
- Review requisitions and issue purchase orders for materials and services on computer.
- Research product information, availability and pricing with various vendors on the internet and/or on the phone.
- Operates computerized inventory systems to identify items for reordering and controlling stock levels.
- Conducts periodic inventories of warehouse stock.
- Operates a vehicle to pick-up items purchased and deliver materials and equipment.
- Maintains logs and records including vehicle maintenance records, fuel storage consumption, MSDS records and monthly safety meetings.
- Cleans the warehouse facility, keeping it in a clean, neat, and orderly condition.
- Establish and maintain cooperative working relationships with co-workers, outside agencies, and the public.
- Regular attendance and adherence to prescribed work schedule to conduct job responsibilities.
- Prepares and maintains various personnel records and type memos and reports for Field Supervisors.

Other Duties

- Answer phones, receive and respond to field crews on two-way radio, and control entry into the Glenwood Plant through security gates.
- Maintains Glenwood facility, opens/locks warehouse during business hours, issue new tools and personal protective equipment to field employees.
- Maintains proper work safety standards.
- Performs data entry and upkeep of various Excel spreadsheets and reports.
- Scans and electronically files all material requisition sheets and job orders.
- Monitor the storage and disposal of scrap metal and hazardous materials.
- Set-up room break room for functions and gather all equipment and materials needed.
- Performs related duties as assigned.

Job Standards/Specifications

Knowledge of:

- Methods used in receiving, inspecting, and storing materials and equipment.
- Delivery and distribution systems.
- Inventory control methods.
- Operation of computerized inventory systems.
- Principles of work safety.

Ability to:

- Perform a variety of ordering, receiving, storage, and material distribution assignments at a centralized warehouse.
- Operate motor vehicles and warehouse equipment.
- Use computer systems and software applicable to updating and maintaining inventory records.
- Follow oral and written directions.

Typical Physical Activities

- Operates warehouse equipment such as forklifts and operates a motor vehicle for delivery and distribution of equipment and supplies.
- Must be able to carry, push, pull, reach, and lift supplies and merchandise weighing up to 50 pounds.
- Stoops, kneels, crouches, crawls, and climbs during the storage and distribution of equipment and supplies.
- Works in an environment with exposure to dust and significant temperature changes between cold and heat.
- Communicates orally with District staff in face-to-face, one-to-one settings.
- Regularly uses a telephone for communication.
- Uses office equipment such as computer terminals, copiers, and FAX machines.
- Stands and walks for extended time periods.
- Hearing and vision within normal ranges with or without correction.

Environmental Factors

1. Exposure to the sun: Some work time spent outside a building and exposed to the sun.
2. Work above floor level: Some work done on ladders or other surfaces from 4 to 12 feet above the ground.
3. Temperature: Some work time in temperatures above 80 and below 60 degrees.
4. Humidity: Work in areas with potential to have high humidity.
5. Wetness: Occasionally works in the rain getting part or all of the body and/or clothing wet.
6. Noise: Occasionally there are unusually loud sounds.
7. Slippery surfaces: Occasional work on unusually slippery surfaces.

8. Oil: Some parts of the body in contact with oil or grease occasionally.
9. Dust: Works in or around areas with minor amounts of dust.

Desirable Qualifications

Any combination of education and experience that would likely provide the necessary knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Experience: One year of responsible experience in performing receiving, storage, and inventory work at a warehouse facility.

License Certificate Registration Requirement

Driver License: Possession of a valid California Class C Driver License may be required at the time of appointment. Failure to obtain or maintain such required license(s) may be cause for disciplinary action. Individuals who do not meet this requirement due to a physical disability will be considered for accommodation on a case-by-case basis.

Possession and proof of a driving record free of multiple or serious traffic violations or accidents for two (2) consecutive years.

General Certifications: **Possess** and **maintain** Distribution 1 (D-1) certification as required (D-2 preferred) by the California State Health Department. Certification(s) need to be finished and obtained either at date of hire or within eighteen (18) months. Failure to obtain this certification will result in disciplinary action up to and including termination.

I have reviewed this Job Description with my Supervisor and agree with its contents.

Employee Signature

Date

Supervisor Signature

Date

Revised: August 2014

CRESCENTA VALLEY WATER DISTRICT

PLANT COORDINATOR

DEFINITION

Under general supervision, has charge of receiving, storing, disbursing and accounting for all types of material used by the District. This employee keeps a continuous inventory of all materials in storage; types and maintains various records and reports; acts as a Radio Dispatcher; keeps warehouse and work areas in neat order and performs other duties as assigned.

EXAMPLE OF DUTIES

Assumes responsibility for receiving, storing and disbursing a variety of materials used by operational staff of the District; confers with management regarding prices and other information concerning material to be ordered; keeps records of vehicle maintenance, gasoline usage, materials issued and their cost, and assures that reusable equipment is returned and properly accounted for; keeps a continuous inventory of stock on hand; coordinates material needs for all projects; issues requisitions for replenishment of stock; maintains daily production reports and checks accuracy of pumper's logs, prepares work order requisitions, including cost for new construction and maintenance jobs and prepares other reports as required.

Conducts periodic equipment and material inventory and assists accounting department in preparing billing for damaged District property facilities; acts as Timekeeper and Dispatcher for District's radio-equipped trucks; assumes responsibility for seeing that emergency calls are handled in a courteous and expeditious manner; prepares and maintains various personnel records, types memos and reports for Field Supervisors; keeps the warehouse and work areas in a neat order, observing all related fire and safety regulations; maintains field safety files; and performs related work as required. Also coordinates and assigns work to a designated assistant as needed.

QUALIFICATIONS

- Equivalent of High School Education
- Two years of purchasing, dispatching, or appropriate administrative experience
- Excellent organizational skills

KNOWLEDGE OF:

- Requisition and Inventory processes
- Waterworks materials and equipment
- Filing Systems
- Personal Computers
- Basic bookkeeping procedures

Ability to:

- Communicate effectively over public radio system
- Operate typical office equipment
- Follow oral and written instruction
- Work cooperatively with other employees
- Keep neat records and prepare various reports
- Establish and maintain effective working relations with public and other agencies

CRESCENTA VALLEY WATER DISTRICT

BOARD OF DIRECTORS - STAFF REPORT

Action Item No. 4

October 7, 2014

To: Honorable President and Members of the Board of Directors
From: David S. Gould, P.E. – District Engineer
Subject: **Replacement of the Motor Control Center at Oak Creek Reservoir, Advertise for Bid, Project E-931**

ACTION ITEM:

1. **Replacement of Motor Control Center at Oak Creek Reservoir, Project E-931** – Consideration and motion to authorize the General Manager to advertise for bids for the replacement of the motor control center at Oak Creek Reservoir with an engineer's estimate for construction of \$293,700 and to find said project exempt from the provisions of the California Environmental Quality Act (CEQA).

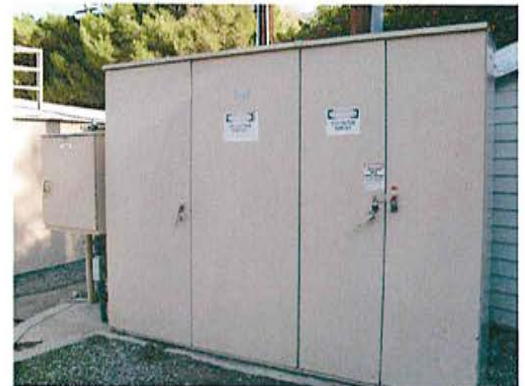
BACKGROUND:

Crescenta Valley Water District (CVWD) will be replacing the existing electrical motor control center (MCC) located at CVWD's Oak Creek Reservoir site at the north end of the intersection of Cloud Avenue and Brookhill Street as part of the FY 14/15 CIP Program. The MCC was originally constructed in 1980 and the District will be replacing the MCC unit with updated electrical equipment for the booster pump system at Oak Creek Reservoir.

This project is part of the on-going CVWD MCC replacement program in which a replacement MCC is designed one fiscal year and construction takes place in the following fiscal year.

DISCUSSION:

Staff has been working with Canon on the design which is completed and is ready for advertising for bids. The upgraded MCC will include modernized equipment which will monitor electrical usage, safety upgrades, connections for the portable emergency generator, and weather-proof shelter.



The anticipated project schedule is to award a contract at the Board meeting on November 4, 2014. Construction should begin in February 2015 after approval of the shop drawings and manufacturing of the MCC cabinets. Mr. Raymond Dodge and Mr. David Gould will be the project managers and Mr. Cory Whitman will provide field inspection. Staff may need assistance from Canon during installation and start-up.

Staff is also working on a public outreach program for the project. This will include sending letters within the next two weeks to the residents in the area notifying them of the upcoming project and sending a second letter two weeks before construction begins.

The construction cost estimate for the project is \$293,700 and the entire project costs including consultant inspection, soils engineer, staff engineering and inspection, and contingencies are estimated at \$322,000.

RECOMMENDATION:

It is staff's recommendation to authorize the General Manager to advertise for bids for the project. Staff will advertise the project in the McGraw-Hill Dodge Construction News and will send out plans to selected contractors.

ENVIRONMENTAL REVIEW:

This project is exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15301 of the CEQA Guidelines. This exemption covers the repair of existing facilities involving negligible or no expansion of existing use.

FUNDING AVAILABILITY:

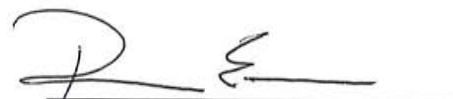
There are sufficient funds available in the following accounts for the project:

Account Description	Account Number	Amount
Water CIP– Water Distribution – MCC Replacement		\$325,000
Engineer's Cost Estimate for Contractor		<\$293,700>
Additional costs such as SCADA Programming, soils engineer, engineering & inspection labor costs & contingency		<\$23,300>
Total Engineer's Cost Estimate		<\$322,000>
Amount Remaining in Water CIP – MCC Replacement	Total	\$3,000

Prepared by:


David S. Gould, P.E.
District Engineer

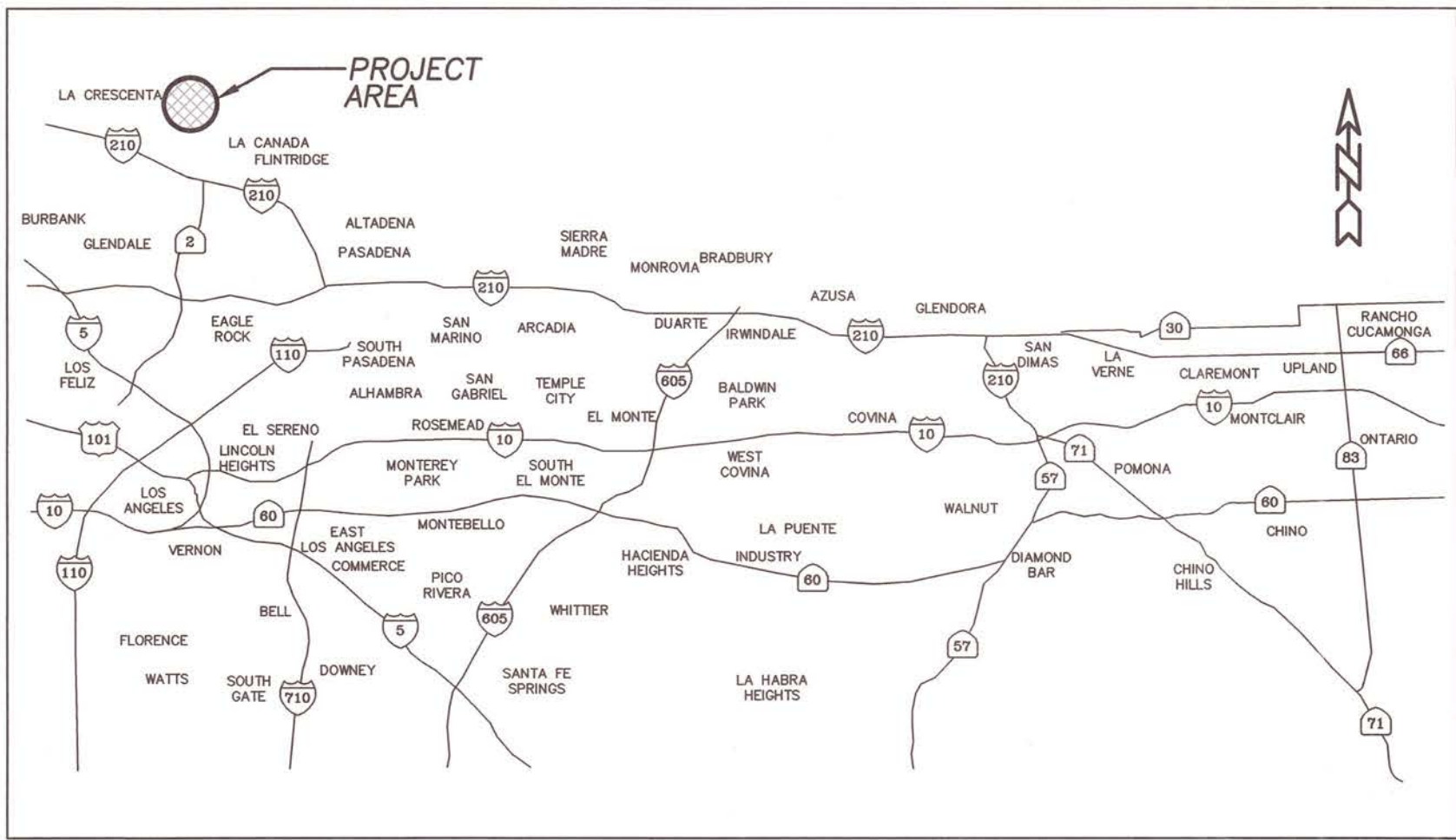
Submitted by:


Dennis Erdman
General Manager

Attachment:

1. Project Location Map & Site Plan

CRESCENTA VALLEY WATER DISTRICT
MOTOR CONTROL CENTER REPLACEMENT
AT OAK CREEK RESERVOIR
PROJECT E-931



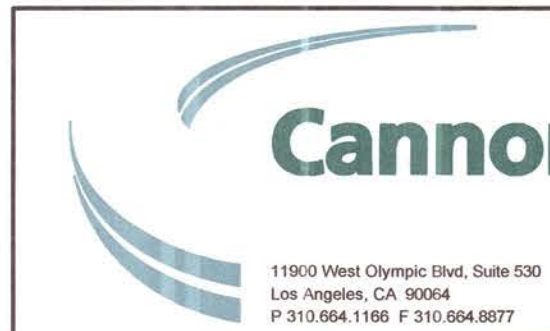
VICINITY MAP
N.T.S.

LIST OF DRAWINGS

SHEET	DESCRIPTION
1	TITLE SHEET
2	ELECTRICAL NOTES, ABBREVIATIONS, AND LEGENDS
3	DEMOLITION PLAN
4	ELECTRICAL SITE PLAN
5	SINGLE LINE DIAGRAM
6	ELECTRICAL PLAN AND DETAIL
7	PUMP CONTROL WIRING DIAGRAM
8	SCADA CONTROL PANEL WIRING DIAGRAM
9	FOUNDATION PLAN
10	GRADING PLAN



LOCATION MAP
N.T.S.



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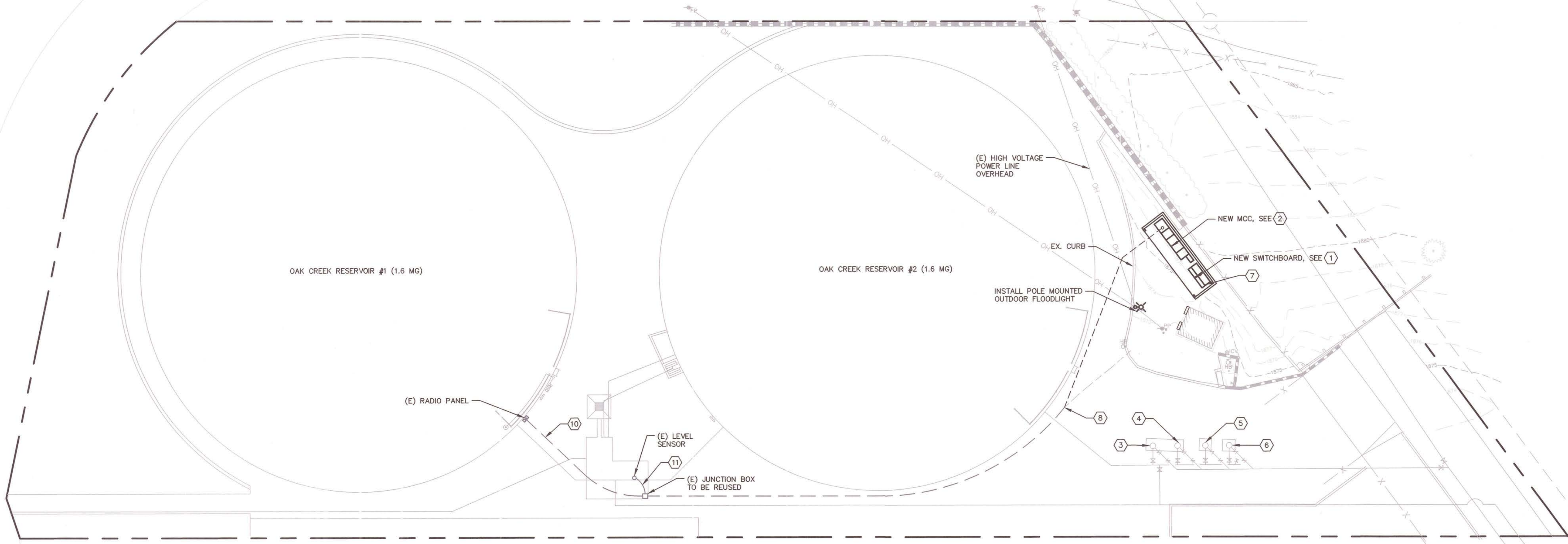
DISCLAIMER
Approval by C.V.W.D. does not
constitute a representation as to the
accuracy of design or the existence
and location of underground utilities,
structures, and conditions within the
limits of this project.

REV.	DATE	REVISION	REV. BY	CHK. BY	APP'D
0	10/2/14	ISSUED FOR CONSTRUCTION	SM	JP	DR

SCALE:	AS SHOWN	DATE
DRAWN BY:	SM/WT	1/22/14
CHECKED BY:	JP	1/22/14
APPROVED:	DR	1/22/14
AS BUILT:		

CRESCENTA VALLEY WATER DISTRICT		SHT. 1 OF 10 SHTS.	
MCC REPLACEMENT AT OAK CREEK RESERVOIR		JOB NO. E-931	
TITLE SHEET		FILE NO. EC-01	

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CONSTRUCTION NOTES

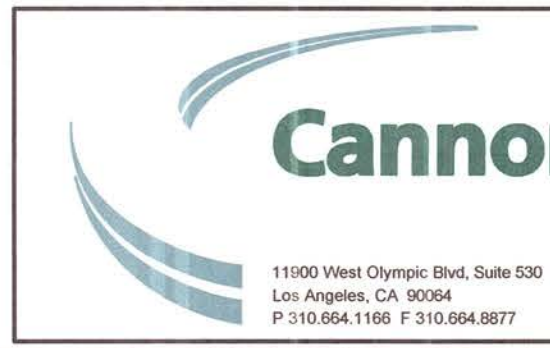
1. MAIN SWITCHBOARD "MS" SHALL BE 600 AMP, 277/480 VOLT, 3 PHASE, 4 WIRE WITH COPPER BUSSING IN NEMA 3R ENCLOSURE. SEE SHEET 5. CAREFULLY COORDINATE LOCATION OF MS INSTALLATION WITH CVWD.
2. MOTOR CONTROL CENTER "MCC" SHALL BE 600 AMP, 480 VOLT, 3 PHASE, 3 WIRE WITH COPPER BUSSING IN NEMA 3R ENCLOSURE. SEE SHEET 5. CAREFULLY COORDINATE LOCATION OF MCC INSTALLATION WITH CVWD.
3. EXISTING PUMP MOTOR "A", 100HP, 460 VOLT, 3 PHASE.
4. EXISTING PUMP MOTOR "B", 40HP, 460 VOLT, 3 PHASE.
5. EXISTING PUMP MOTOR "C", 50HP, 460 VOLT, 3 PHASE.
6. EXISTING PUMP MOTOR "D", 50HP, 460 VOLT, 3 PHASE.
7. PROVIDE CONCRETE HOUSEKEEPING PAD. REFER TO STRUCTURAL DRAWING ON SHEET 9.
8. INTERCEPT EXISTING 2" CONDUIT AND EXTEND NEW 2" CONDUIT TO MCC. PROVIDE NEW WIRING FROM MCC TO RADIO PANEL - 4#10, 1#10 GND FOR POWER (2 SPARES); 2#14 FOR INTRUSION ALARM SIGNALS; 1#18 TSP FOR TANK LEVEL SIGNALS; AND (2) CAT 6 SHIELDED CABLES. CAP AND COIL SPARE WIRES IN JUNCTION BOX.
9. NOT USED..
10. EXISTING 3/4" CONDUIT TO RADIO PANEL TO BE REUSED. EXTEND 2#10, 1#10 GND, AND (2) CAT 6 SHIELDED CABLES TO PANEL.
11. EXISTING 1/2" CONDUIT TO LEVEL SENSOR TO BE REUSED. EXTEND 1#18 TSP TO SENSOR.

GENERAL NOTES

1. SEE GENERAL NOTES ON SHEET 2



811
TWO WORKING DAYS BEFORE YOU DIG



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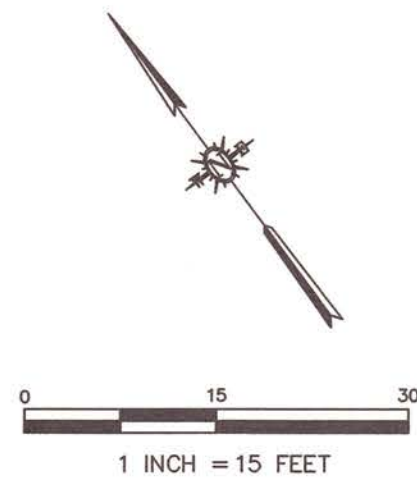
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REV.	DATE	REVISION	REV. BY	CHK. BY	APP'D
0	10/2/14	ISSUED FOR CONSTRUCTION	SM	JP	DR

SCALE:	AS SHOWN	DATE
DRAWN BY:	SM/WT	1/22/14
CHECKED BY:	JP	1/22/14
APPROVED:	DR	1/22/14
AS BUILT:		

CRESCENTA VALLEY WATER DISTRICT
MCC REPLACEMENT AT OAK CREEK RESERVOIR
SITE PLAN

L.A.C.D.P.W. PERMIT NO.	
SHT. 4 OF 10 SHTS.	
JOB NO. E-931	FILE NO. EC-04

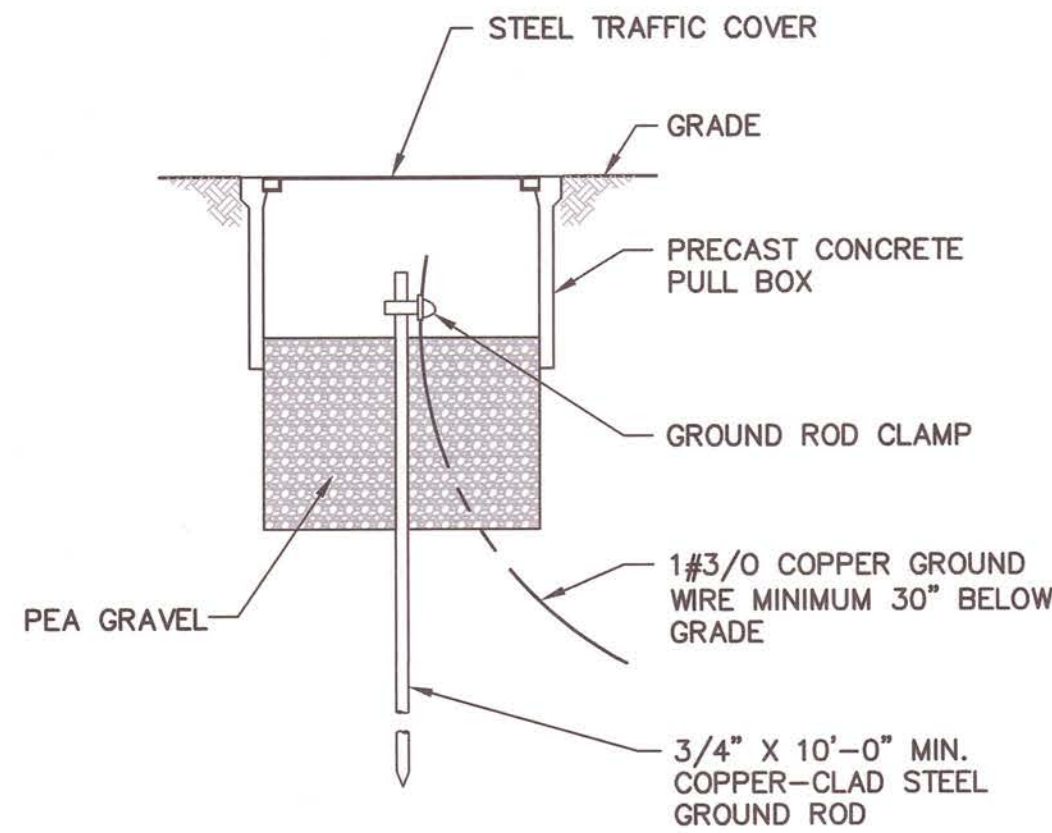


CONSTRUCTION NOTES

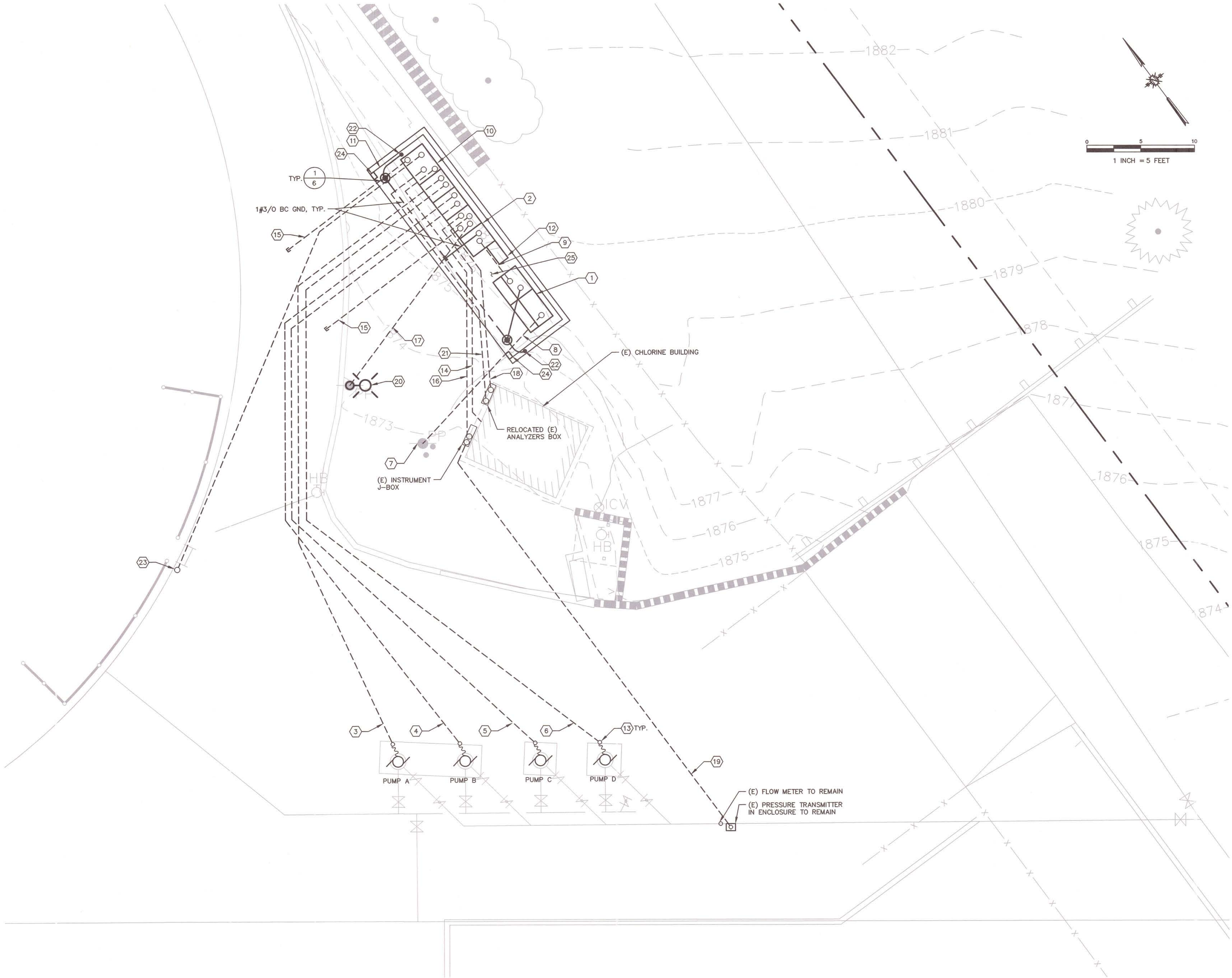
- 1 MAIN SWITCHBOARD "MS" SHALL BE 600 AMP, 277/480 VOLT, 3 PHASE, 4 WIRE WITH COPPER BUSSING IN NEMA 3R ENCLOSURE. SEE SHEET 5. CAREFULLY COORDINATE LOCATION OF MS INSTALLATION WITH CVWD.
- 2 MOTOR CONTROL CENTER "MCC" SHALL BE 600 AMP, 480 VOLT, 3 PHASE, 3 WIRE WITH COPPER BUSSING IN NEMA 3R ENCLOSURE. SEE SHEET 5. CAREFULLY COORDINATE LOCATION OF MCC INSTALLATION WITH CVWD.
- 3 2.5"C-3#2/0, 1#6 GND, 2"C-2#12, 1#12 GND, 2#14.
- 4 2"C-3#6, 1#8 GND, 2"C-2#12, 1#12 GND, 2#14.
- 5 2"C-3#4, 1#6 GND, 2"C-2#12, 1#12 GND, 2#14.
- 6 2"C-3#4, 1#6 GND, 2"C-2#12, 1#12 GND, 2#14.
- 7 EXISTING SCE POLE MOUNTED TRANSFORMERS.
- 8 (2) 4" CONDUITS FOR SCE SECONDARY SERVICE. INSTALL MINIMUM 30" BELOW GRADE. PROVIDE PULL ROPE IN EACH CONDUIT. INSTALL PER SCE REQUIREMENTS. SEE SCE UGS CD AND SCE PLANS FOR THIS PROJECT.
- 9 (2) 3"C-3#35kcmil, 1#1 GND.
- 10 RELOCATE AND INSTALL EXISTING TESCO LIQ5 RTU, ULTRA MAG FLOW METER CONTROLLER AND OTHER ELECTRICAL COMPONENTS FROM EXISTING SCADA ENCLOSURE TO NEW SCADA PANEL COMPONENTS (EXCEPT ELAPSED TIME METERS) MOUNTED ON EXISTING SWING OUT DOOR SHALL BE INSTALLED ON INTERIOR DOOR OF SCADA SECTION IN NEW NEMA 3R MCC. RETURN ELAPSED TIME METERS TO CVWD.
- 11 PROVIDE CONCRETE HOUSEKEEPING PAD FOR MS AND MCC. REFER TO STRUCTURAL DRAWING SHEET 9. CONTRACTOR TO VERIFY ALL EQUIPMENT DIMENSIONS PRIOR TO FORMING OR LOCATING PAD.
- 12 GENERATOR CONNECTION BOX. PROVIDE A NEMA 3R BOX WITH MINIMUM WIDTH OF 24" AND MINIMUM DEPTH OF 12". MOUNT CONNECTIONS CORP. RAIN TIGHT SAFETY LOCK PANEL PIN C48SPOLW TO BOX DOOR. FACE BOX IN THE SAME DIRECTION AS THE MCC. WIRE SAFETY LOCK PANEL TO MCC GENERATOR MAIN. MOUNT BOX 3'-0" ABOVE MCC MAINTENANCE PAD. MCC SHALL RETAIN UL RATING AFTER INSTALLATION.
- 13 STUB UP CONDUIT INTO A JUNCTION BOX SO MOTOR HEATER FEED AND MOTOR FEEDER CAN BE SEPARATED PRIOR TO ENTERING MOTOR PECKERHEAD. ROUTE MOTOR HEATER FEED THROUGH A LOCKABLE TOGGLE TYPE DISCONNECT SWITCH IN A WEATHERPROOF BOX. ROUTE PRESSURE SWITCH WIRING THROUGH JUNCTION BOX TO MCC.
- 14 CONTRACTOR TO COORDINATE LOCATION OF CHLORINE BUILDING FEEDER WITH CLIENT AND ROUTE ACCORDINGLY. 2"C-2#12, 1#12 GND FROM LP-PANEL.
- 15 STUB OUT AND CAP (2) 2" SPARE CONDUITS.
- 16 2"C-4#16 TSP TO SCADA PANEL.
- 17 2"C-2#12, 1#12 GND.
- 18 2"C-2#12, 1#12 GND.
- 19 EXISTING (3) 3/4"C-1#18 TSP. REMOVE WIRE, CONDUIT TO REMAIN AND BE REUSED. PROVIDE NEW 2#16 TSP TO SCADA PANEL. ROUTE WIRES THROUGH EXISTING JUNCTION BOX ON CHLORINE BUILDING, SEE NOTE 16.
- 20 LITHONIA LIGHTING 79 WATT DSXF2 LED AREA LIGHT, 120 VOLT WITH INTEGRAL PHOTOCELL CONTROL AND BLACK FINISH. MOUNT TOGGLE SWITCH IN WEATHERPROOF BOX ON POLE FOR MANUAL OPERATION OF LIGHT. PHOTOCELL CONTROL SHALL ONLY TURN LIGHT ON IF SWITCH IS IN "ON" POSITION.
- 21 2"C-2#16 TSP.
- 22 #2 GROUND WIRE TO MCC CANOPY.
- 23 INTERCEPT EXISTING 3/4" CONDUIT AT TANK AND REROUTE TO SCADA SECTION OF NEW MCC. 3/4"C-2#14 FOR INTRUSION ALARM SIGNALS.
- 24 20A, 125V GFCI DUPLEX RECEPTACLE IN WEATHERPROOF BOX.
- 25 PROVIDE CANOPY LIGHTING. FIXTURES SHALL BE FLUORESCENT INDUSTRIAL, ENCLOSED AND GASKETED, RATED FOR WET LOCATIONS, 4' LONG WITH (2) 32W T8 LAMPS, 77W. PROVIDE TWO FIXTURES MOUNTED TO UNDERNEATH CEILING OF CANOPY. PROVIDE PHOTOCELL AND LIGHT SWITCH CONTROL. PHOTOCELL AND LIGHT SWITCH SHALL BE RATED FOR FIXTURES INSTALLED. INSTALL LIGHT SWITCH ON CANOPY COLUMN AND PHOTOCELL ON TOP OF CANOPY.

GENERAL NOTES

- 1. SEE GENERAL NOTES ON SHEET 2



GROUND DETAIL 1/6 NTS



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0	10/2/14	ISSUED FOR CONSTRUCTION	SM	JP	DR

SCALE:	AS SHOWN	DATE
DRAWN BY:	SM/WT	1/22/14
CHECKED BY:	JP	1/22/14
APPROVED:	DR	1/22/14
AS BUILT:		

CRESCENTA VALLEY WATER DISTRICT 

MCC REPLACEMENT AT OAK CREEK RESERVOIR

ELECTRICAL PLAN

L.A.C.D.P.W. PERMIT NO.	SHT. 6 OF 10 SHTS.
JOB NO. E-931	FILE NO. EC-06

CRESCENTA VALLEY WATER DISTRICT

BOARD OF DIRECTORS - STAFF REPORT

To: Honorable President and Members of the Board of Directors
From: David S. Gould, P.E. – District Engineer
Subject: Discussion of the Ocean View Reservoir Overflow/Drain Line, Project M-934

Agenda Item No. 5
October 7, 2014

AGENDA ITEM

1. **Ocean View Reservoir Overflow/Drain Pipe, Project M-934** – Discussion of the replacement of overflow/drain pipe for Ocean View Reservoir.

BACKGROUND:

CVWD owns and operates a 3.6 MG concrete reservoir on Ocean View Blvd, just north of Conle Way. The reservoir was built in 1983 and replaced an open concrete reservoir which was built in 1939.

On June 23, 2014, the water level inside the concrete reservoir rose to the level of the overflow outlet, which is 30 feet above the reservoir bottom and discharges into the 14-inch overflow pipeline to the catch basin located at the intersection of Ocean View Blvd and Conle Way. The water went from the 14-inch pipeline into a 10-inch pipeline that connected to a storm drain manhole at the intersection of Ocean View Blvd and Foothill Blvd. The water inside the pipeline became pressurized either due to blockage or undersized pipe and the water went out of the pipe into the surrounding soil, which uplifted and damaged the existing asphalt/concrete (AC) pavement. Staff reported on this incident at the July 8, 2014 Board of Directors' meeting.

CVWD's goal is to replace the overflow/drain pipeline and repair the right-turn pocket pavement in a timely manner.

Staff has prepared a number of options for the replacement of the overflow/drain pipeline and AC pavement, which have been previously presented to the Engineering Committee and reviewed with the City of La Canada Flintridge (LCF). LCF has expressed concerns about the proposed overflow/drain pipeline such as the size and location of the overflow/drain pipeline, the amount of water to be released, water quality, and ownership of the overflow/drain pipeline.

Staff has been working with Civiltec Engineering (Civiltec) on various options for the overflow/drain pipeline, preliminary hydraulic design and parameters, and preliminary cost estimates. Civiltec will prepare construction documents for the overflow/drain pipeline after the final review of options.

DISCUSSION:

Options:

Staff met with the Engineering Committee on October 3rd, 2014 to discuss the hydraulic calculations for the existing 10-inch and 14-inch pipelines based on the existing conditions provided by Civiltec and the options for replacement of the Overflow/ Drain pipeline. (See attached Engineering Committee Memo dated October 3, 2014 for more detail).

The Engineering Committee discussed the options and recommended to advertise for bids for the AC pavement replacement as shown in Option 2C and to meet with the City of La Canada Flintridge regarding the remainder of the project.

Project Schedule:

As shown in the Engineering Committee Memo dated October 3, 2014, Option 2C shows that the AC pavement could be completed by the middle of December 2014 and pipeline completed by April 2015.

Funding Availability:

There is currently no funding allocated for this project. A breakdown of funding options was discussed with the Engineering Committee and is shown in the Engineering Committee Memo dated October 3, 2014.

The Engineering Committee discussed the preliminary cost estimates relative to each option and the funding options. It is the Engineering Committee's recommendation to maintain the FY 14/15 CIP program at \$2M for the year and adjust or defer proposed projects to maintain the overall \$2M budget.

RECOMMENDATION:

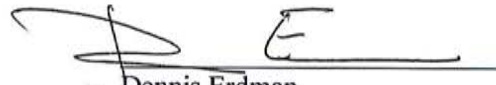
It is staff's desire to get a consensus of the Board of Directors before finalizing, the design option, alignment and pipe size with the City of La Canada Flintridge.

Prepared by:



David S. Gould, P.E.
District Engineer

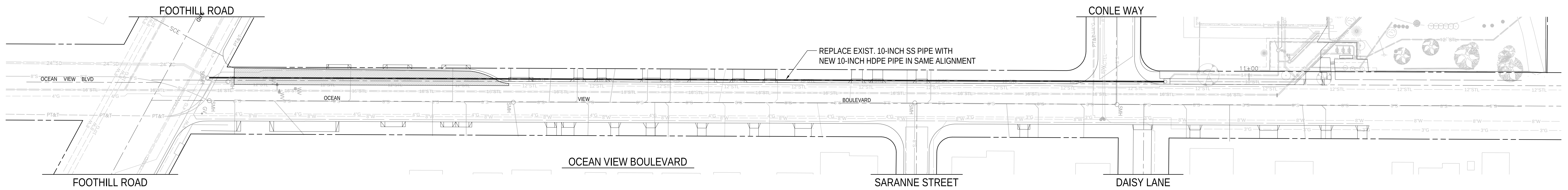
Submitted by:



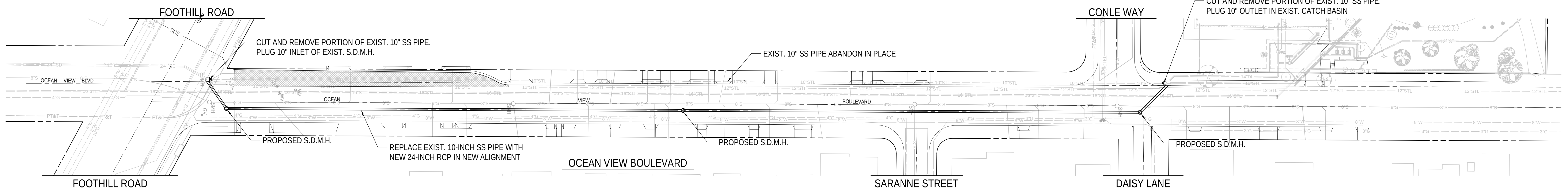
Dennis Erdman
General Manager

Attachment:

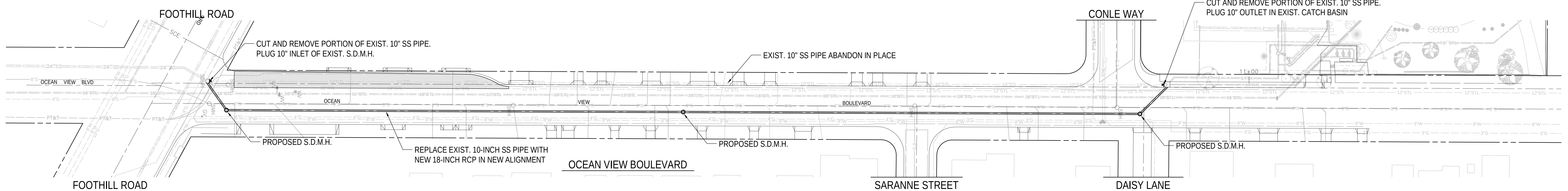
1. Engineering Committee Memo dated October 3, 2014



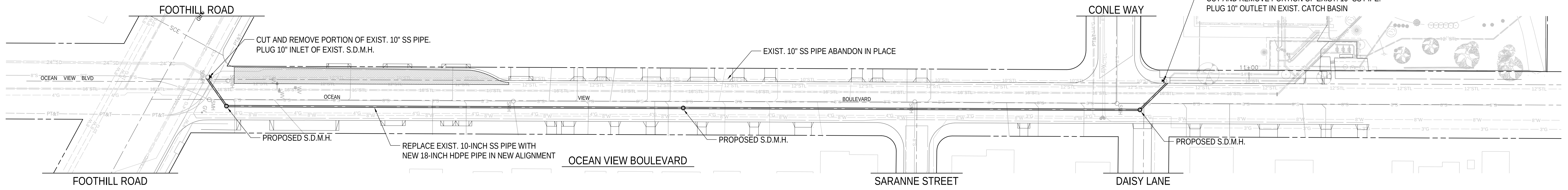
OPTION 1



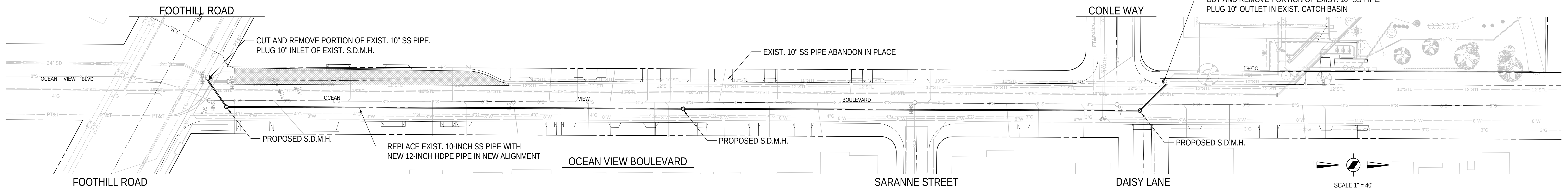
OPTION 2



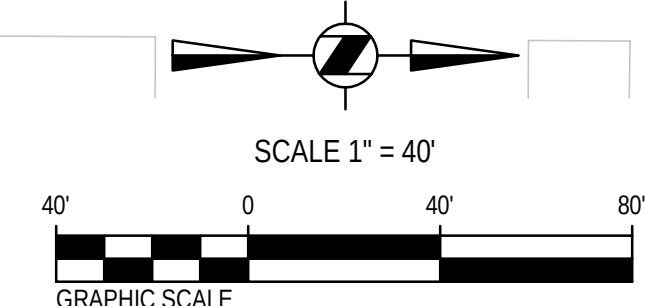
OPTION 2A



OPTION 2B



OPTION 2C



PLANS PREPARED BY:

General Civil, Transportation,
Municipal, Water and Wastewater
Engineering, Planning, Construction
Management, and Surveying

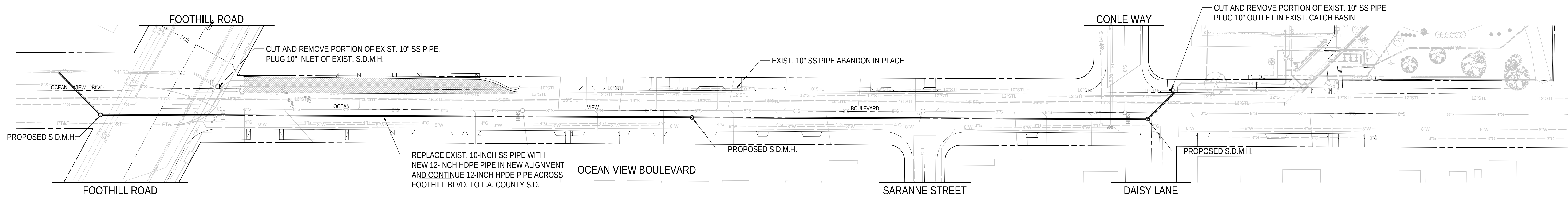
118 West Lime Avenue
Monrovia, Ca. 91016
Phone: (626) 357-0588
Fax: (626) 303-7957



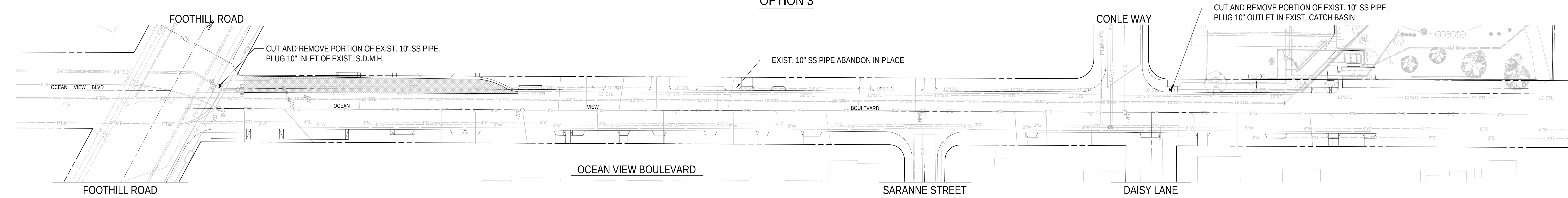
CRESCENTA VALLEY WATER DISTRICT

OCEAN VIEW RESERVOIR
OVERFLOW / DRAIN PIPELINE REPLACEMENT

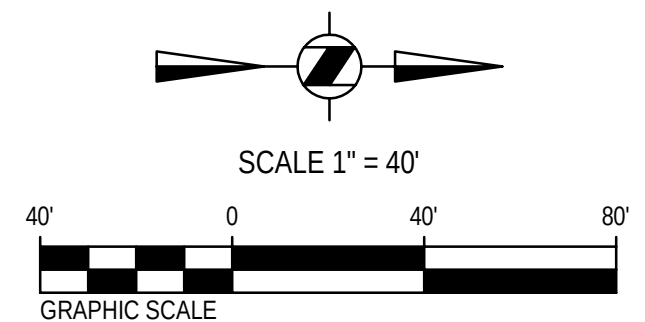
DESIGN:	OAM	CHECKED:	OAS	DRAWN:	OAM
DESIGN DATE:	9/30/2014	JOB NO.	2014136.00	SHEET	1 OF 2



OPTION 3



OPTION 4



PLANS PREPARED BY: General Civil, Transportation, Municipal, Water and Wastewater Engineering, Planning, Construction Management, and Surveying 118 West Lime Avenue Monrovia, Ca. 91016 Phone: (626) 357-0588 Fax: (626) 303-7957 CIVILTEC engineering inc. Monrovia • Prescott • Phoenix				CRESCENTA VALLEY WATER DISTRICT			
				OCEAN VIEW RESERVOIR OVERFLOW / DRAIN PIPELINE REPLACEMENT			
DESIGN:	OAM	CHECKED:	OAS	DRAWN:	OAM		
DESIGN DATE:	9/30/2014	JOB NO.	2014136.00	SHEET	2	OF 2	

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 1
October 3, 2014

To: Engineering Committee
From: David S. Gould, P.E. – District Engineer
Subject: Discussion of Ocean View Reservoir Overflow/Drain Pipe

INFORMATION ITEM:

Ocean View Reservoir Overflow/Drain Pipe – Review of options for the Ocean View Reservoir Overflow/Drain Pipe

BACKGROUND

CVWD owns and operates a 3.6MG concrete reservoir on Ocean View Blvd, just north of Conle Way. The reservoir was built in 1983 and replaced an open concrete reservoir, which was built in 1939.

On June 23, 2014, the water level inside the concrete reservoir rose to the level of the overflow outlet, which is 30 feet above the reservoir bottom and discharges into the 14-inch overflow pipeline to the catch basin located at the intersection of Ocean View Blvd and Conle Way. The water went from the 14-inch pipeline into a 10-inch pipeline connected to a storm drain manhole at the intersection of Ocean View Blvd and Foothill Blvd. The water inside the pipeline became pressurized either due to blockage or undersized pipe and the water went out of the pipe into the surrounding soil, which uplifted and damaged the existing asphalt/concrete (AC) pavement.

Staff has prepared a number of options for the replacement overflow/drain pipeline and AC pavement replacement which were presented to the Engineering Committee and reviewed with the City of La Canada Flintridge (LCF). LCF has expressed concerns about the proposed overflow/drain pipeline such as the size and location of the overflow/drain pipeline, the amount of water to be released, the water quality, and ownership of the overflow/drain pipeline.

CVWD has been working with Civiltec Engineering (Civiltec) to assist the District with reviewing options for the overflow/drain pipeline, provide preliminary hydraulic design and parameters, provide preliminary cost estimates, and prepare construction documents for the overflow/drain pipeline.

Staff met with the Engineering Committee on September 5th, 2014 to discuss the options (See 9/5/14 Engineering Committee Memo) and cost estimates. At the meeting, the Engineering Committee requested that hydraulic calculations for the existing 10-inch and 14-inch overflow/drain lines based on maximum flow from the reservoir during an overflow condition be provided, and that the cost estimates be revised to better reflect construction costs.

CVWD's goal is to replace the overflow/drain pipeline and repair the right-turn pocket pavement in a timely manner.

DISCUSSION:

Staff requested that Civiltec provide the hydraulic calculations for the existing pipelines based on the existing conditions. Staff also reviewed and adjusted the options which are discussed below:

Option 1:

Remove the existing 10-inch pipe and construct a new 10-inch high-density polyethylene (HDPE) pipe from the existing storm drain manhole to the existing catch basin using the open-cut trench excavation method. This option will utilize the current pipeline alignment which is underneath the sidewalk and driveways along the westerly side of Ocean View Blvd.

Advantage:

- Replace the pipeline with the same size, but different material
- 10-inch pipe has capacity to contain the water during an overflow event
- Longer life cycle using HDPE

Disadvantage:

- Cost to remove and replace sidewalk and driveways
- Disruption to residents during construction due to lack of access to homes
- Need to replace pipe before replacing AC pavement

Cost Estimate: \$357,000

Maintenance: CVWD will maintain the 10-inch pipe from Ocean View Reservoir to existing storm drain manhole on Foothill Blvd.

The preliminary cost estimate will be used as a baseline cost for discussions with LCF.

Option 2:

Construct a new 24-inch Reinforced Concrete Pipe (RCP) using a new alignment along the easterly side of Ocean View Blvd. This option will connect the new overflow/drain pipeline to the existing 18-inch storm drain along the north side of Foothill Blvd. Install a redwood plug in the existing 10-inch outlet in the catch basin such that any overflows will outlet onto Ocean View Blvd.

Advantage:

- Replace the pipeline with a new pipe size and material
- The AC pavement can be replaced before the overflow/drain pipeline is installed
- 24-inch pipe has capacity to contain the water during an overflow event
- Longer life cycle using RCP

Disadvantage:

- Limited availability of 24-inch RCP, pipe available 8 – 12 weeks after placing order
- Disruption to residents for traffic control along Ocean View Blvd. during construction
- Installation of two (2) additional storm drain manholes

Cost Estimate: \$467,000

Maintenance: 24-inch RCP will be maintained by LCF.

Option 2A:

Same as Option 2, except using an 18-inch RCP pipeline

Cost Estimate: \$451,000

Maintenance: 18-inch RCP will be maintained by LCF.

Option 2B:

Same as Option 2, except using an 18-inch HDPE pipeline

Cost Estimate: \$413,000

Maintenance: 18-inch HDPE will be maintained by LCF.

Option 2C:

Same as Option 2, except using a 12-inch HDPE pipeline

Cost Estimate: \$381,000

Maintenance: 12-inch HDPE will be maintained by CVWD.

Option 3:

Same as Option 2C with the addition of installing 12-inch HDPE pipe from the existing 18-inch storm drain across Foothill Blvd and joining to the existing Los Angeles County storm drain system.

Advantage:

- Replace the pipeline with a new pipe size and material
- The AC pavement can be replaced before the overflow/drain pipeline is installed
- 12-inch pipe has capacity to contain the water during an overflow event
- Longer life cycle using RCP
- Bypasses LCF's storm drain system

Disadvantage:

- Disruption to residents for traffic control along Ocean View Blvd during construction
- Installation of three (3) additional storm drain manholes
- Increased traffic control for the intersection of Foothill Blvd and Ocean View Blvd
- Need approval from LA County to tie into their system
- Additional potholing need for design

Cost Estimate: \$532,000

Maintenance: 12-inch HDPE will be maintained by CVWD.

Option 4:

Plug the 10-inch opening in the existing catch basin and abandon the existing 10-inch pipe in place. Prepare hydraulic calculations to determine the depth of the water in Ocean View Blvd at various discharge rates from Ocean View Reservoir site. Present the calculations to LCF to discuss the possibility of abandoning the existing 10-inch pipe in place and using the street as the conduit.

Civiltec has prepared a preliminary report (see Attachment "A") which addresses the flow capacity and hydraulics of the existing 10-inch and 14-inch pipes.

Civiltec and District Staff have worked together to update the cost estimate as shown on Attachment "B".

Summary of Cost Estimates

The following is cost estimate of construction costs:

Option	Description	Construction Cost Estimate
1	10-inch HDPE, Replace in kind	\$357,000
2	24-inch RCP, New Alignment	\$462,000
2A	18-inch RCP, New Alignment	\$439,000
2B	18-inch HDPE, New Alignment	\$413,000
2C	12-inch HDPE, New Alignment	\$381,000
3	12-inch HDPE, Connect to LA County	\$532,000
4	Outlet at Catch Basin	\$18,000

The construction costs above do not include the cost to replace the AC pavement or install a float inside the reservoir. The estimated costs for these tasks are \$58,300 and \$14,500 respectively.

Project Schedule:

The following is the proposed project schedule for the AC pavement and pipeline replacement:

Task	Start Date	End Date
Review with Board/Approve Alignment	10/7/2014	10/7/2014
Meet with LCF	10/9/2014	10/9/2014
Pipeline - Design\Civiltec – Option 2 or 2A or 2B or 2C	10/13/2014	10/13/2014
AC Pavement - Design/RFQ	10/13/2014	10/27/2014
AC Pavement - Advertise for Bids	10/27/2014	11/10/2014
AC Pavement - Submit for Permit	10/27/2014	11/10/2014
AC Pavement - Bid Opening	11/13/2014	11/13/2014
AC Pavement - Staff Report	11/14/2014	11/14/2014
AC Pavement - Award of Contract	11/19/2014	11/19/2014
AC Pavement - Start Construction	12/1/2014	12/1/2014
AC Pavement - End Construction	12/12/2014	12/12/2014
Pipeline - Complete Design	10/13/2014	12/12/2014
Pipeline - Submit for Permit to LCF	12/12/2014	1/2/2015
Staff Report	1/2/2015	1/2/2015
Pipeline - Advertise for Bids	1/20/2015	1/20/2015
Pipeline - Pre-Bid Meeting	2/3/2015	2/3/2015
Pipeline - Bid Opening	2/11/2015	2/11/2015
Pipeline - Staff Report	2/13/2015	2/13/2015
Pipeline - Award of Contract	2/17/2015	2/17/2015
Pipeline - Start Construction	3/3/2015	3/3/2015
Pipeline - End Construction	3/3/2015	4/17/2015

As shown in the schedule above, the AC pavement could be completed by the middle of December 2014 and the pipeline completed by April 2015.

FUNDING AVAILABILITY:

There is currently no funding allocated for this project. Staff has reviewed the FY 14/15 Capital Improvement Project Program and is providing the following funding options:

Construction Cost Estimate:

Using the average cost of Option 2 - \$381,000 to \$462,000; Average	\$424,000
Cost for AC Pavement	\$ 58,300
Cost to install a float inside the reservoir	\$ 14,500
Total	\$496,800

Funding Options:

- Increase the FY 14/15 CIP program by \$496,800 from \$2,000,000 to \$2,496,800. This would decrease the amount of the Water Fund Reserves available by about \$300,000.
- Defer or reduce the following FY 14/15 CIP Projects:

Pipeline Replacement – 2800 Block Prospect and 4400 Block Glenwood	<\$200,000>
Mills Plant - Aeration Tower Rehabilitation	<\$ 35,000>
Rehabilitation Surge Tanks at Glenwood	<\$ 28,000>
Repairs to Ramsdell Mixing Station	<\$ 35,000>
New Chlorination Station at Markridge	<\$ 43,000>
SCADA RTU Replacement- Equipment & Integration	<\$ 49,000>
Total	<\$390,000>

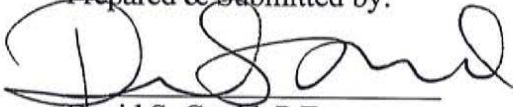
The total amount needed to increase the FY 14/15 CIP Program

\$106,800

SUMMARY

Staff's goal is to discuss these options with the Engineering Committee to achieve a consensus on an option or options to be presented to CVWD Board for approval and to LCF, Public Works Department for preliminary approval. After staff receives preliminary approval from LCF, Civiltec will proceed with the design of the overflow/drain line.

Prepared & Submitted by:



David S. Gould, P.E.
District Engineer

Attachments:

1. Attachment "A" – Ocean View Reservoir Hydraulic Report dated October 1, 2014
2. Attachment "B" – Option 1 – 4 Cost Estimate Summary

g:\engineering committee\2014 ec memo\10-03-14 ecm memo - ov reservoir overflow.docx

System Theory	1
Q [Zone 2 Demand]	2
Q_{in} [Supply Entering Zone 2].....	3
Q_{out} [Supply Leaving Zone 2]	3
$\Delta V/\Delta t$ [Zone 2 Storage Variation]	4
Applying the Demand Equation.....	4
Overflow Capacity from Tanks	4

System Theory

Based on system theory, demand in Zone 2 follows the relationship below:

$$Q = Q_{in} - Q_{out} + \frac{\Delta V}{\Delta t}$$

Where:

Q is demand

Q_{in} is supply entering the system

Q_{out} is supply leaving the system

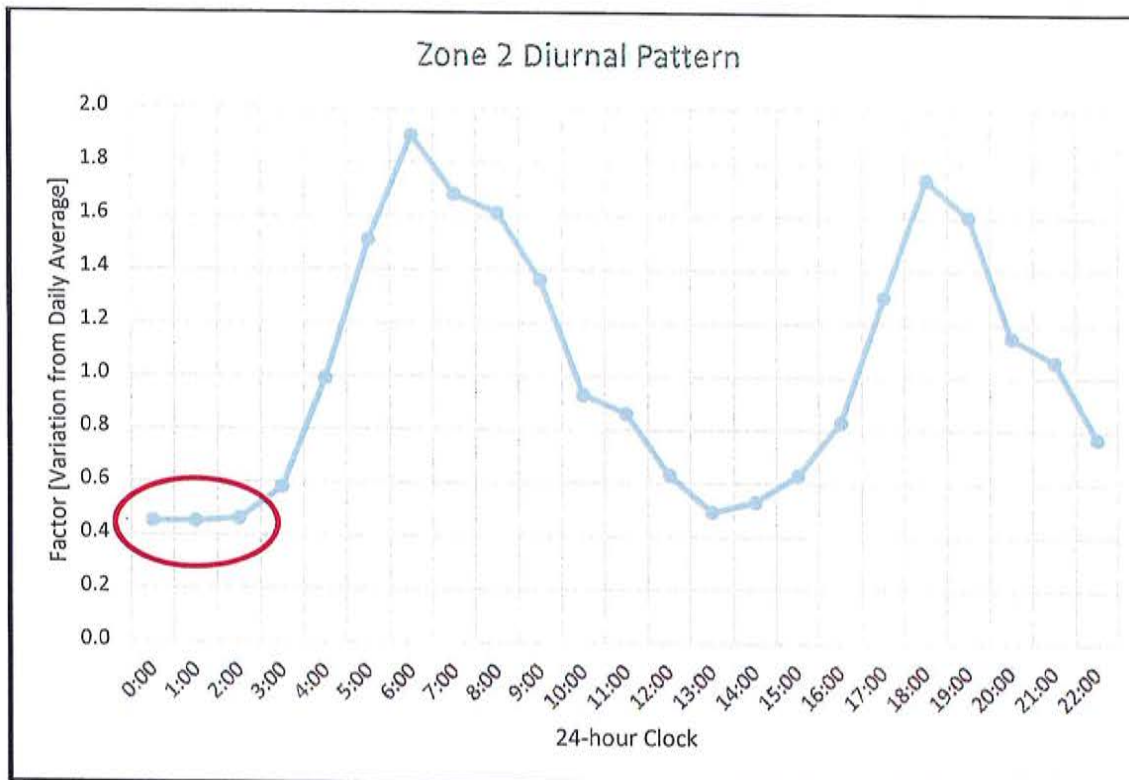
$\frac{\Delta V}{\Delta t}$ is the change in storage with respect to time

Following is further definition of each component of the demand equation and how they would contribute a worst case scenario:

***Q* [Zone 2 Demand]**

Per the CVWD 2007 Water Master Plan and Water Model Update, average demand in Zone 2 is 628 gpm.

Demand in Zone 2 behave according to the following diurnal pattern:



The lowest factor on the diurnal curve is 0.45 occurring at midnight and 1:00 AM.

Therefore, the lowest anticipated demand is approximately 283 gpm:

$$Q_{min} = (0.45)(628 \text{ gpm}) = 283 \text{ gpm}$$

Q_{in} [Supply Entering Zone 2]

The following sources and their nominal flows enter Zone 2:

Source	Flow (gpm)	Status
Encinal Booster A	800	Active - Controlled by Ocean View Tank Level
Encinal Booster B	1,200	Active - Controlled by Ocean View Tank Level
Encinal Booster C	800	Active - Controlled by Ocean View Tank Level
Encinal Booster D	800	Active - Controlled by Ocean View Tank Level
Ocean View FMWD Connection	2,000	Active - Controlled by Ocean View Tank Level
Ocean View FMWD Bypass (to CVWD)	3,188	Normally Closed
LADWP Connection	1,000	Normally Closed
Well No. 2	150	Inactive

The worst case with respect to automated supply would be all four Encinal Boosters and the Ocean View FMWD Connection in operation, or 5,600 gpm.

Q_{out} [Supply Leaving Zone 2]

Source	Flow (gpm)	Status
Williams Booster A	700	Active - Controlled by Oak Creek Tank Level
Williams Booster B	700	Active - Controlled by Oak Creek Tank Level
Williams Booster C	700	Active - Controlled by Oak Creek Tank Level
Ocean View FMWD Bypass (to FMWD)	Not Rated	Normally Closed

The worst case with respect to automated supply would be all sources off, or zero.

$\Delta V/\Delta t$ [Zone 2 Storage Variation]

There are two tanks serving Zone 2: Ocean View (aka Williams) and Ordunio.

The worst case with respect to automated supply would be both tank at or over capacity resulting in zero volumetric change with respect to time.

Applying the Demand Equation

The demand equation implies a balance between supply, demand and storage equalization. However, the failure of the shut-off device creates an imbalance we'll call *Overflow*:

$$Q + \text{Overflow} = Q_{in} - Q_{out} + \frac{\Delta V}{\Delta t} \Rightarrow \text{Overflow} = Q_{in} - Q_{out} + \frac{\Delta V}{\Delta t} - Q$$

$$\text{Overflow} = 5,600 - 0 - 0 - 283 \cong 5,320 \text{ gpm}$$

Overflow Capacity from Tanks

Assumption:

Two hydraulically linked tanks with similar outlet characteristics and capacities

Designed with siphon to promote pipe flow

Dimensions taken from as-built drawings:

CVWD Ocean View Reservoir No. 2: Overflow Details & Trough Drain Details [Sheet 18]

Conclusion:

The overflow capacity from each tank is estimated at 7.8 cfs (3,500 gpm)

Application:

Given, Bernoulli's equation and observed parameters:

$$z_1 + \frac{P_1}{\gamma} + \frac{v_1^2}{2g} = z_2 + \frac{P_2}{\gamma} + \frac{v_2^2}{2g} + h_l$$

Where:

z_1 is the maximum water elevation: 1611 feet

z_2 is the outlet elevation: 1584 feet

P_1 is the pressure at the HWL: zero

P_2 is the pressure at the outlet: zero

$v = v_1 = v_2$ is the velocity inside the overflow pipe

γ is the density of water

g is the acceleration of gravity

h_l is the sum of head losses:

$$h_l = \text{major losses} + \text{minor losses} + \text{back flap gate losses}$$

$$= \frac{v^2}{2g} \left[\frac{l}{d} k_{\text{roughness}} + \sum k_{\text{minor}} + 8e^{\frac{1.15v}{\sqrt{d}}} \right]$$

Where:

l is the length of the overflow pipeline: 50 feet

d is the diameter of the over flow pipeline: 1 foot

$k_{\text{roughness}}$ is the absolute roughness¹ of cement lined pipe: 0.3

k_{minor} is a point loss coefficient²

$\sum k_{\text{minor}}$ is the influence per the as-built drawing of (1) entrance from tank to pipe, (1) long radius 90° bend, (4) 45° bends

$\frac{4v^2}{g} e^{\frac{1.15v}{\sqrt{d}}}$ is an empirical equation describing loss through a back flap gate³

An iterative solution to Bernoulli's equation yielded a pipe velocity of approximately 10.0 feet per second, or 7.8 cfs (3,500 gpm) for each tank:

$$Q = Av = \frac{\pi}{4} (1 \text{ foot})^2 \left(\frac{10.0 \text{ feet}}{s} \right) \cong 7.8 \text{ cubic feet per second}$$

¹ http://www.engineeringtoolbox.com/major-loss-ducts-tubes-d_459.html

² Gupta, R. S. (2001). *Hydrology and Hydraulic Systems: Table 11.2 – Minor Head Loss Coefficients*. Waveland Press Inc. Long Grove, Illinois & http://www.engineeringtoolbox.com/minor-loss-coefficients-pipes-d_626.html

³ Hydro Gate. (2002). *Flap Gates: Loss of Head through Flap Gates (p. 3)*.
http://www.hydrogate.com/products/literature/hg_flap_gates.pdf

10" Steel Pipe-Full Flow Capacity

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Capacity

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.07500	ft/ft
Normal Depth	0.83	ft
Diameter	0.83	ft
Discharge	5.94	ft ³ /s

Results

Discharge	5.94	ft ³ /s
Normal Depth	0.83	ft
Flow Area	0.54	ft ²
Wetted Perimeter	2.61	ft
Hydraulic Radius	0.21	ft
Top Width	0.00	ft
Critical Depth	0.82	ft
Percent Full	100.0	%
Critical Slope	0.06974	ft/ft
Velocity	10.97	ft/s
Velocity Head	1.87	ft
Specific Energy	2.70	ft
Froude Number	0.00	
Maximum Discharge	6.39	ft ³ /s
Discharge Full	5.94	ft ³ /s
Slope Full	0.07500	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

10" Steel Pipe-Full Flow Capacity

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.83	ft
Critical Depth	0.82	ft
Channel Slope	0.07500	ft/ft
Critical Slope	0.06974	ft/ft

10" Plastic Pipe-Full Flow Capacity

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Capacity

Input Data

Roughness Coefficient	0.010	
Channel Slope	0.07500	ft/ft
Normal Depth	0.83	ft
Diameter	0.83	ft
Discharge	7.72	ft ³ /s

Results

Discharge	7.72	ft ³ /s
Normal Depth	0.83	ft
Flow Area	0.54	ft ²
Wetted Perimeter	2.61	ft
Hydraulic Radius	0.21	ft
Top Width	0.00	ft
Critical Depth	0.83	ft
Percent Full	100.0	%
Critical Slope	0.07179	ft/ft
Velocity	14.26	ft/s
Velocity Head	3.16	ft
Specific Energy	3.99	ft
Froude Number	0.00	
Maximum Discharge	8.30	ft ³ /s
Discharge Full	7.72	ft ³ /s
Slope Full	0.07500	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

10" Plastic Pipe-Full Flow Capacity

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.83	ft
Critical Depth	0.83	ft
Channel Slope	0.07500	ft/ft
Critical Slope	0.07179	ft/ft

14" DIP-Full Flow Capacity

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Capacity

Input Data

Roughness Coefficient	0.012	
Channel Slope	0.02400	ft/ft
Normal Depth	1.17	ft
Diameter	1.17	ft
Discharge	9.09	ft ³ /s

Results

Discharge	9.09	ft ³ /s
Normal Depth	1.17	ft
Flow Area	1.08	ft ²
Wetted Perimeter	3.68	ft
Hydraulic Radius	0.29	ft
Top Width	0.00	ft
Critical Depth	1.12	ft
Percent Full	100.0	%
Critical Slope	0.02089	ft/ft
Velocity	8.45	ft/s
Velocity Head	1.11	ft
Specific Energy	2.28	ft
Froude Number	0.00	
Maximum Discharge	9.78	ft ³ /s
Discharge Full	9.09	ft ³ /s
Slope Full	0.02400	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

14" DIP-Full Flow Capacity

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.17	ft
Critical Depth	1.12	ft
Channel Slope	0.02400	ft/ft
Critical Slope	0.02089	ft/ft

14" DIP-Normal Depth

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.012	
Channel Slope	0.02400	ft/ft
Diameter	1.17	ft
Discharge	7.80	ft ³ /s

Results

Normal Depth	0.83	ft
Flow Area	0.82	ft ²
Wetted Perimeter	2.35	ft
Hydraulic Radius	0.35	ft
Top Width	1.06	ft
Critical Depth	1.09	ft
Percent Full	71.4	%
Critical Slope	0.01529	ft/ft
Velocity	9.50	ft/s
Velocity Head	1.40	ft
Specific Energy	2.24	ft
Froude Number	1.90	
Maximum Discharge	9.78	ft ³ /s
Discharge Full	9.09	ft ³ /s
Slope Full	0.01768	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	71.36	%
Downstream Velocity	Infinity	ft/s

14" DIP-Normal Depth

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.83	ft
Critical Depth	1.09	ft
Channel Slope	0.02400	ft/ft
Critical Slope	0.01529	ft/ft

Option 1 - Replace Ex. 10-inch SS pipe with new 10" HDPE in same alignment				Option 2 - Replace Ex. 10-inch SS pipe with new 24" RCP in new alignment			
Task	Quantity	Cost/Unit	Cost	Task	Quantity	Cost/Unit	Cost
Mobilization/Demobilization	1	LS \$10,000	\$10,000	Mobilization/Demobilization	1	LS \$10,000	\$10,000
Excavation	900	LF \$65	\$58,500	Excavation & Shoring	970	LF \$105	\$101,850
10" HDPE Overflow/Drain Pipe - Material	900	LF \$7	\$6,300	24" RCP Overflow/Drain Pipe - Material	970	LF \$30	\$29,100
Install 10" HDPE Overflow/Drain Pipe	900	LF \$90	\$81,000	Install 24" RCP Overflow/Drain Pipe	970	LF \$125	\$121,250
Remove & Replace Junction Structure/Manhole Ov & Foothill	1	EA \$20,000	\$20,000	Remove & Replace Junction Structure/Manhole Ov & Foothill	1	EA \$20,000	\$20,000
New Junction Structure/Manhole	1	EA \$15,000	\$15,000	New Junction Structure/Manhole	2	EA \$15,000	\$30,000
Remove & Replace S/W & DWY	3,700	SF \$18	\$66,600	Trench Resturfacing	4,000	SF \$10	\$40,000
Traffic Control	1	LS \$15,000	\$15,000	Traffic Control	1	LS \$15,000	\$15,000
Construction - Subtotal			\$272,400	Construction - Subtotal			\$367,200
10% Contingency			\$27,240	10% Contingency			\$36,720
Construction - Total			\$299,640	Construction - Total			\$403,920
Engineering Design	1	LS \$30,000	\$30,000	Engineering Design	1	LS \$30,000	\$30,000
Construction Staking	1	LS \$1,800	\$1,800	Construction Staking	1	LS \$1,800	\$1,800
Compaction Testing - Associated Soils	1	LS \$3,000	\$3,000	Compaction Testing - Associated Soils	1	LS \$3,000	\$3,000
Construction Admin/Inspection - CVWD	240	HR \$50	\$12,000	Construction Admin/Inspection - CVWD	240	HR \$50	\$12,000
Inspection - LCF	80	HR \$75	\$6,000	Inspection - LCF	80	HR \$75	\$6,000
Permit and Misc.	1	LS \$4,560	\$4,560	Permit and Misc.	1	LS \$5,280	\$5,280
Grant Total			\$357,000	Grant Total			\$462,000
Percentage greater than Option 1 29%							
Remove and replace the existing AC pavement damaged							
Task	Quantity	Cost/Unit	Cost				
Pavement Contractor	3,250	SF \$13	\$42,250				
Construction Admin/Inspection - CVWD	60	HR \$50	\$3,000				
Inspection - LCF	40	HR \$75	\$3,000				
Compaction Testing - Associated Soils	1	LS \$2,500	\$2,500				
Permit and Misc.	1	LS \$2,250	\$2,250				
Subtotal			\$53,000				
10% Contingency			\$5,300				
Total - Replace the existing AC pavement damaged			\$58,300				
Install Float with an alarm on the Ocean View Reservoir Overflow pipe inside the reservoir							
Task	Quantity	Cost/Unit	Cost				
Float Alarm System & SCADA Alarm (equipment)	1	LS \$1,000	\$1,000				
Installation Float Alarm System	1	LS \$5,000	\$5,000				
Installation SCADA Alarm System	1	LS \$4,000	\$4,000				
Construction Admin/Inspection - CVWD	40	HR \$50	\$2,000				
Permit and Misc.	1	LS \$1,182	\$1,182				
Subtotal			\$13,182				
10% Contingency			\$1,318				
Total - Float with an alarm			\$14,500				
Total Construction - Option 1				Total Construction - Option 2			
Remove and Replace Existing AC Pavement			\$58,300	Remove and Replace Existing AC Pavement			\$467,000
Install Float with Alarm			\$14,500	Install Float with Alarm			\$14,500
Grand Total			\$429,800	Grand Total			\$534,800

Option 2A -

Replace Ex. 10-inch SS pipe with new 18" RCP in new alignment

Task	Quantity	Cost/Unit	Cost
Mobilization/Demobilization	1	LS \$10,000	\$10,000
Excavation & Shoring	970	LF \$100	\$97,000
18" RCP Overflow/Drain Pipe - Material	970	LF \$19	\$18,430
Install 18" RCP Overflow/Drain Pipe	970	LF \$120	\$116,400
Remove & Replace Junction Structure/Manhole Ov & Foothill	1	EA \$20,000	\$20,000
New Junction Structure/Manhole	2	EA \$15,000	\$30,000
Trench Resurfacing	4,000	SF \$10	\$40,000
Traffic Control	1	LS \$15,000	\$15,000
Construction - Subtotal			\$346,830
10% Contingency			\$34,683
Construction - Total			\$381,513
Engineering Design	1	LS \$30,000	\$30,000
Construction Staking	1	LS \$1,800	\$1,800
Compaction Testing - Associated Soils	1	LS \$3,000	\$3,000
Construction Admin/Inspection - CVWD	240	HR \$50	\$12,000
Inspection - LCF	80	HR \$75	\$6,000
Permit and Misc.	1	LS \$4,687	\$4,687
Grant Total			\$439,000
Percentage less than Option 2 -5%			

Option 2B -

Replace Ex. 10-inch SS pipe with new 18" HDPE in new alignment

Task	Quantity	Cost/Unit	Cost
Mobilization/Demobilization	1	LS \$10,000	\$10,000
Excavation & Shoring	970	LF \$90	\$87,300
18" HDPE Overflow/Drain Pipe - Material	970	LF \$15	\$14,550
Install 18" HDPE Overflow/Drain Pipe	970	LF \$110	\$106,700
Remove & Replace Junction Structure/Manhole Ov & Foothill	1	EA \$20,000	\$20,000
New Junction Structure/Manhole	2	EA \$15,000	\$30,000
Trench Resurfacing	4,000	SF \$10	\$40,000
Traffic Control	1	LS \$15,000	\$15,000
Construction - Subtotal			\$323,550
10% Contingency			\$32,355
Construction - Total			\$355,905
Engineering Design	1	LS \$30,000	\$30,000
Construction Staking	1	LS \$1,800	\$1,800
Compaction Testing - Associated Soils	1	LS \$3,000	\$3,000
Construction Admin/Inspection - CVWD	240	HR \$50	\$12,000
Inspection - LCF	80	HR \$75	\$6,000
Permit and Misc.	1	LS \$4,295	\$4,295
Grant Total			\$413,000
Percentage less than Option 2 -11%			

Total Construction - Option 2A			\$439,000
Remove and Replace Existing AC Pavement			\$58,300
Install Float with Alarm			\$14,500
Grand Total			\$511,800

Total Install 24" RCP Overflow/Drain Line			\$413,000
Remove and Replace Existing AC Pavement			\$53,300
Install Float with Alarm			\$14,500
Grand Total			\$485,800

Option 2C - Replace Ex. 10-inch SS pipe with new 12" HDPE in new alignment				
Task	Quantity	Cost/Unit	Cost	
Mobilization/Demobilization	1	LS \$10,000	\$10,000	
Excavation & Shoring	970	LF \$80	\$77,600	
18" HDPE Overflow/Drain Pipe - Material	970	LF \$10	\$9,700	
Install 18" HDPE Overflow/Drain Pipe	970	LF \$95	\$92,150	
Remove & Replace Junction Structure/Manhole Ov & Foothill	1	EA \$20,000	\$20,000	
New Junction Structure/Manhole	2	EA \$15,000	\$30,000	
Trench Resurfacing	4,000	SF \$10	\$40,000	
Traffic Control	1	LS \$15,000	\$15,000	
Construction - Subtotal			\$294,450	
10% Contingency			\$29,445	
Construction - Total			\$323,895	
Engineering Design	1	LS \$30,000	\$30,000	
Construction Staking	1	LS \$1,800	\$1,800	
Compaction Testing - Associated Soils	1	LS \$3,000	\$3,000	
Construction Admin/Inspection - CVWD	240	HR \$50	\$12,000	
Inspection - LCF	80	HR \$75	\$6,000	
Permit and Misc.	1	LS \$4,305	\$4,305	
Grant Total			\$381,000	
Percentage less than Option 2			-18%	
Total Install 24" RCP Overflow/Drain Line				\$381,000
Remove and Replace Existing AC Pavement				\$58,300
Install Float with Alarm				\$14,500
Grand Total				\$453,800

Option 3 - Replace Ex. 10-inch SS pipe with new 12" HDPE in new alignment and continue 12" HDPE across Foothill Blvd to LA County SD				
Task	Quantity	Cost/Unit	Cost	
Mobilization/Demobilization	1	LS \$15,000	\$15,000	
Excavation	970	LF \$80	\$77,600	
12" HDPE Overflow/Drain Pipe - Material, North	970	LF \$10	\$9,700	
Install 12" HDPE Overflow/Drain Pipe, North	970	LF \$95	\$92,150	
12" HDPE Overflow/Drain Pipe - Material, South	150	LF \$10	\$1,500	
Install 12" HDPE Overflow/Drain Pipe, South	150	LF \$300	\$45,000	
Remove & Replace Junction Structure/Manhole Ov & Foothill	1	EA \$20,000	\$20,000	
New Junction Structure/Manhole	3	EA \$15,000	\$45,000	
Trench Resurfacing	5,500	SF \$10	\$55,000	
Traffic Control	1	LS \$30,000	\$30,000	
Construction - Subtotal			\$390,950	
10% Contingency			\$39,095	
Construction - Total			\$430,045	
Engineering Design	1	LS \$40,000	\$40,000	
Construction Staking & Potholing	1	LS \$28,600	\$28,600	
Compaction Testing - Associated Soils	1	LS \$3,000	\$3,000	
Construction Admin/Inspection - CVWD	320	HR \$50	\$16,000	
Inspection - LCF	120	HR \$75	\$9,000	
Permit and Misc.	1	LS \$5,355	\$5,355	
Grant Total			\$532,000	
Percentage greater than Option 2			15%	
Total Install 24" RCP & 12" HDPE Overflow/Drain Line				\$532,000
Remove and Replace Existing AC Pavement				\$58,300
Install Float with Alarm				\$14,500
Grand Total				\$604,800

**Option 4 -
Abandon Ex. 10-inch SS pipe - Outlet into Ocean View**

Task	Quantity	Cost/Unit	Cost
Mobilization/Demobilization	1	LS \$5,000	\$5,000
Excavation & Shoring	0	LF \$80	\$0
18" HDPE Overflow/Drain Pipe - Material	0	LF \$10	\$0
Install 18" HDPE Overflow/Drain Pipe	0	LF \$95	\$0
Remove & Replace Junction Structure/Manhole Ov & Foothill	0	EA \$20,000	\$0
New Junction Structure/Manhole	0	EA \$15,000	\$0
Trench Resurfacing	0	SF \$10	\$0
Traffic Control	0	LS \$15,000	\$0
Construction - Subtotal			\$5,000
10% Contingency			\$500
Construction - Total			\$5,500
Engineering Design	1	LS \$7,500	\$7,500
Construction Staking	0	LS \$1,800	\$0
Compaction Testing - Associated Soils	0	LS \$3,000	\$0
Construction Admin/Inspection - CVWD	40	HR \$50	\$2,000
Inspection - LCF	0	HR \$75	\$0
Permit and Misc	1	LS \$3,000	\$3,000
Grant Total			\$18,000
Percentage less than Option 2			-96%

Total Install 24" RCP & 12" HDPE Overflow/Drain Line			\$0
Remove and Replace Existing AC Pavement			\$58,300
Install Float with Alarm			\$14,500
Grand Total			\$72,800

Summary of Cost Estimates for Overflow/Drain line Options

Option	Description	Construction Cost Estimate	Cost/LF
1	10-inch HDPE, Replace in kind	\$357,000	\$397
2	24-inch RCP, New Alignment	\$462,000	\$476
2A	18-inch RCP, New Alignment	\$439,000	\$453
2B	18-inch HDPE, New Alignment	\$413,000	\$426
2C	12-inch HDPE, New Alignment	\$381,000	\$393
3	12-inch HDPE, Connect to LA County	\$532,000	\$548
4	Outlet at Catch Basin	\$18,000	

CRESCENTA VALLEY WATER DISTRICT

BOARD OF DIRECTORS - STAFF REPORT

Agenda Item No. 6

October 7, 2014

To: Honorable President and Members of the Board of Directors

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

Subject: Discussion of AC Pavement Replacement on Ocean View Blvd., Advertise for Bids, Project M-934

AGENDA ITEM

1. **AC Pavement Replacement on Ocean View Blvd., Project M-934** - Consideration and motion to authorize the General Manager to advertise for bids for the replacement of the AC pavement on Ocean View Blvd with an engineer's estimate for construction of \$42,250 and to find said project exempt from the provisions of the California Environmental Quality Act (CEQA)..

BACKGROUND:

On June 23, 2014, the water level inside the concrete reservoir rose to the level of the overflow outlet, which is 30 feet above the reservoir bottom and discharges into the 14-inch overflow pipeline to the catch basin located at the intersection of Ocean View Blvd and Conle Way. The water went from the 14-inch pipeline into a 10-inch pipeline that connected to a storm drain manhole at the intersection of Ocean View Blvd and Foothill Blvd. The water inside the pipeline became pressurized either due to blockage or undersized pipe and the water went out of the pipe into the surrounding soil, which uplifted and damaged the existing asphalt/concrete (AC) pavement. Staff reported on this incident at the July 8, 2014 Board of Directors' meeting.

CVWD's goal is to repair the right-turn pocket AC pavement on the east side of Ocean View Blvd. in a timely manner.

DISCUSSION:

Staff met with the Engineering Committee on October 3rd, 2014 to discuss the options for replacement of the Overflow/ Drain pipeline.

The Engineering Committee discussed the options and recommended to advertise for bids for the AC pavement replacement as shown in Option 2C.

The attached drawing shows the limits of work for the AC pavement replacement. The plans will also show that the existing base material under the pavement will have to be removed, replaced and re-compacted. The area of base material to be removed and replaced will be determine when the pavement is removed and inspected by CVWD's geotechnical engineer (Associated Soils) and LCF.

The pavement contractor will replace the AC pavement with the same thickness of AC pavement as the existing pavement section to maintain the structural integrity of the street. Also, the existing 10-inch overflow/drain line is shallow and may have to be removed during construction.

The anticipated project schedule is to award a contract at the Board meeting on November 19, 2014. Construction should begin in December 2014 and completed within two (2) weeks. Ms. Christina Olmedo and Mr. David Gould will be the project managers and Mr. Cory Whitman will provide field inspection. Staff will need assistance from Associated Soils for inspection of base material, compaction and pavement.

Staff is also working on a public outreach program for the project. This will include sending letters within the next two weeks to the residents in the area notifying them of the upcoming project and sending a second letter two weeks before construction begins.

The construction cost estimate for the project is \$42,250 and the entire project costs including consultant inspection, soils engineer, staff engineering and inspection, and contingencies are estimated at \$58,300.

RECOMMENDATION:

It is staff's recommendation to authorize the General Manager to advertise for bids for the project. Staff will advertise the project in the McGraw-Hill Dodge Construction News and will send out plans to selected contractors.

ENVIRONMENTAL REVIEW:

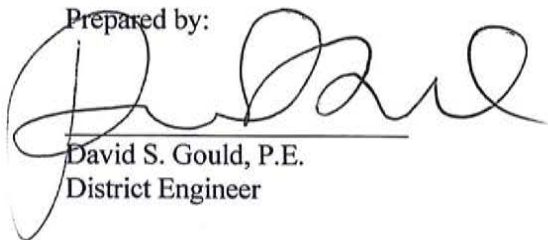
This project is exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15301 of the CEQA Guidelines. This exemption covers the repair of existing facilities involving negligible or no expansion of existing use.

FUNDING AVAILABILITY:

The Engineering Committee discussed the preliminary cost estimates relative to project and recommended to maintain the FY 14/15 CIP program at \$2M for the year and adjust or defer proposed projects to maintain the overall \$2M budget.

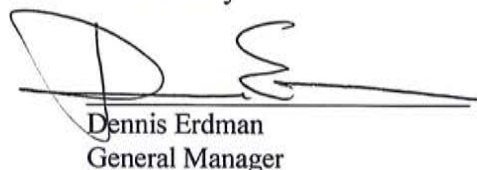
Account Description	Account Number	Amount
Water CIP– Water Storage		\$0,000
Transfer - Pipeline Replacement – 2800 Block Prospect and 4400 Block Glenwood		\$200,000
Engineer's Cost Estimate for Contractor		<\$42,250 >
Additional costs such as soils engineer, engineering & inspection labor costs & contingency		<\$16,050>
Total Engineer's Cost Estimate		<\$58,300>
Amount Remaining in Water CIP– Water Storage	Total	\$141,700

Prepared by:



David S. Gould, P.E.
District Engineer

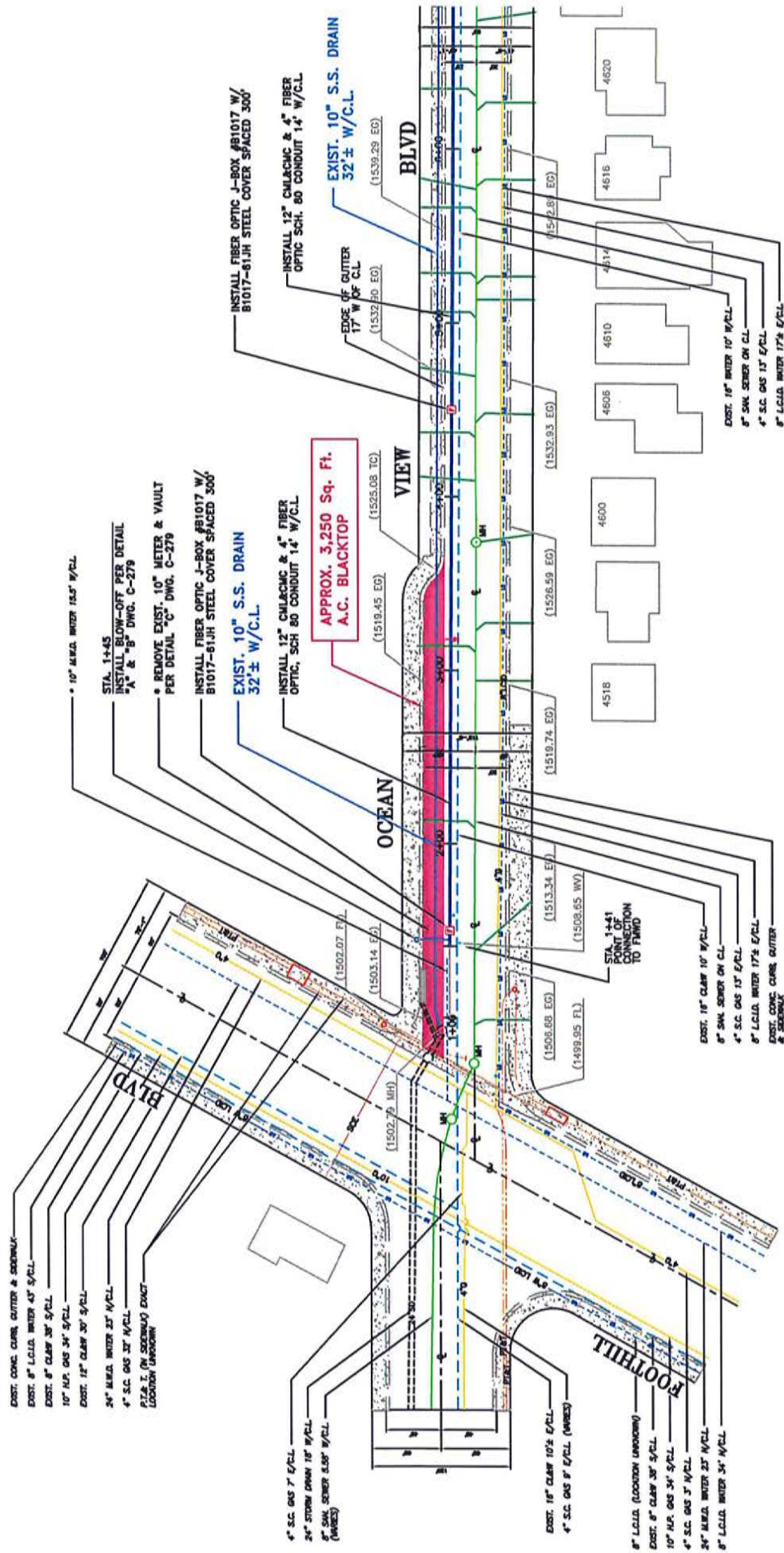
Submitted by:



Dennis Erdman
General Manager

Attachment:

1. Engineering Committee Memo dated October 3, 2014



SCALE:	DATE:	DATE:	DATE:
1"=50'	1/25/21	1/25/21	1/25/21
DESIGNED BY:	DATE:	DATE:	DATE:
APPROVED BY:	DATE:	DATE:	DATE:
AS BUILT:	DATE:	DATE:	DATE:

CRESCENT VALLEY WATER DISTRICT

12" TRANSMISSION MAIN INSTALLATION ON
OCEAN VIEW BLVD.

FROM FOOTHILL BLVD. TO 170' N/ CONLE WAY

SHEET 1 OF 1

DATE: 1/25/21

FILE NO. E-733

C-077

CRESCENTA VALLEY WATER DISTRICT

BOARD OF DIRECTORS - STAFF REPORT

Agenda Item No.7

October 7, 2014

To: Honorable President and Members of the Board of Directors

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

Subject: **Discussion on Agreement with Glendale Water and Power on the Rockhaven Well Project, Project E-940**

AGENDA ITEM

1. **Discussion on Draft Agreement with Glendale Water and Power on the Rockhaven Well Project, Project E-940** – Discussion on Draft Agreement for the proposed Rockhaven Well, Project E-940.

BACKGROUND:

Glendale Water and Power (GWP) drilled a new groundwater well at the old Rockhaven Sanitarium on Honolulu Avenue near La Crescenta Avenue called the Rockhaven Well. The well construction report showed that the well could produce between 350 gpm to 450 gpm and GWP was planning to use this well to increase water production within the Verdugo Basin. However, the water quality for this well showed high nitrate levels, which is typical of the Verdugo Basin.

Crescenta Valley Water District (CVWD) and GWP have been meeting over the last year about a plan for CVWD to complete the construction of the well facility and piping, leasing the land from GWP, and CVWD purchasing the water from GWP.

DISCUSSION

Agreement:

Staff has met a number of times with GWP staff about drafting an agreement and attached is a draft agreement for review and discussion with the Board of Directors.

The following are major elements of the draft agreement:

1. **Land Lease Term:** CVWD will lease the land from Glendale for a 25-year period. CVWD & GWP are finalizing a draft land lease agreement that will be presented at a future Board Meeting. CVWD has requested that a provision be added to the land lease that CVWD has first right to purchase the parcel with the well, if Glendale sells the entire Rockhaven land parcel.
2. **Existing Well and Infrastructure Cost:** CVWD will reimburse GWP for the construction cost of drilling and installing the casing based on 50-year life cycle over the 25-year period.
3. **Water Usage Cost:** CVWD agrees to pay GWP for groundwater produced per Exhibit A of the Agreement. The cost per ac-ft is based on the Cost Analysis Study prepared by Raftelis Financial Consultants.
4. **Land Lease Cost:** CVWD will pay GWP for the cost of the land lease per Exhibit A of the Agreement. The cost is based on the Cost Analysis Study prepared by Raftelis Financial Consultants.

Cost Analysis Study:

Staff has been working with Sudhir Pardiwala and Kevin Kostiuk from Raftelis Financial Consultants to update the Cost Analysis Study. Attached for your review are the Raftelis Report and Cost Analysis for the project. The Cost Analysis was based on two (2) scenarios, if CVWD/GWP received or did not receive the Drought Relief Grant.

Land Lease:

Staff has been working with Mr. Bunn and GWP on a land lease for the project. Attached is a draft land lease for discussion with the Board.

RECOMMENDATION:

Staff's goal is for the Board to review the agreement, Cost Analysis Study, and land lease and provide any additional comments or questions. Staff will follow up with the final documents for approval at the November 4, 2014 Board meeting.

ENVIRONMENTAL REVIEW:

N/A

FUNDING AVAILABILITY:

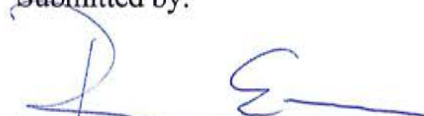
N/A

Prepared by:



David S. Gould, P.E.
District Engineer

Submitted by:



Dennis Erdman
General Manager

Attachment:

1. Draft – "City of Glendale and CVWD Rockhaven Well Operation and Water Purchase/Sale Agreement"
2. Rockhaven Wellsite Review Report prepared by Raftelis financial Consultants dated October 2014
3. Draft – City of Glendale Lease Agreement

CITY OF GLENDALE
AND
CRESCENTA VALLEY WATER DISTRICT
ROCKHAVEN WELL OPERATION
AND WATER PURCHASE/SALE AGREEMENT

This Agreement for the operation of the Rockhaven Well and Water Purchase/Sale Agreement ("Agreement"), is made and entered between the City of Glendale acting by and through Glendale Water and Power (interchangeably referred to as "Glendale" or "GWP") and Crescenta Valley Water District (referred to as "District") (also referred to as each a "PARTY" and collectively, the "PARTIES"), on this ____ day of _____, 2014 ("Effective Date"), with reference to the following facts and intentions, which the PARTIES agree are true and correct to the best of their knowledge and belief:

RECITALS

- A. The groundwater rights of District and Glendale within the Verdugo Basin located within the Upper Los Angeles River Watershed in Los Angeles County ("Verdugo Basin") are defined by the January 26, 1979 Judgment in Los Angeles County Superior Court Case No. 650079, entitled *City of Los Angeles, a Municipal Corporation v. City of San Fernando, et. al.* ("Judgment"). The Judgment is incorporated in the Agreement by this reference as though fully set forth herein.
- B. District and Glendale are the only parties with rights in and to the Verdugo Basin. The Judgment provides that the total Safe-Yield for the Verdugo Basin is 7,150 acre-feet per year ("AF/Y"). The Judgment further adjudicates the rights of the PARTIES to the Verdugo Basin and allocates the entire Safe Yield between them.
- C. Each PARTY holds adjudicated water rights in and to the Verdugo Basin as follows: 3,856 AF/Y for GWP and 3,294 AF/Y for District.
- D. In 2011, GWP constructed a groundwater well, commonly known as the Rockhaven Well ("Well"), at 2740 Hermosa Avenue in order to pump groundwater from the Verdugo Basin for its use.
- E. The Well is capable of producing groundwater; however, the water is contaminated with nitrates, rendering the groundwater from the Well unsuitable for reasonable use without proper treatment.
- F. The District desires to operate the Well and its existing infrastructure for GWP and construct additional facilities and features through which groundwater pumped at the Well can be purchased by the District and delivered to District's nitrate treatment facility pursuant to the terms and conditions as set forth in this Agreement and District may thereafter make use of such treated water for its use.

NOW, THEREFORE, in consideration of the foregoing recitals, which are incorporated into the operative provisions of this Agreement by this reference, and for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the PARTIES hereto agree as follows:

AGREEMENT

1. ADJUDICATED RIGHTS.

- 1.1 District recognizes and acknowledges Glendale's right to pump 3,856 AF/Y from the Verdugo Basin under the Judgment.
- 1.2 Glendale recognizes and acknowledges District's right to pump 3,294 AF/Y from the Verdugo Basin.
- 1.3 The PARTIES acknowledge that they are each entitled to pump no more than their rights as forth herein per the Judgment.
- 1.4 District acknowledges and agrees that nothing in this Agreement, or otherwise, shall be construed as a past, present, or future, abandonment, forfeiture or waiver by Glendale of its rights, nor any portion thereof, to the 3,856 AF/Y from the Verdugo Basin. District further acknowledges and agrees that District's past, present or future pumping from the Verdugo Basin in excess of District's right at 3,294 AF/Y shall not give rise to any right, claim or interest by District to any quantity of water in excess of District's right as set forth herein per the Judgment.

2. **TERM.** The term of this Agreement shall be for a period of 25 years commencing on the Effective Date; provided, however, that PARTIES may terminate this Agreement pursuant to Article 11, below.

3. **FINANCIAL.** GWP shall invoice the District on a monthly basis, an amount based on the following three (3) components and the Five Year Cost Agreement as shown in Exhibit "A". GWP shall invoice the District using the sample form in Exhibit "B".

- a. **Existing Well and Infrastructure Cost.** District agrees to reimburse GWP for the original cost of construction of the Well and existing facilities and features thereto ("Existing Infrastructure"). The amount to be reimbursed shall be based on the 50-year life cycle of the Existing Infrastructure over the 25-year term of the lease and an agreed upon interest rate on investment. In other words, this component of the monthly payment will be 1/600 of the original cost of construction, and at the conclusion of the original term of this Agreement, half the cost will be repaid.

District acknowledges and agrees that payments made pursuant to this section shall not cause or vest any ownership interest in District in the Well. District shall own the improvements constructed by District pursuant to Section 4 of this Agreement.

- b. **Water Usage Cost.** District agrees to pay GWP for the groundwater produced from the Well at a reasonably consistent rate equal to or better than 225 gallons per minute, at a rate per acre-foot as shown in Exhibit "A".

District agrees to pay GWP for the groundwater produced, if the Well is unable to produce water at a reasonably consistent rate of 225 gallons per minute or less, at a rate per acre-foot as shown in Exhibit "A".

District acknowledges and agrees that the water pumped from the well shall be from the Glendale adjudicated right of 3,856 AF/Y.

District acknowledges that water currently available from the Well may not be suitable for consumption, potable or agricultural use and agrees to purchase water under this Agreement and during its term on an "as is" basis.

- c. **Land Lease Cost.** District agrees to pay GWP on a monthly basis, the cost to lease the land for the term in Section 2 and as shown in Exhibit "A".
- 3.1 District agrees to pay GWP within 30 calendar days after receiving the invoice following the first of each month.
- 3.2 These components are based on a Cost Analysis Study dated _____, prepared by Raftelis Financial Consultants. The Cost Analysis Study, the study assumptions and the components shall be reviewed and adjusted every five (5) years from the date of this agreement.

3 **IMPROVEMENTS.**

District shall, at its sole cost and expense, design and install any necessary infrastructure, equipment, facilities, or features ("Improvement(s)") including but not limited to, pumps, motors, piping, meters, small structures, electrical and telemetry systems, waste drain lines, and water mains in connection with the transportation and delivery of water from the Well to District's water treatment facility. District agrees to install a water meter at the Well to accurately record water flows in a manner acceptable to GWP. District shall obtain any necessary permits or licenses related to the construction of any Improvement at its sole cost and expense. District shall comply with all laws and regulatory standards in effect at the time of construction of any Improvement, including any requirements imposed under the California Environmental Quality Act (CEQA) and California Department of Public Health. District shall own any and all Improvements constructed.

- 4 **MAINTENANCE AND REPAIRS.** District shall, at its sole cost and expense, keep and maintain the Existing Infrastructure and any additional Improvements and shall make all necessary repairs and alterations thereto. District agrees to annually calibrate any water meter installed to maintain their accuracy, and any such calibration shall be conducted in the presence of GWP staff.

- 5 **LEASE OF GLENDALE LAND BY DISTRICT.** District agrees to lease the land described in the "Ground Lease Agreement" executed by PARTIES as part of and concurrent to this Agreement and which is incorporated herein by reference, for the amount and under the terms and conditions stated therein.

6 **WATER OPERATION.** Upon the execution of Ground Lease Agreement described in Section 6 of this Agreement, District shall be solely responsible for the cost and operations of the Existing Infrastructure and any Improvements thereon.

7 **GRANTS.** District shall be the lead agency for obtaining any grants from the State of California to finance the construction of Improvements.

District shall obtain prior approval from Glendale of any future improvements not described in Section 4 of this agreement

District and GWP shall share equally the costs associated with providing matching funds as part of any grants obtained from the State of California for the project proposed herein.

8 **INDEMNITY.** Each PARTY agrees to indemnify, defend, and hold the other PARTY and its respective officers, employees, and agents and representatives harmless from and against any and all liability, suits, actions, proceedings, judgments, claims, losses, liens, damages, injuries (whether in contract, in tort, including personal injury, accidental death or property damage, or as part of an environmental claim, and regardless of whether the allegations are false, fraudulent or groundless), costs and expenses (including attorney fees, litigation, arbitration, mediation, appeal expenses) which in whole or in part arise out of or are connected with, or which are alleged to have arisen out of or to have been connected with, each PARTY's performance under this Agreement.

The indemnified PARTY: (i) shall promptly provide the indemnifying PARTY with written notice of any claim, demand, lawsuit, or the like for which it seeks indemnification pursuant to this Article __ and provide the indemnifying PARTY with copies of any demands, notices, summons, or legal papers received in connection with such claim, demand, lawsuit, or the like; (ii) shall not settle any such claim, demand, lawsuit, or the like without the prior written consent of the indemnifying PARTY; and (iii) shall fully cooperate with the indemnifying PARTY in the defense of the claim, demand, lawsuit, or the like. A delay in notice shall not relieve the indemnifying PARTY of its indemnity obligation, except (1) to the extent the indemnifying PARTY can show it was prejudiced by the delay; and (2) the indemnifying PARTY shall not be liable for any settlement or litigation expenses incurred before the time when notice is given. This provision shall survive expiration or termination of the Agreement.

9 **TERMINATION.**

10.1 Termination Right of GWP. GWP shall have the right to terminate this Agreement upon giving written notice of such termination to District at least ninety (90) days in advance and pursuant to the notice requirements as set forth in Section 11.9. In the event that such termination by GWP occurs then Glendale will reimburse the depreciated cost incurred by District in connection with the construction based on the 50-year life cycle of the improvements. Under no circumstances shall GWP have a right or interest in the District's Glenwood nitrate treatment facility.

- 10.2 Termination Right of District.** District shall have the right to terminate this Agreement upon giving written notice of such termination to GWP at least ninety (90) days in advance, pursuant to the notice requirements as set forth in Section 11.9. In the event of such termination by District, GWP shall not be obligated to reimburse District for any costs incurred by District in the construction, or removal, as elected by District in its sole discretion, of any Improvement. Under no circumstances shall GWP have a right or interest in the District's water treatment facility.

10 GENERAL PROVISIONS.

- 11.1 Assignment.** No PARTY shall assign any right or interest in this Agreement, nor delegate any duty owed, without the other PARTY'S prior written consent. Any attempted assignment or delegation shall be void and ineffective for all purposes, and shall constitute a material breach and grounds for immediate termination or suspension of this Agreement. In the event PARTIES consent to an assignment or delegation, the assignee, delegatee, or its legal representative shall agree in writing to personally assume, perform, and be bound by all of the terms of this Agreement.
- 11.2 Successors.** Subject to the provision regarding assignment, above, this Agreement shall be binding on the heirs, executors, administrators, successors, and assigns of the respective PARTIES.
- 11.3 Insurance.** During the term of this Agreement, District shall carry, at its own cost and expense, the following policies of insurance: (i) Insurance against loss or damage to Existing Infrastructure and any Improvements thereon, as is customarily maintained with respect to works and properties of a like character, which may be carried in conjunction with any other policies of fire and extended coverage insurance; (ii) commercial general liability (CGL) insurance with respect to District's activities in connection with this Agreement, such insurance to afford protection of up to One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) general aggregate; and (iii) Workers' Compensation insurance as necessary and required by the laws of the State of California. Upon written request, District shall deliver to GWP copies of each certificate insurance policy obtained.
- 11.4 No Third-Party Beneficiaries.** This Agreement is for the benefit of PARTIES only, and is not intended to benefit any third parties. This Agreement does not create, and shall not be construed to create, any rights enforceable by any person, partnership, corporation, joint venture, limited liability company or other form of organization, association or entity of any kind that is not a PARTY to this Agreement.

- 11.5 Attorneys' Fees.** If any action at law or in equity is brought to enforce or interpret the provisions of this Agreement, the prevailing PARTY shall be entitled to reasonable attorney's fees in addition to any other relief to which it may be entitled.
- 11.6 Construction.** The provisions of this Agreement shall be liberally construed to effectuate its purposes. The language of this Agreement shall be construed simply according to its plain meaning and shall not be construed for or against any PARTY, as each PARTY has participated in the drafting of this Agreement.
- 11.7 Entire Agreement.** In conjunction with the matters considered herein, this Agreement, and the concurrently executed Ground Lease Agreement between the Parties, shall contain the entire understanding and agreement of the PARTIES, and there have been no promises, representations, agreements, warranties or undertakings by any of the PARTIES, either oral or written, of any character or nature binding except as stated herein and the Ground Lease Agreement. This Agreement, and/or the Ground Lease Agreement, may be modified, altered or amended only by an instrument in writing, executed by the PARTIES, and by no other means. Each PARTY waives its right to claim, contest or assert that this Agreement was modified, canceled, superseded or changed by any oral agreement, course of conduct, waiver or estoppel.
- 11.8 Severability.** Should any part, term or provision of this Agreement or any document required herein to be executed be declared invalid, void or unenforceable, all remaining parts, terms and provisions hereof shall remain in full force and effect and shall in no way be invalidated, impaired or affected thereby.
- 11.9 Notices.** All notices, approvals, acceptances, and other communication required or permitted under this Agreement shall be in writing and shall be deemed validly given on the date either: 1) personally delivered to the address indicated below, or 2) on the third business day following deposit, postage prepaid, using certified mail, return receipt requested, in any U.S. Postal mailbox or at any U.S. Post Office, or 3) one business day after the dispatch date by overnight delivery service, or 4) on the date of transmission by facsimile or electronic mail to the number or e-mail address provided below. All notices shall be addressed to the following:

GLENDAL WATER AND POWER
Attn: Ramon Abueg
Assistant General Manager
Glendale Water and Power
City of Glendale
141 North Glendale Ave., 4th Level
Glendale, CA 91206-4496
Facsimile: (818) 552-2852
E-mail: RAbueg@GlendaleCA.GOV

CRESCENTA VALLEY WATER DISTRICT

Attn: Dennis Erdman

General Manager

2700 Foothill Boulevard

La Crescenta, CA 91214-3516

Facsimile: (818) 248-1659

E-mail: derdman@cvwd.com

Any PARTY may change its address by giving the other PARTIES written notice of its new address as provided above.

- 11.10 Governing Law.** This Agreement will be governed by the laws of California, without regard to conflicts of law.
- 11.11 Waiver.** No waiver of any provision or consent to any action shall constitute a waiver of any other provision or consent to any other action, whether or not similar. No waiver or consent shall constitute a continuing waiver or consent or commit a PARTY to provide a waiver or consent in the future except to the extent specifically stated in writing. No waiver shall be binding unless executed in writing by the PARTY making the waiver, based on a full and complete disclosure of all material facts relevant to the waiver requested.
- 11.12 Authorizations.** All individuals executing this Agreement on behalf of the respective PARTIES certify and warrant that they have the capacity, and have been duly authorized to so execute this Agreement on behalf of the entity so indicated.

GLENDALÉ WATER AND POWER

CRESCENTA VALLEY WATER DISTRICT

DRAFT

Exhibit "A"

City of Glendale and Crescenta Valley Water District Rockhaven Well Water Purchase and Sale Agreement Five Year Cost Agreement

Year	2015		2016		2017		2018		2019	
	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly
Existing Well and Infrastructure Cost	\$51,012	\$4,251	\$51,012	\$4,251	\$51,012	\$4,251	\$51,012	\$4,251	\$51,012	\$4,251
	Cost/Ac-ft (above 225 gpm)	Cost/Ac-ft (below 225 gpm)	Cost/Ac-ft (above 225 gpm)	Cost/Ac-ft (below 225 gpm)	Cost/Ac-ft (above 225 gpm)	Cost/Ac-ft (below 225 gpm)	Cost/Ac-ft (above 225 gpm)	Cost/Ac-ft (below 225 gpm)	Cost/Ac-ft (above 225 gpm)	Cost/Ac-ft (below 225 gpm)
Water Usage Cost	\$276	\$236	\$290	\$248	\$305	\$261	\$321	\$275	\$337	\$289
	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly
Land Lease Cost	\$15,040	\$1,253	\$15,040	\$1,253	\$15,491	\$1,291	\$15,956	\$1,330	\$16,435	\$1,370
	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly

Notes:

1. Cost shown above are based on the Cost Analysis Study and Worksheets prepared by Raffelis Financial Consultants dated September, 2014
1. Cost shown above are based CVWD/GWP receiving Prop. 84, Drought Relief Grant
2. Cost and Assumptions of the Cost Analysis Study and Worksheets to be reviewed and revised every 5 years, next revision in 2020.

EXHIBIT "B"

MONTHLY PAYMENT FORM ROCKHAVEN WELL

Month: _____ Year: 2014

WATER USAGE:

End-of-Month Rockhaven Well Meter Read = 17441424 cubic feet (cf)

Prior End-of-Month Rockhaven Well Meter Read = 00000000 cf

Total Usage for Month: 17,441,424 cf ÷ 43,560 = 400.40 Acre-Feet, (AF)

a) Usage for Month at 225 gpm or more: 17,441,424 cf ÷ 43,560 = 400.40 AF

b) Usage for Month at 225 gpm or less: 0.00 cf ÷ 43,560 = 0.00 AF

WATER USAGE COST ⁽¹⁾:

a) \$276 per AF x 400.4 AF = \$ 110,510.40

b) \$236 per AF x 0.00 AF = \$ 0.00

Total Water Usage Cost \$ 110,510.40

EXISTING WELL AND INFRASTRUCTURE COST ⁽¹⁾:

\$51,012 per year or \$4,251 per month \$ 4,251.00

LAND LEASE COST ⁽¹⁾:

\$15,040 per year or \$1,253 per month \$ 1,253.00

Total Payment, CVWD to Glendale \$ 116,014.70

Approved by: _____
Glendale

Approved by: _____
CVWD

NOTES:

1. Unit Costs shown are in accordance with Exhibit "A" of the Agreement.
2. Glendale and CVWD will meet prior to the of the 5th year to revised and adjust the unit costs in accordance with Section 3.2 of the Agreement

October 2014

Rockhaven Wellsite Review Report

Crescenta Valley Water District



Prepared by
RAFTELIS FINANCIAL CONSULTANTS

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1 Introduction

1.1 Scope of Work

Crescenta Valley Water District (District) engaged Raftelis Financial Consultants (RFC) to review and update the analysis of the economics of leasing the Rockhaven Well site from the City of Glendale. RFC reviewed Hoag Consulting's methodology, assumptions and conclusions in the memo *Financial Review of Rockhaven Well* dated January 13, 2014. Additionally, RFC updated the original analysis to include an option that incorporates significantly higher well and pipeline costs to prepare the site for production and transmission of well water.

As part of the review we have confirmed and/or amended inflation factors, revised the amortization of capital investments and examined the validity of rate of return (IRR) calculations.

Lastly, the District would like for any arrangement at the Rockhaven wellsite to be a fair deal for both parties. That is to say, the net present value (NPV) of savings over the contracted period from cost reduction in imported supplies from Foothill Municipal Water District (FMWD) would be roughly equal to the payments to Glendale Water and Power (GWP) for production at Rockhaven. The objective of the analysis is to determine the purchase cost of groundwater such that the District and GWP both benefit equally from the arrangement to lease the facilities and sell groundwater to the District.

1.2 Rockhaven Wellsite Background

The City of Glendale owns the property at the Rockhaven wellsite. In 2011, GWP drilled a borehole and poured well casing. GWP has approximately \$1.05 million in sunken construction costs at the site, though it has not been completed. The well yield is anticipated to be 484 acre feet (AF) per year. The District and GWP will incur additional construction and piping costs before the District can avail of the groundwater. These costs will be shared by the District and GWP. There is potential that part of these costs will be funded through grants.

The District currently imports 50% of its water supply from FMWD at a cost of approximately \$890 per AF for supply and an additional \$154 per AF in power cost to deliver water at District facilities, for a total unit cost of \$1,044 per AF. The District would like to offset some of its imported water cost with lower cost groundwater produced at the Rockhaven site, leased from GWP.

2 Review of Previous Analysis

2.1 Methodology

Hoag Consulting performed a financial feasibility examination in 2013 for the District. The annualized cash flows of 484 AF of imported water were compared against well completion and production at Rockhaven, of the same volume of water, over a 15 year period.

After review of the original work we agree with the methodology and formulation of annual expenditures at Rockhaven, annual payments to GWP and determination of the IRR for the District. RFC has updated the assumptions used in the Hoag analysis and extended the analysis to 25 years.

2.2 Assumptions

The Hoag analysis amortized the entirety of GWP's sunken construction cost over the 15 year period, increasing the annual repayment significantly when compared to the RFC analysis below. Additionally an inflation rate of 2% was assumed on construction costs- while this may be accurate in the short term, it is a significant underestimate when comparing long term CCI trends and when projecting a 15-25 year horizon.

While imported water supply costs were inflated by 4% annually, inflation on the lease of groundwater supplies were only inflated by 2% in the Hoag analysis. We expand on our assumed inflation rate for water supply in the next section.

Annual wellsite lease payments were assumed to be \$60k. New negotiations put the figure at roughly one-quarter of that amount (\$15,040) which significantly lowers total annual payments to GWP.

Lastly, the anticipated construction cost, to complete the wellsite and lay 1,200 feet of transmission line, was assumed to be \$845,000 to the District and \$0 to GWP without grants and \$150,000 to each with grants.

3 RFC Analysis

3.1 Methodology

RFC updated the original year 2013 (v13) analysis to reflect 25 years of cashflow, from the original 15 years.

The payback schedule for GWP's sunken construction costs was amended to represent the useful life of improvements at the site (50 years) with the District making payments to match the contract term of 25 years. The interest rate on construction repayments is 4% based on current market debt.

To confirm the internal rate of return (IRR), RFC replicated the original analysis and compared the annual total expenditures at Rockhaven to produce 484 AF against the total annual expenditures on 484 AF of imported supply from FMWD. Next, total annual payments to GWP were calculated for construction repayments, lease of the wellsite and payments for leasing the right to water produced at the wellsite.

Since payments to GWP and well site expenditures for construction, production and treatment are known, in the final step the price paid for leased water rights (per AF) was adjusted until the NPV of savings to the District equals the NPV of payments received by GWP. Two scenarios are evaluated - construction at the wellsite and laying 1,200 feet of water transmission line with and without grants. The internal rate of return (IRR) to the District was determined for both scenarios.

3.2 Assumptions

After discussion with the District, lease payments for the site were changed from \$60k annually to \$15,040 in year 2015. Lease payments are inflated by 3% annually, in line with a long term average in the Consumer Price Index (CPI); and lease payments increase only after the second year (as per the lease contract).

Fixed operating and maintenance (O&M), treatment O&M and other O&M for the Rockhaven site is inflated at 3% per year to more closely match the long term CPI inflation while power O&M is inflated at 6% to reflect increasing energy costs. These rates are identical to those used in the Hoag analysis. The inflation rate on the cost of water is increased by 1% from the original analysis, as we believe 5% annually represents a more conservative long term estimate on the cost of raw water. The interest rate on investment for purposes of amortizing the sunken construction costs is 4%, and the rate for present value calculations to determine the cost of groundwater at which the NPV of District and GWP benefits is equal to 5%.

3.3 Cost Analysis of Rockhaven with Grant Funding

Assuming \$160,875 to make Rockhaven production ready, the District will need to lease water rights from GWP at \$276/AF in 2015. This represents a 70% discount on the existing tier 1 imported rate paid to FMWD. At this price the District will recognize savings of \$3.82 million over 25 years, with an equal amount in payments to GWP. The IRR for this scenario is 63%.

Table 3-1

NPV of Savings (25 years)	\$ 3,818,522
NPV of Payments to Glendale (25 Years)	\$ 3,818,522
Price (\$/AF)	\$276
IRR	63%
Variance	\$0.00

3.4 Cost Analysis of Rockhaven without Grant Funding

If no grant funding is available, \$845k is required to make Rockhaven production ready and the District will need to lease water rights from GWP at \$231/AF in 2015. This represents an 75% discount on the existing tier 1 imported rate paid to FMWD. At this price the District will recognize savings of \$3.66 million over 25 years, with an equal amount in payments to GWP. The IRR for this scenario is 23%.

Table 3-2

NPV of Savings (25 years)	\$ 3,656,413
NPV of Payments to Glendale (25 Years)	\$ 3,656,413
Price (\$/AF)	\$231
IRR	23%
Variance	\$0.00

4 Recommendations

Our analysis shows that it is beneficial to both the District and GWP to enter into an agreement to lease the well-site and produce groundwater. The IRR for both scenarios is quite high and the District's customers will benefit from lower operating costs and rates. The deal is also beneficial to GWP which will be able to recover costs for facilities built and not being used.

Table 1
Existing CVWD Water Supply Costs

[illegible]

Table 1
Existing CVWD Water Supply Costs

Description	CY 2014	CY 2022 8	CY 2023 9	CY 2024 10	CY 2025 11	CY 2026 12	CY 2027 13	CY 2028 14
Rockhaven Well Production								
Average Annual Water Production (GPM)	300							
Projected Rockhaven Water Production (AFY)	484	484	484	484	484	484	484	484
FMWD Imported Water Costs (Base Case)								
Existing FMWD Tier 1 Imported Water Supply Costs	Budgeted	\$1,315	\$1,381	\$1,450	\$1,522	\$1,598	\$1,678	\$1,762
CVWWD Power Costs for FMWD deliveries		\$245	\$260	\$275	\$292	\$309	\$328	\$348
Total Unit Cost for FMWD deliveries (\$/AF)		\$1,560	\$1,640	\$1,725	\$1,814	\$1,908	\$2,006	\$2,110
Projected Rockhaven Water Production (AFY)		484	484	484	484	484	484	484
Annual CVWWD Existing Payments to FMWD for the Rockhaven Well Production Level		\$754,795	\$793,720	\$834,663	\$877,728	\$923,026	\$970,674	\$1,020,794
Grand Total								
	\$25,640,758							

Table 1
Existing CVWD Water Supply Costs

Description	CY 2014	CY 2029 15	CY 2030 16	CY 2031 17	CY 2032 18	CY 2033 19	CY 2034 20
Rockhaven Well Production							
Average Annual Water Production (GPM)	300						
Projected Rockhaven Water Production (AFY)	484	484	484	484	484	484	484
FMWD Imported Water Costs (Base Case)							
Existing FMWD Tier 1 Imported Water Supply Costs		\$1,850	\$1,943	\$2,040	\$2,142	\$2,249	\$2,361
CVWD Power Costs for FMWD deliveries		\$368	\$390	\$414	\$439	\$465	\$493
Total Unit Cost for FMWD deliveries (\$/AF)		\$2,219	\$2,333	\$2,454	\$2,581	\$2,714	\$2,854
Projected Rockhaven Water Production (AFY)		484	484	484	484	484	484
Annual CVWD Existing Payments to FMWD for the Rockhaven Well Production Level		\$1,073,515	\$1,128,973	\$1,187,311	\$1,248,679	\$1,313,236	\$1,381,148
Grand Total	\$25,640,758						

Table 1 Existing CVWD Water Supply Costs						
Description	CY 2014	CY 2035 21	CY 2036 22	CY 2037 23	CY 2038 24	CY 2039 25
Rockhaven Well Production						
Average Annual Water Production (GPM)						
Projected Rockhaven Water Production (AFY)	300 484	484	484	484	484	484
FMWD Imported Water Costs (Base Case)						
Existing FMWD Tier 1 Imported Water Supply Costs		\$2,480	\$2,603	\$2,734	\$2,870	\$3,014
CVWD Power Costs for FMWD deliveries		\$523	\$554	\$587	\$622	\$660
Total Unit Cost for FMWD deliveries (\$/AF)		\$3,002	\$3,157	\$3,321	\$3,493	\$3,674
Projected Rockhaven Water Production (AFY)		484	484	484	484	484
Annual CVWD Existing Payments to FMWD for the Rockhaven Well Production Level		\$1,452,590	\$1,527,748	\$1,606,815	\$1,689,997	\$1,777,508
Grand Total	\$25,640,758					

Table 2
Rockhaven Well Future Construction Costs

Description		Cost
Rockhaven Well Project Capitalized Cost		
Transmission Pipe to Blending Plant (a)		\$240,000
Well Equipment		
Pump & Motor		\$90,000
Electrical		\$90,000
Piping		\$40,000
SCADA/Telemetry		\$44,000
Building/Misc		\$35,000
Site work		\$25,000
Subtotal		\$564,000
Construction Cost Multipliers		
Contingency	20%	\$112,800
Engineering & Permitting	15%	\$84,600
Soils Engineering	1%	\$5,640
Construction Mgmt	10%	\$56,400
CVWD Labor, Eqpt, Mtls		\$21,560
Grand Total Capital Cost (2014)		\$845,000
Rockhaven Well Site Costs (2013)		
Local Wellsite Labor		
Weekly	Hrs	10
Annual	Hrs	520
Burdened Labor Rate (\$/hour)		\$60
Annual Labor Cost		\$31,200
Materials Cost at Wellsite (\$/year)		\$5,000
Total Annual Labor & Materials		\$36,200
a. The transmission line is 1,200 ft. at \$200/lf.		

Rockhaven Cost Analysis with Grant Funding

Interest rate on investment (Construction)																							
Inflation (Lease)																							
Interest rate on (Well and Pipe Costs)																							
Inflation on water																							
Inflation Rate on O&M (Fixed)																							
Inflation Rate on O&M (Treatment)																							
Inflation Rate on O&M (Other)																							
Inflation Rate on Power																							
Rate for PV Calculations																							
Lease Payments																							
Rockhaven Fixed O&M (2013 \$)																							
Total Investment																							
Rockhaven Well	GWP Construction Costs at Rockhaven Well	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012
	Lease of Rockhaven Wellsite from GWP	\$	19,624	\$	20,213	\$	20,819	\$	21,443	\$	22,087	\$	22,749	\$	23,432	\$	24,135	\$	24,859	\$	25,605	\$	26,373
	Lease of Water Rights from GWP	\$	220,609	\$	231,995	\$	243,972	\$	256,570	\$	269,822	\$	283,761	\$	298,425	\$	313,851	\$	330,078	\$	347,148	\$	365,106
Rockhaven Well Fixed O&M	Rockhaven Well Fixed O&M	\$	51,613	\$	53,161	\$	54,756	\$	56,398	\$	58,090	\$	59,833	\$	61,628	\$	63,477	\$	65,381	\$	67,343	\$	69,363
	Treatment O&M (Variable)	\$151,775	\$156,328	\$161,018	\$165,848	\$170,824	\$175,948	\$181,227	\$186,664	\$192,263	\$198,031	\$203,972											
	Other O&M (Variable)	\$6,761	\$6,964	\$7,173	\$7,388	\$7,609	\$7,838	\$8,073	\$8,315	\$8,564	\$8,821	\$9,086											
	Power O&M (Variable)	\$92,496	\$98,046	\$103,929	\$110,164	\$116,774	\$123,781	\$131,208	\$139,080	\$147,425	\$156,270	\$165,646											
Total Annual O&M Rockhaven		\$	302,644	\$	314,498	\$	326,875	\$	339,799	\$	353,298	\$	367,400	\$	382,135	\$	397,535	\$	413,634	\$	430,466	\$	448,068
Total Annual Expenditures Rockhaven Wellsite		\$	593,889	\$	617,718	\$	642,677	\$	668,824	\$	696,218	\$	724,922	\$	755,004	\$	786,532	\$	819,582	\$	854,230	\$	890,558

FMWD Import

Imported Water Supply Equivalent	\$	736,549	\$	773,377	\$	812,046	\$	852,648	\$	895,280	\$	940,044	\$	987,047	\$	1,036,399	\$	1,088,219	\$	1,142,630	\$	1,199,761
Power Costs of Delivery	\$	141,454	\$	149,941	\$	158,938	\$	168,474	\$	178,582	\$	189,297	\$	200,655	\$	212,694	\$	225,456	\$	238,983	\$	253,322
Total Import Expenditure Equivalent	\$	878,003	\$	923,318	\$	970,983	\$	1,021,122	\$	1,073,863	\$	1,129,342	\$	1,187,702	\$	1,249,093	\$	1,313,675	\$	1,381,613	\$	1,453,084
Net Annual Rockhaven Savings	\$	284,114	\$	305,600	\$	328,306	\$	352,298	\$	377,645	\$	404,419	\$	432,698	\$	462,561	\$	494,093	\$	527,383	\$	562,526

Well and Pipeline Construction Cost
Subtotal

Annual Payments to GWP

GWP Construction Costs at Rockhaven Well	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012	\$	51,012
Lease of Rockhaven Wellsite from GWP	\$	19,624	\$	20,213	\$	20,819	\$	21,443	\$	22,087	\$	22,749	\$	23,432	\$	24,135	\$	24,859	\$	25,605	\$	26,373
Lease of Water Rights from GWP	\$	220,609	\$	231,995	\$	243,972	\$	256,570	\$	269,822	\$	283,761	\$	298,425	\$	313,851	\$	330,078	\$	347,148	\$	365,106
Annual Payments to GWP	\$	291,245	\$	303,220	\$	315,802	\$	329,025	\$	342,920	\$	357,522	\$	372,869	\$	388,997	\$	405,948	\$	423,764	\$	442,490
Total Cost per ac-ft	\$	602	\$	627	\$	653	\$	680	\$	709	\$	739	\$	771	\$	804	\$	839	\$	876	\$	914

CY 2013
Existing FMWD Tier 1 Imported Water Supply Cc
CVWD Power Costs for FMWD deliveries
Total Unit Cost for FMWD deliveries (\$/AF)

	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484
	\$847	\$1,522	\$1,598	\$1,678	\$1,762	\$1,850	\$1,943	\$2,040	\$2,142	\$2,249	\$2,361	\$2,480	\$2,605	\$2,735	\$2,871	\$3,013	\$3,161	\$3,315	\$3,475	\$3,641	\$3,813	\$4,000
	\$145	\$292	\$310	\$328	\$348	\$369	\$391	\$415	\$440	\$466	\$494	\$524	\$555	\$586	\$617	\$649	\$682	\$717	\$755	\$795	\$836	\$878
	\$992	\$1,815	\$1,908	\$2,007	\$2,110	\$2,219	\$2,334	\$2,455	\$2,581	\$2,715	\$2,855	\$2,999	\$3,148	\$3,301	\$3,458	\$3,619	\$3,784	\$3,953	\$4,126	\$4,303	\$4,484	\$4,669
		\$1,815	\$1,908	\$2,007	\$2,110	\$2,219	\$2,334	\$2,455	\$2,581	\$2,715	\$2,855	\$2,999	\$3,148	\$3,301	\$3,458	\$3,619	\$3,784	\$3,953	\$4,126	\$4,303	\$4,484	\$4,669
		25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
		\$456	\$479	\$504	\$530	\$558	\$586	\$617	\$649	\$682	\$717	\$755	\$795	\$836	\$878	\$921	\$965	\$1,010	\$1,056	\$1,103	\$1,151	\$1,200

Rockhaven Cost Analysis with Grant Funding

[illegible]

Rockhaven Cost Analysis with No Grant Funding

Interest rate on investment (Construction) Percentage of Foothill Rate

Inflation (Lease)

Interest rate on (Well and Pipe Costs)

Inflation on water

Inflation Rate on O&M (Fixed)

Inflation Rate on O&M (Treatment)

Inflation Rate on Power

Rate for PV Calculations

Lease Payments

Rockhaven Fixed O&M (2013 \$)

NPV of Savings (25 years)	\$ 3,656,413
NPV of Payments to Glendale (25	\$ 3,656,413
Prece (\$/AF)	\$231
IRR	23%
Variance	\$0.00

21%

Well & Pipeline Construction Costs
w/o Grant \$845,000

	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024	CY 2025
Rockhaven Well											
GWP Construction Costs at Rockhaven Well	\$ 51,012	\$ 51,012	\$ 51,012	\$ 51,012	\$ 51,012	\$ 51,012	\$ 51,012	\$ 51,012	\$ 51,012	\$ 51,012	\$ 51,012
Lease of Rockhaven Wellsite from GWP	\$ 15,040	\$ 15,040	\$ 15,491	\$ 15,956	\$ 16,435	\$ 16,928	\$ 17,435	\$ 17,959	\$ 18,497	\$ 19,052	\$ 19,624
Lease of Water Rights from GWP	\$ 55,920	\$ 117,599	\$ 123,656	\$ 130,025	\$ 136,725	\$ 143,771	\$ 151,182	\$ 158,977	\$ 167,176	\$ 175,800	\$ 184,871
Rockhaven Well Fixed O&M	\$ 38,405	\$ 39,557	\$ 40,743	\$ 41,966	\$ 43,225	\$ 44,521	\$ 45,857	\$ 47,233	\$ 48,650	\$ 50,109	\$ 51,613
Treatment O&M (Variable)	\$56,467	\$116,323	\$119,812	\$123,407	\$127,109	\$130,922	\$134,850	\$138,895	\$143,062	\$147,354	\$151,775
Other O&M (Variable)	\$2,515	\$5,182	\$5,337	\$5,497	\$5,662	\$5,832	\$6,007	\$6,187	\$6,373	\$6,564	\$6,761
Power O&M (Variable)	\$25,825	\$54,748	\$58,033	\$61,515	\$65,206	\$69,118	\$73,266	\$77,662	\$82,321	\$87,260	\$92,496
Total Annual O&M Rockhaven	\$ 123,212	\$ 215,809	\$ 223,926	\$ 232,385	\$ 241,202	\$ 250,394	\$ 259,979	\$ 269,977	\$ 280,406	\$ 291,288	\$ 302,644
Total Annual Expenditures Rockhaven Wellsite	\$ 245,184	\$ 399,460	\$ 414,084	\$ 429,377	\$ 445,373	\$ 462,104	\$ 479,608	\$ 497,924	\$ 517,091	\$ 537,151	\$ 558,150

FMWD Import

Imported Water Supply Equivalent

Power Costs of Delivery

Total Import Expenditure Equivalent

Net Annual Rockhaven Savings	\$ 20,398	\$ 159,052	\$ 173,191	\$ 188,149	\$ 203,971	\$ 220,704	\$ 238,397	\$ 257,103	\$ 276,875	\$ 297,772	\$ 319,853
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Well and Pipeline Construction Cost

Subtotal

Annual Payments to GWP

GWP Construction Costs at Rockhaven Well

Lease of Rockhaven Wellsite from GWP

Lease of Water Rights from GWP

Annual Payments to GWP	\$ 121,972	\$ 183,651	\$ 190,158	\$ 196,993	\$ 204,171	\$ 211,710	\$ 219,629	\$ 227,947	\$ 236,685	\$ 245,863	\$ 255,506
Total Cost per ac-ft	\$ 504	\$ 380	\$ 393	\$ 407	\$ 422	\$ 438	\$ 454	\$ 471	\$ 489	\$ 508	\$ 528

CY 2013

Existing FMWD Tier 1 Imported Water Supply Costs

CVWD Power Costs for FMWD deliveries

Total Unit Cost for FMWD deliveries (\$/AF)

\$847	\$935	\$981	\$1,030	\$1,082	\$1,136	\$1,193	\$1,252	\$1,315	\$1,381	\$1,450	\$1,522
\$145	\$163	\$173	\$183	\$194	\$206	\$218	\$232	\$245	\$260	\$276	\$292
\$992	\$1,098	\$1,154	\$1,214	\$1,276	\$1,342	\$1,411	\$1,484	\$1,560	\$1,641	\$1,726	\$1,815
\$1,098	\$1,154	\$1,214	\$1,276	\$1,342	\$1,411	\$1,484	\$1,560	\$1,641	\$1,726	\$1,815	\$1,906
21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
\$231	\$243	\$256	\$269	\$283	\$297	\$312	\$329	\$345	\$363	\$382	\$402

Rockhaven Cost Analysis with No Grant Funding

Interest rate on investment (Construction)												
Inflation (Lease)												
Interest rate on (Well and Pipe Costs)												
Inflation on water												
Inflation Rate on O&M (Fixed)												
Inflation Rate on O&M (Treatment)												
Inflation Rate on O&M (Other)												
Inflation Rate on Power												
Rate for PV Calculations												
Lease Payments												
Rockhaven Fixed O&M (2013 \$)												
	CY 2026	CY 2027	CY 2028	CY 2029	CY 2030	CY 2031	CY 2032	CY 2033	CY 2034	CY 2035	CY 2036	CY 2037
	12	13	14	15	16	17	18	19	20	21	22	23
Total Investment												
Rockhaven Well	\$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012											
	\$ 20,213 \$ 20,819 \$ 21,443 \$ 22,087 \$ 22,749 \$ 23,432 \$ 24,135 \$ 24,859 \$ 25,605 \$ 26,373 \$ 27,164 \$ 27,979											
	\$ 194,412 \$ 204,448 \$ 215,005 \$ 226,110 \$ 237,792 \$ 250,080 \$ 263,007 \$ 276,605 \$ 290,910 \$ 305,958 \$ 321,790 \$ 338,445											
Rockhaven Well Fixed O&M	\$ 53,161 \$ 54,756 \$ 56,398 \$ 58,090 \$ 59,833 \$ 61,628 \$ 63,477 \$ 65,381 \$ 67,343 \$ 69,363 \$ 71,444 \$ 73,587											
	\$ 156,328 \$ 161,018 \$ 165,848 \$ 170,824 \$ 175,948 \$ 181,227 \$ 186,664 \$ 192,263 \$ 198,031 \$ 203,972 \$ 210,091 \$ 216,394											
	\$ 6,964 \$ 7,173 \$ 7,388 \$ 7,609 \$ 7,838 \$ 8,073 \$ 8,315 \$ 8,564 \$ 8,821 \$ 9,086 \$ 9,359 \$ 9,639											
	\$ 98,046 \$ 103,929 \$ 110,164 \$ 116,774 \$ 123,781 \$ 131,208 \$ 139,080 \$ 147,425 \$ 156,270 \$ 165,646 \$ 175,585 \$ 186,120											
Total Annual O&M Rockhaven												
\$ 314,498 \$ 326,875 \$ 339,799 \$ 353,298 \$ 367,400 \$ 382,135 \$ 397,535 \$ 413,634 \$ 430,466 \$ 448,068 \$ 466,479 \$ 485,741												
Total Annual Expenditures Rockhaven Wellsite												
\$ 580,134 \$ 603,153 \$ 627,259 \$ 652,506 \$ 678,953 \$ 706,659 \$ 735,688 \$ 766,109 \$ 797,992 \$ 831,410 \$ 866,444 \$ 903,176												
FMWD Import												
Imported Water Supply Equivalent												
Power Costs of Delivery												
Total Import Expenditure Equivalent												
\$ 773,377 \$ 812,046 \$ 852,648 \$ 895,280 \$ 940,044 \$ 987,047 \$ 1,036,399 \$ 1,088,219 \$ 1,142,630 \$ 1,199,761 \$ 1,259,749 \$ 1,322,737												
\$ 149,941 \$ 158,938 \$ 168,474 \$ 178,582 \$ 189,297 \$ 200,655 \$ 212,694 \$ 225,456 \$ 238,983 \$ 253,322 \$ 268,522 \$ 284,633												
\$ 923,318 \$ 970,983 \$ 1,071,122 \$ 1,073,863 \$ 1,129,342 \$ 1,187,702 \$ 1,249,093 \$ 1,313,675 \$ 1,381,613 \$ 1,453,084 \$ 1,528,271 \$ 1,607,370												
Net Annual Rockhaven Savings												
\$ 343,184 \$ 367,830 \$ 393,863 \$ 421,356 \$ 450,389 \$ 481,043 \$ 513,405 \$ 547,566 \$ 583,622 \$ 621,673 \$ 661,827 \$ 704,194												
Well and Pipeline Construction Cost												
Subtotal												
Annual Payments to GWP												
GWP Construction Costs at Rockhaven Well												
Lease of Rockhaven Wellsite from GWP												
Lease of Water Rights from GWP												
\$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012 \$ 51,012												
\$ 20,213 \$ 20,819 \$ 21,443 \$ 22,087 \$ 22,749 \$ 23,432 \$ 24,135 \$ 24,859 \$ 25,605 \$ 26,373 \$ 27,164 \$ 27,979												
\$ 194,412 \$ 204,448 \$ 215,005 \$ 226,110 \$ 237,792 \$ 250,080 \$ 263,007 \$ 276,605 \$ 290,910 \$ 305,958 \$ 321,790 \$ 338,445												
Annual Payments to GWP												
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Total Cost per ac-ft												
\$ 549 \$ 571 \$ 594 \$ 618 \$ 644 \$ 671 \$ 699 \$ 728 \$ 760 \$ 792 \$ 827 \$ 863												
CY 2013												
Existing FMWWD Tier 1 Imported Water Supply Costs	484	484	484	484	484	484	484	484	484	484	484	484
	\$847	\$1,598	\$1,678	\$1,762	\$1,850	\$1,943	\$2,040	\$2,142	\$2,249	\$2,361	\$2,480	\$2,603
	\$145	\$310	\$328	\$348	\$369	\$391	\$415	\$440	\$466	\$494	\$524	\$555
CWWDD Power Costs for FMWWD deliveries												
Total Unit Cost for FMWWD deliveries (\$/AF)												
\$992 \$992 \$992 \$992 \$992 \$992 \$992 \$992 \$992 \$992 \$992 \$992												
Existing FMWWD Tier 1 Imported Water Supply Costs												
Negotiated Percentage												
Cost per Ac-ft for Rockhaven Well												
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Rockhaven Cost Analysis with No Grant Funding			
Interest rate on investment (Construction)			
Inflation (Lease)			
Interest rate on (Well and Pipe Costs)			
Inflation on water			
Inflation Rate on O&M (Fixed)			
Inflation Rate on O&M (Treatment)			
Inflation Rate on O&M (Other)			
Inflation Rate on Power			
Rate for PV Calculations			
Lease Payments			
Rockhaven Fixed O&M (2013 \$)		CY 2038 24	CY 2039 25
Rockhaven Well	Total Investment		
GWP Construction Costs at Rockhaven Well	\$ 1,095,841	\$ 51,012	\$ 51,012
Lease of Rockhaven Wellsite from GWP	\$376,000	\$ 28,818	\$ 29,683
Lease of Water Rights from GWP		\$ 355,966	\$ 374,400
Rockhaven Well Fixed O&M	2013 Price	\$ 75,795	\$ 78,069
Treatment O&M (Variable)	\$220	\$222,886	\$229,573
Other O&M (Variable)	\$10	\$9,929	\$10,226
Power O&M (Variable)	\$95	\$197,288	\$209,125
Total Annual O&M Rockhaven		\$ 505,897	\$ 526,993
Total Annual Expenditures Rockhaven Wellsite		\$ 941,693	\$ 982,087
FMWD Import			
Imported Water Supply Equivalent		\$ 1,388,874	\$ 1,458,317
Power Costs of Delivery		\$ 301,711	\$ 319,814
Total Import Expenditure Equivalent		\$ 1,690,585	\$ 1,778,131
Net Annual Rockhaven Savings		\$ 748,892	\$ 796,044
Well and Pipeline Construction Cost			
Subtotal			
Annual Payments to GWP			
GWP Construction Costs at Rockhaven Well		\$ 51,012	\$ 51,012
Lease of Rockhaven Wellsite from GWP		\$ 28,818	\$ 29,683
Lease of Water Rights from GWP		\$ 355,966	\$ 374,400
Annual Payments to GWP		\$ 435,796	\$ 455,094
Total Cost per ac-ft		\$ 901	\$ 941
Existing FMWD Tier 1 Imported Water Supply Costs	CY 2013	484	484
CVWD Power Costs for FMWD deliveries	\$847	\$2,870	\$3,014
Total Unit Cost for FMWD deliveries (\$/AF)	\$145	\$624	\$661
	\$992	\$3,494	\$3,675
Existing FMWD Tier 1 Imported Water Supply Costs		\$3,494	\$3,675
Negotiated Percentage		21%	21%
Cost per Ac-ft for Rockhaven Well		\$736	\$774

LEASE AGREEMENT

THIS GROUND LEASE AGREEMENT ("Lease Agreement") is made and entered into as of _____, 2014, by and between the **CITY OF GLENDALE, CALIFORNIA**, ("Landlord"), a municipal corporation, and **CRESCENTA VALLEY WATER DISTRICT** ("Tenant"), also referred to as each a "Party" and collectively "Parties".

RECITALS

WHEREAS, Landlord is the owner of certain real property a portion of which is the subject of the terms of this Lease Agreement, which portion is legally described in Exhibit "A" and shown in Exhibit "B" as the "Leased Premises" (hereinafter referred to as the "Leased Premises"); Said Exhibits "A" and "B" are attached hereto and incorporated herein by reference.

WHEREAS, Landlord and Tenant have entered into an executed a memorandum of understanding and agreement entitled City of Glendale and Crescenta Valley Water District Rockhaven Well Infrastructure, Operation and Water Purchase/Sale and Land Lease Agreement ("MOU"), which MOU sets forth the Parties' understanding and agreement pertaining to Tenant's proposed use of the Leased Premises;

WHEREAS, Tenant desires to enter into a lease with Landlord for the Leased Premises; and

WHEREAS, Landlord is willing to grant such a lease, subject to the terms and conditions of this Lease Agreement.

NOW, THEREFORE, in consideration of the promises and of the mutual obligations and agreements in this Lease, the Parties agree as follows:

1. TERM

1.1 The term of this Lease Agreement shall be for a period of twenty five (25) years, commencing thirty days following the City Council's approval by way of an ordinance authorizing the subject Lease Agreement. The term of the Lease may be terminated sooner in any one or more of the following: abandonment or voluntary surrender of the Lease by Tenant; forfeiture of the Lease after an uncured breach of the terms of the Lease Agreement; and/or for any other reason stated in this Lease Agreement.

1.2 Landlord may terminate this Lease Agreement at any time upon eighteen ~~six~~ (18) months written notice to Tenants.

1.3 Landlord may terminate this Lease Agreement, in the event the operations on the Lease Premises are posing or constituting an emergency affecting public welfare, safety and security, and/or in the event Landlord requires the use of the Leased Premises to address an emergency affecting public welfare, safety and security. Such termination shall be effective immediately and shall be without the requirement of any prior notice to Tenant. Landlord will make every effort to provide Tenant with one (1) week notice of termination in instances of public emergency affecting public security and/or safety only if providing such notice is possible in light of the events and circumstances surrounding the emergency.

1.4 Tenant may terminate this Lease Agreement at any time upon eighteen ~~six~~ (18) months written notice to Landlord.

2. USE OF PREMISES

2.1 The Leased Premises shall be used solely for the purpose of installation/construction of vertical turbine pump and motor, a small building enclosure on a concrete pad over the groundwater well, above ground discharge piping with a flow meter, electrical/telemetry system to provide power for the pump and ability to remotely monitor and control the pump, asphaltic concrete paving and on-site improvements, underground discharge piping to waste, and 8-inch water main which will connect to an existing 8-inch water main to CVWD's Nitrate Removal Treatment and ingress, egress and parking of motor vehicles by Tenant and Tenant's employees, representatives and agents, and for no other purposes, without the written consent of Landlord first being obtained.

2.2 Tenant acknowledges that Landlord shall not be held responsible for the design of the facilities on the Leased Premises. Tenant acknowledges that Landlord shall not be held liable and agrees to defend and hold Landlord harmless to the maximum extent permitted by law from all claims arising out of the design, maintenance and operation of Tenant's Facilities at the Leased Premises.

3. RENT

Tenant shall pay as rent the sum of _____, in advance, on the 1st day of every month during the first two (2) years of this Lease Agreement. The rent shall be adjusted every two (2) years, commencing after the first two years (beginning on the 1st day of the twenty fifth (25th) month and thereafter every other year on the anniversary), per the most recent published Consumer Price Index for all Urban Consumers applicable to the Los Angeles-Anaheim-Riverside area, published by the U.S. Department of Labor, Bureau of Labor Statistics ("Index") compared to the index published twelve (12) months earlier, provided however, that in no event shall the rent decrease below the original rent effective on the commencement date of this Lease Agreement or increase more than a maximum of five percent (5%) per adjustment. If the Index is discontinued or changed so that it is impossible to obtain a continuous measurement of price changes, the index shall be replaced by a comparable governmental index.

4. PAYMENTS

All payments, including rentals, to be made by the Tenant to Landlord hereunder, shall be payable in lawful money of the United States by check or money order to the City of Glendale, and delivered to the Water Engineering, City of Glendale, 141 North Glendale Avenue, 4th Floor, Glendale, California, 91206-4998, or to such other address as Landlord may from time to time designate in writing. All payments submitted shall contain the following notation: "Lease payment for Rockhaven Well".

5. DEPOSIT AS SECURITY

It is understood that Tenant has deposited with Landlord the sum of \$_____ as security for the performance of all of the terms and conditions hereof to be kept and performed by each Tenant, as well as security for the payment on account of any damages which Landlord may sustain by reason of any act or omission of the Tenant.

6. MAINTENANCE AND REPAIRS

6.1 Landlord shall be responsible for maintaining the lighting and landscaping, including planting, trimming and irrigating said landscaping.

6.2 Tenant shall be directly responsible for all utilities required by Tenant's use of the Leased Premises, including but not limited to electricity. The cost of any utilities provided by Landlord shall be paid by Tenant to Landlord as payment separate from rent. Tenant shall pay a monthly charge for electricity computed at the then-current public utility rate.

6.3 Tenant shall keep the Leased Premises free from trash and debris. Tenant shall maintain the paved surface of the Leased Premises.

7. ACCESS

7.1 By Landlord: Landlord reserves the right to enter and use the Leased Premises for the purpose of gaining access to Landlord's adjacent properties without interfering with Tenant's use of the Leased Premises.

7.2 By Tenant: At all times throughout the Term of this Lease Agreement, and at no additional charge to Tenant, Tenant and its employees, agents, contractors, and subcontractors, will have twenty-four (24) hour per day, seven (7) day per week right of access to and over Landlord's property, along Landlord's specified access routes, for the installation, repair, maintenance and operation of the Tenant Facilities and any utilities serving the Lease Property. Tenant must provide Landlord with at least 72 hours advance prior notice for any vehicular access if the vehicle or equipment: (1) has a gross vehicle weight in excess of 10,000 pounds; (2) has skid steering including track driven vehicles or equipment; (3) possesses outriggers or stabilizers; (4) needs to be transported by trailer; or (5) is not recognized by the Department of Motor Vehicles to be legally driven or operated across/over public roads or highways. Tenant is responsible for and shall reimburse Landlord for any and all damages to the access to Landlord's property caused by Tenant's activity on Landlord's Property.

8. COMPLIANCE WITH ALL LAWS

8.1 Tenant shall comply with all applicable requirements of federal, state and local laws, rules and to monitor and certify such compliance in accordance with requirements as may be established by Landlord.

8.2 Tenant's ability to use the Lease Property shall be dependent upon Tenant obtaining all the certificates, permits, and other approvals, which may be required from any federal, state, or local authorities. Landlord shall reasonably cooperate with Tenant, but at no expense to Landlord, in obtaining such approvals. If any application by Tenant for any such approval is finally denied or rejected, or if any such certificate, permit, license or approval expires, lapses or is otherwise withdrawn or terminated, or if due to technological changes or for any other reason, Tenant, in its sole discretion, determines that it will be unable to use the Lease Property for Tenant's intended purposes, then Tenant shall have the right to terminate this Lease in accordance with the applicable Sections herein.

9. SIGNS

Tenant shall consult with the Planning Division of the City of Glendale to determine what signs will be permitted. Only those signs permitted by ordinance may be erected on the Leased Premises.

10. TAXES

10.1 Tenant recognizes and understands that this lease may create a possessory interest subject to property taxation and that Tenant may be subject to the payment of property taxes levied on such interest, and Tenant agrees to pay all such taxes levied. Tenant bears the responsibility to determine the subject taxes. Landlord shall not be liable for Tenant's failure to pay such possessory property taxes.

10.2 Tenant shall also pay, before delinquency, all taxes assessed against any personal property of Tenant, which may be located in or upon the Leased Premises, including all facilities, furnishings, fixtures, equipment. Tenant shall not be liable to pay any taxes and assessments arising from fee simple ownership of the Leased Premises.

11. RIGHT OF INSPECTION

Landlord reserves the right, to its officers, agents or employees, to enter upon the Leased Premises, and every part thereof, at all reasonable times during regular business hours for the purpose of inspecting same.

12. INDEMNIFICATION

12.1 Tenant agrees to indemnify, defend and hold harmless, to the maximum extent permitted by law, Landlord and its officers, agents, employees and representatives, from and against any and all liability, suits, actions, proceedings, judgments, claims losses, liens, damages, injuries (whether in contract or in tort, including personal injury, accidental death or property damage, and regardless of whether the allegations are false, fraudulent or groundless), costs and expenses (including attorney's fees), litigation, arbitration, mediation, appeal expenses) which in whole or in part arise out of or are connected with, or which are alleged to have arisen out of or to have been connected with Tenant's use, occupancy, activities, events, or operations on, in or about the Leased Premises.

12.2 Tenant's obligation to indemnify, defend and hold harmless shall remain in effect and shall be binding upon Tenant whether such injury or damage shall accrue, or may be discovered, before or after the termination of this Lease.

13. INSURANCE

13.1 At their own expense, Tenant shall obtain, pay for and maintain during the term of the Lease Agreement an "occurrence" policy for Commercial General Liability (including Contractual Liability) which shall protect Tenant and Landlord from claims for injuries and damages. The policy shall add Landlord, its officers, agents and employees as additional named insureds under the policy in the following amounts:

COMMERCIAL GENERAL LIABILITY INSURANCE in an amount not less than One Million Dollars (\$1,000,000) per occurrence for personal injuries, including accidental death, to any one person;

PROPERTY DAMAGE INSURANCE in an amount not less than One Million Dollars (\$1,000,000); and subject to the above limits and combined single limit of insurance in an amount not less than One Million Dollars (\$1,000,000)

13.2 At all times, the insurance company issuing the policy shall be an "admitted" insured in the State of California; shall be domiciled within, and organized under the laws of, a state of the United States; and shall carry an A.M. Best & Company minimum rating of "A-"

13.3 All policies shall contain a "Separation of Insured" clause and a "Primary Coverage" clause for any loss arising out of or caused by Tenant's occupation or use of the Leased Premises. In addition, the policies shall contain a statement of obligation on the insurance carrier's part to notify Landlord, by registered mail, at least thirty (30) days in advance of any policy cancellation, termination or reduction of the state limits.

13.4 Before signing this Lease Agreement, Tenant shall deliver to Landlord a "certificate of insurance" and an "additional insured endorsement", both documents countersigned by the insurance carrier or its authorized representative, on forms satisfactory to the City Attorney, which set forth the above provisions.

13.5 Thirty (30) days prior to each anniversary date of this Lease Agreement, each Tenant shall deliver to Landlord a renewal certificate of insurance and renewal additional insured endorsement, in conformance with the requirements set forth herein.

13.6 The countersigned certificate, along with the additional insured endorsement, shall state: "The City of Glendale, its officers, agents and employees are added as additional names insureds under this policy. This insurance is primary to the coverage of the City of Glendale. Neither the Landlord nor any of its insurers shall be required to contribute to any loss. The insurance shall apply separately to each insured. The issuing company shall mail thirty (30) days advance notice to the Landlord of any policy cancellation, termination or reduction of the stated limits."

13.7 Additionally, any deductibles or self-insured retentions shall be set forth on the certificate and shall be subject to Landlord's review and approval. Landlord reserves the right to modify its insurance requirements on an annual basis.

13.8 Tenant's failure to comply with the provisions of this Section shall constitute a material breach upon which Landlord may immediately terminate this Lease Agreement.

13 DEFAULT BY TENANT

13.1 The occurrence of any one or more of the following events shall constitute an "Event of Default" hereunder by Tenant.

1. The failure by Tenant to make the payment of rent or any other payment required to be made by Tenant hereunder when due, where such failure shall continue for a period of ten (10) days after written notice thereof is received by Tenant from Landlord.
2. The failure by Tenant to observe or perform any of the covenants or provisions of this Lease Agreement to be observed or performed by Tenant, other than as specified in Section 13(A) where such failure shall continue for a period of thirty (30) days after written notice thereof is received by Tenant from Landlord; provided, however, that it shall not be deemed an Event of Default by Tenant if Tenant shall commence to cure such failure within said thirty (30) day period and thereafter diligently prosecute such cure to completion.

13.2 If there occurs an Event of Default by Tenant, in addition to any and all other remedies available to Landlord at law or in equity; Landlord shall have the option to terminate this Lease Agreement and all rights of Tenant hereunder.

13.3 In addition, Landlord shall be entitled to immediate restraint by injunction of any violation of any of the covenants, conditions, or provisions of this Lease Agreement.

13.4 Should Tenant engage in activities which may cause or allow the Leased Premises to become a threat or danger to public welfare and safety, Landlord shall have the right, prior to a determination and authorization by a court of competent jurisdiction, to re-enter the Leased Premises and remove persons and personal property therefrom.

14 ASSIGNMENT AND SUBLETTING

14.1 Tenant shall not have the right to assign this Lease, or to sublet the whole or any portion of the Property without the prior written consent of the Landlord, which consent shall not be unreasonably withheld. No assignment or sublet shall release Tenant or change Tenant's primary liability to perform Tenant's obligations hereunder.

14.2 Tenant's rights hereunder shall not be subject to assignment by attachment, execution or proceedings under any Bankruptcy Act provision. Any such assignment or subletting shall be wholly void and of no force and effect without Landlord's prior written consent.

14.3 Any consent by Landlord to Tenant to assign this lease or sublet the whole or any portion of the Property, shall not be construed as consent to any other assignment or subletting, or as a waiver of Landlord's objection or right to object to any such assignment or subletting to which it has not consented.

15 EFFECT OF BANKRUPTCY

If at any time during the Lease term, in any judicial action or Court proceeding against either of the Tenant, a receiver or other officer or agent of the court is appointed to take charge of Tenant's interest under this Lease, and remain in possession of the Leased Premises for a period of more than twenty (20) days, or if Tenant shall be adjudicated bankrupt, or should any attempt to be made to sell Tenant's interest under this Lease by judicial sale, then Landlord shall have the right, to immediately terminate this Lease Agreement.

16 LANDLORD'S RIGHTS UPON TERMINATION

In the event of a termination or cancellation of this Lease Agreement for any cause or reason whatsoever, before the expiration of the term hereof, Landlord shall be entitled to remove Tenant from the Leased Premises and, except as otherwise hereinabove expressly provided, shall be entitled to retain any sum then held by Landlord as security pursuant to Paragraph 6 hereof, to cover damages and rents owed, pursuant to Section 1950.7 of the California Civil Code.

17 HOLDING OVER

Upon termination of this Lease Agreement, Tenant shall surrender the Leased Premises in good, clean, undamaged condition, wear and tear excepted. Any holding over by Tenant after the term of this Lease Agreement expires, with the consent of Landlord, shall create a month to month tenancy, which either party may terminate by giving the other party written notice at least thirty (30) days before the intended termination date. Rent shall be at a rate equal to the rent for the immediately preceding month, and shall be payable in advance. In the event of a holding over, all other terms and conditions of this Lease shall remain in full force and effect.

18 NOTICE

Any notice to be provided to the Landlord and Tenant hereunder shall be provided in writing and unless otherwise provided herein, shall be deemed validly given on the date either personally delivered to the address indicated below or on the third (3rd) business day following deposit, postage prepaid, using certified mail, return receipt requested, in any U.S. Postal mailbox or at any U.S. Post Office. Notices shall also be allowed via electronic mail ("email"), and shall be deemed validly given on the date of transmission when sent by email. Should Landlord or Tenant have a change of address, the other party shall immediately be notified in writing of such change, provided, however, that each address for notice must include a street address and not merely a post office box. All notices shall be addressed as follows:

TENANTS

CRESCENTA VALLEY WATER DISTRICT
ATTN: Dennis Erdman, General Manager
2700 Foothill Boulevard
La Crescenta, CA 91214-3516
Facsimile: (818) 248-1659
Email: derdman@cvwd.com

LANDLORD

CITY OF GLENDALE WATER & POWER
ATTN: Ramon Abueg, Chief Assistant General Manager
141 North Glendale Ave., 4th Level
Glendale, CA 91206-4496
Facsimile: (818) 552-2852
Email: rabueg@glendaleca.gov

19 MISCELLANEOUS PROVISIONS

A. WAIVER. Landlord's failure to exercise any of its rights resulting from a default or breach of covenant on the part of Tenant shall not be construed as a waiver thereof, nor shall any custom or practice which may grow up between the parties in the course of administering this Lease be construed to waive or to lessen the right of Landlord to insist upon the performance by Tenant of any term, covenant or condition hereof, or to exercise any right given it resulting from any such default. A waiver of a particular breach or default shall not be deemed to be a waiver of the same or any other subsequent breach of default.

B. TIME OF ESSENCE. Time is of the essence of this Lease and of each provision.

C. NO PARTNERSHIP. This Lease Agreement shall not be construed to constitute any form or partnership or joint venture between Landlord and Tenant.

D. CONSTRUCTION

1. Section titles or captions contained in this Lease are inserted as a matter of convenience and for reference and in no way define, limit, extend or describe the scope of this Lease or any provision hereof.

2. Unless defined otherwise, the words used in this Lease shall be construed according to their plain meaning in the English language. The language used in this Lease shall not be interpreted strictly for or against either party.
3. If any provision of this Lease is capable of two constructions, one of which would render the provision void and the other of which would render the provision valid, then the provision shall have the meaning that renders it valid.
4. The singular includes the plural and vice versa, and the masculine includes the feminine and neuter, whenever the context so requires.

E. WARRANTEE. Landlord warrants and agrees that Landlord is seized of good and sufficient title to and interest in the Leased Premises and has full authority to enter into and execute this Lease Agreement and that there are no undisclosed liens, judgment or impediments of title on the Leased Premises that would affect this Lease Agreement. Landlord makes no representation or warranty whatsoever concerning the suitability of the Leased Premises for the purposes intended by Tenant. Tenant acknowledges that neither Landlord, nor any of Landlord's officers, agents and employees have made any representations concerning the suitability of the Leased Premises for the purposes intended by Tenant, nor is Tenant entering into this Lease Agreement in reliance upon any such representations.

F. RIGHT OF QUIET ENJOYMENT. Tenant shall have the right of quiet enjoyment of the Leased Premises.

G. GOVERNING LAW. This Lease Agreement and the performance hereon shall be governed, interpreted, construed and regulated by the laws of the State of California.

H. ENTIRE AGREEMENT. This Lease Agreement constitutes the entire agreement between the parties hereto pertaining to the subject matter hereof, fully supersedes any and all prior understandings, representations, warranties and agreements between the parties hereto, or any of them, pertaining to the subject matter hereof, and may be modified only by written agreement signed by all of the parties hereto.

I. BINDING POWER. Each person executing this Lease warrants and represents that he or she is duly authorized to execute this Lease Agreement on behalf of Landlord or Tenant.

J. SEVERABILITY. If any portion of this Lease Agreement is declared by a court of competent jurisdiction to be invalid or unenforceable, then such portion shall be deemed modified to the extent necessary in such court's opinion to render such portion enforceable and, as so modified, such portion and the balance of this Lease Agreement shall continue in full force and effect.

K. ATTORNEYS' FEES. In case suit shall be brought because of the breach or alleged breach of any covenant herein contained on the part of any party to be kept or performed, or for declaratory relief, the prevailing party or parties shall recover from the non-prevailing party or parties all costs and expenses incurred herein, including reasonable attorneys' fees and expenses incurred in enforcing any judgment.

L. FORCE MAJEURE. For the purposes of this Lease Agreement, "Force Majeure" means an unforeseen event or condition deemed by Landlord as calling for immediate action to avoid the threat of loss or injury of property and/or danger to public safety, including but not limited to, an act of God, labor dispute, civil unrest, epidemic, and/or natural disaster.

20 ENFORCEMENT AUTHORIZATION

The City Manager of Landlord, or his assigned representative, is hereby authorized to act on behalf of the City in all matters pertaining to this Lease, with the exception that a termination of the Lease by Landlord due to breach of any of the terms and conditions herein shall be approved by the Council of the City of Glendale.

IN WITNESS WHEREOF, the parties hereto have caused this Lease to be executed by their officers hereunto duly authorized on the day and year first above written.

LANDLORD:

CITY OF GLENDALE

By: _____
City Manager

TENANT:

CRESCENTA VALLEY WATER
DISTRICT

By: _____

**EXHIBIT “A”
(LEGAL DESCRIPTION)**

DRAFT

**EXHIBIT “B”
(MAP)**

Daily water allocation could be the next California drought strategy



The lush and the dying lawns of two homes in Studio City reflect different takes on California's water crisis. California water agencies are working towards "allocation-based rate structures" in order to help combat the drought. (Dean Musgrove — Staff photographer)

You probably know your Social Security number, your driver's license number and perhaps the latest wrinkle in mattress marketing, your sleep number.

But do you know your drought number?

The latter represents the amount of water you are allowed to use per day. If you don't know it, you probably should. Not knowing could cost you money. As California's severe drought moves into a fourth year, state and local water agencies are working on something called "allocation-based rate structures," a kind of precursor to water

rationing that's all the rage in Sacramento and in some areas such as Santa Cruz, Irvine and Santa Monica.

Here's how it works: Your local water company, special district or city assigns you and your household a number in gallons — a daily water allocation. Usually, one number applies to maximum indoor water use, i.e. showers, kitchen and bathroom faucets, dishwashers, clothes washers, etc., and an extra allocation is assigned for outdoor use such as lawn irrigation.

Using census records, aerial photography and satellite imagery, an agency can determine a property's efficient water usage.

At the Irvine Ranch Water District, number of residents, amount of landscaping and even medical needs are factored into a household's water allocation or water budget.

"We want you to stay within that budget. That way we know you are using water in an efficient way," according to an instructional video on the Orange County water agency's website.

While some call it a more equal way to meter out mandatory water conservation, others call it social engineering. Some say the idea simply will not work.

In July, the State Water Resources Control Board passed stage one emergency regulations, giving powers to all local water agencies to fine \$500 per violation.

"We were concerned with the lack of alarm we were hearing," said Felicia Marcus, chair of the State Water Resources Control Board. "Our reservoirs are low. Half of the state's storage is gone. It's a frightening situation."

Beginning sometime in October, the state water board will have collected sufficient data from local water agencies to report how much water per person per day residents of the state are using. Already, Marcus said Los Angeles residents are down to 89 gallons per person per day, from more than 100 earlier in the year. Sacramento water use has dropped as well, but it is still way higher per capita than Los Angeles, she said.

After the new numbers are crunched, the state board could order the local agencies to implement stronger water-use regulations, such as banning all watering of lawns and all decorative fountains, she said.

Right now, Marcus is recommending that water agencies, particularly retail ones, switch to water-budgeted allocations. But it is unlikely the state board will assign every resident a drought number. That would be left up to local agencies and cities.

She said at the very least, water agencies and cities should move toward "incentivizing water use through different kinds of rate structures" but declined to get more specific.

“Rates send a powerful signal,” she said. “It is one thing to ask for voluntary action ... but that can only go so far. Rates should be designed so you send a financial signal (to customers)” and to enable them to know their water use and compare that with their neighbors.

“This winter, we will be looking at this information on water production, specifically gallons per capita per day. That will give us a better story of what is going on and people can compare themselves with other communities. We will then consider more regulations,” Marcus said.

Santa Monica model

Some local agencies are implementing a drought number model. In Santa Monica, the City Council passed a first-reading in August of an ordinance that would apply an indoor water allocation of 68 gallons per-person-per-capita for every single-family home with four people, said Gilbert Borboa, water resources manager for the city of Santa Monica.

“A customer uses beyond that allocation, then it is possible some penalties might apply,” he said. Today, residents are using about 88 gallons per person per day in Santa Monica, he said.

The City Council will vote on the water-allocation plan next month. Santa Monica will work on allocations for bigger households, apartments and condominiums and for commercial establishments such as hotels, he said. Indoor use is “essential” for health and safety, while the ordinance labels outdoor use as “non-essential.”

“Watering plants and lawns make them all look green and pretty, but that is not essential. Essential is for sustaining life (indoor use),” Borboa said.

The per person allocation is gaining momentum as are other water conservation ideas.

Eastern Municipal Water District, which covers communities in the Inland Empire from Riverside to Hemet, has enacted a Stage 2 drought plan. Each single-family household with three residents gets 60 gallons per person per day. An outdoor allocation is provided based on whether a house has a pool or turf or both. Any household going over the total allocation will be charged an “excessive rate,” according to the plan.

Matt Lyons, director of planning and conservation for the city of Long Beach, said the water allocation method is deeply flawed. Lyons said calculating an accurate allocation for a household or a hotel can’t be done because aerial images don’t tell the whole story such as elevation, or what lies under a canopy of trees — factors that affect water use.

“No. We have not embraced that at all,” he said. “You can’t do it with any degree of accuracy or without being intrusive.”

Instead, Long Beach has seen water conservation successes since 2009 through extensive outreach programs, including paying homeowners \$3.50 per square foot to remove thirsty lawns and replace them with drought-tolerant plants.

So far, 1,400 residents have eliminated their lawns and on average, each uses 22 percent less water, he said. The city has seen a drop in water use of 10,000 acre-feet from 2007 to 2009, he said. "Behavior change is driving this water savings," he said.

Making water hogs pay a top-tier rate is another trend gaining popularity among water agencies.

For example, Irvine charges a "wasteful" rate of \$12.60 per hundred cubic feet, well above the \$1.34 base rate.

Pasadena City Council member Margaret McAustin said Pasadena Water and Power, like many cities including Los Angeles, bill customers using tiered water rates. Customers pay more when they use more. But this doesn't stop residents who can afford higher bills from wasting water, she said.

"We are talking about putting in a new tier for people who use a lot of water," she said.

Jonathan Parfrey, executive director of Climate Resolve and a former commissioner at the Los Angeles Department of Water and Power, likes the water-allocation system.

"This is a terrific idea. People need to live within their water means. That is what a water budget offers," he said. He'd like to see cities add more, steeper tiers, charge for excessive water use and re-direct the revenues into conservation and water recycling.

Lyons, of Long Beach, cautioned against charging too much for water because it could be a violation of Proposition 218, which says water agencies can only charge for the cost of water service. If a municipal agency charges more for water, it can't make a profit, so it will have to charge someone else less. This leads to inequities, he explained.

He characterized water budgeting as a passing fad. "In water conservation, people are always looking for or thinking they found the magic bullet," he said. "We'd rather change the water culture."

Reach Steve Scauzillo at steve.scauzillo@langnews.com or on Twitter [@stevscaz](https://twitter.com/stevscaz)

Tags: [water use](#)

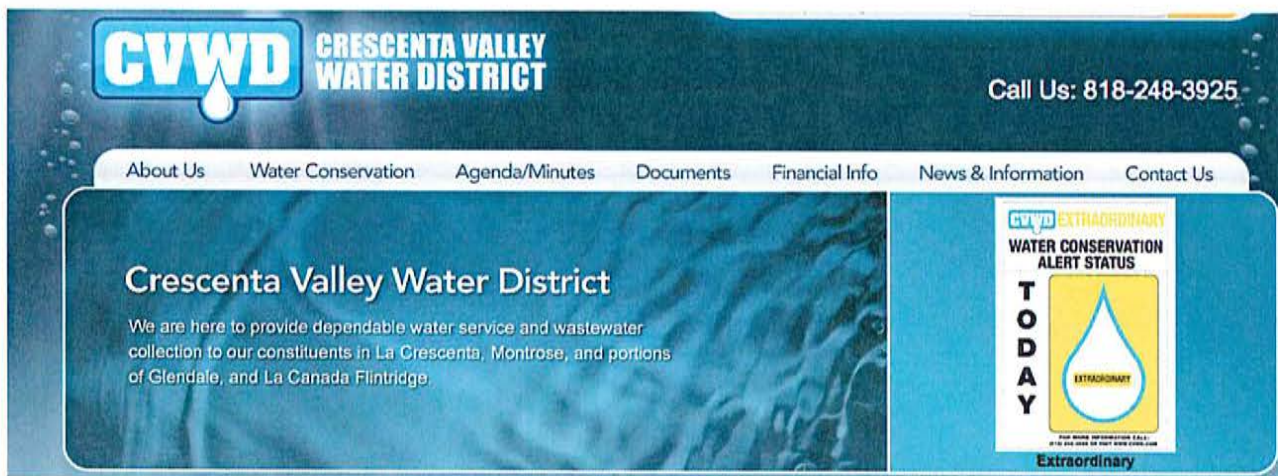
info item

Crescenta Valley Water District Loses Director to Foothills Municipal Water District

Kathleen M. Ross will resign from the Crescenta Valley Water District (CVWD) Board of Directors effective Dec. 5.

By Mirna Alfonso/Editor (mirna.alfonso@patch.com) (Patch Staff) (/users/mirna-alfonso-2)

🕒 Updated September 30, 2014 at 10:08 pm 🗨



NEWS FROM CRESCENTA VALLEY WATER DISTRICT

From the General Manager's Office (818) 248-3925

FAX (818) 248-1659

cjscott@cvwd.com

Director Kathleen M. Ross will resign from the Crescenta Valley Water District (CVWD)

Board of Directors effective December 5.

Ross ran and was unopposed for the Division 5 Foothill Municipal Water District Board of Directors seat in the general election scheduled for Nov. 4.

As a result, Ross must resign her position on the CVWD Board of Directors.

The District will accept Letters of Interest and resumes for its upcoming Board vacancy.

Letters of Interest and resumes may be submitted to Dennis Erdman -- CVWD's General Manger -- until noon on Monday Oct. 20.

Crescenta Valley Water District
2700 Foothill Blvd.
La Crescenta, CA 91214
Attn: Dennis Erdman

info item

CV WEEKLY

OCT. 2, 2014

Applications Now Being Taken for CVWD Board Seat

Director Kathleen M. Ross will resign from the Crescenta Valley Water District (CVWD) board of directors effective Dec. 5. . Ross ran and was unopposed for the Division 5 Foothill Municipal Water District board of directors seat in the general election scheduled for Nov. 4. As a result,

Ross must resign her position on the CVWD board of directors.

The district will accept Letters of Interest and resumes for its upcoming board vacancy.

Letters of Interest and resumes may be submitted to Dennis Erdman, CVWD's general manager until noon on Monday

Oct. 20. Send to:

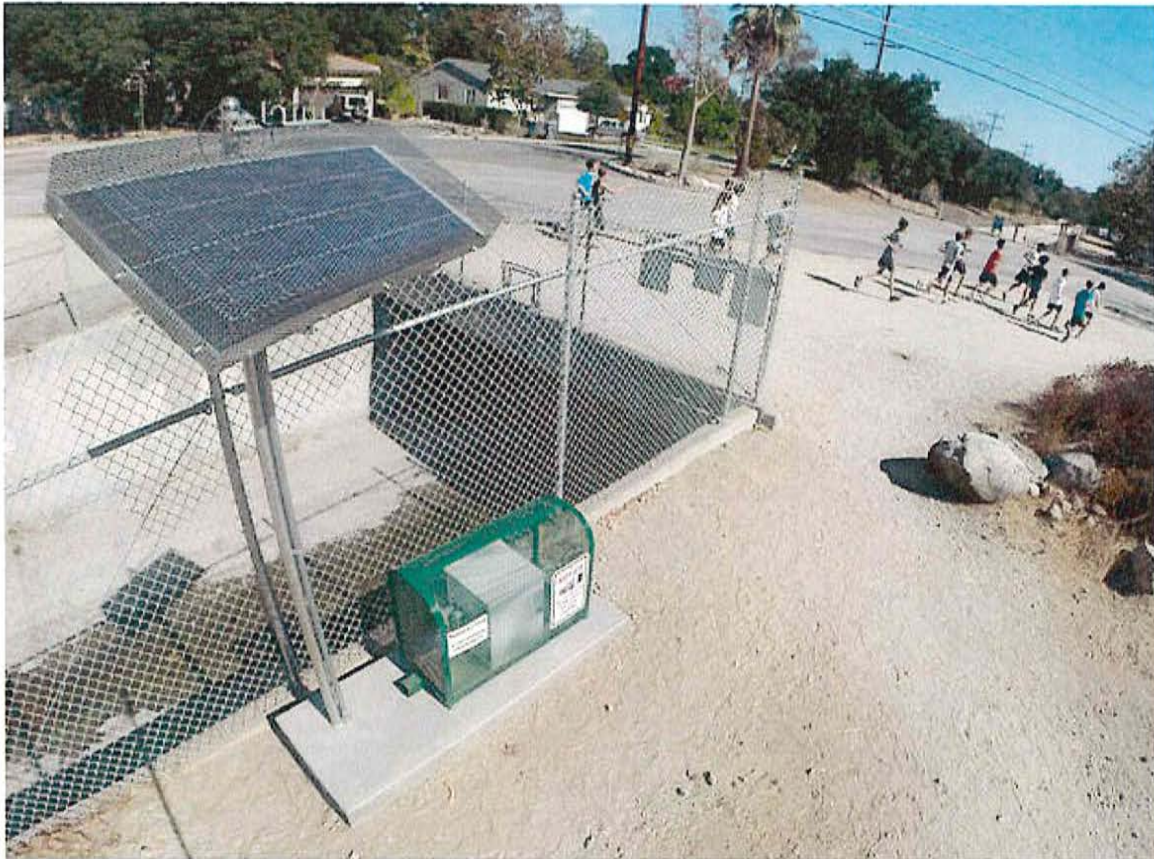
Crescenta Valley Water District
2700 Foothill Blvd.

La Crescenta, CA 91214

Attn: Dennis Erdman

District hopes to tap new resource of groundwater

Crescenta Valley Park is eyed as a future stormwater collection site.



Members of the Crescenta Valley High School cross country team run over a bridge that crosses the Verdugo Wash at the site of a solar-powered monitoring station at Crescenta Valley Park in La Crescenta on Monday, September 29, 2014. The station is being used to gather data about whether Crescenta Valley Park would be suitable for storm water to be placed in the ground. (Tim Berger / [Glendale News Press](#) / September 29, 2014)

By Alicia Banks, alicia.banks@latimes.com

October 1, 2014 6:30 p.m.

The Foothills area could gain a new way to combat the recurring drought as a study aims to see if an area of the Crescenta Valley can transform into a viable resource of usable groundwater.

Earlier this year, the Crescenta Valley Water District chose Crescenta Valley Park as a location to test for stormwater recharge feasibility. A \$158,500 grant from the California Department of Water Resources is funding the study.

Currently, the study is measuring the flow of water in the Verdugo Wash during a storm. If water levels prove plentiful, the study could lead to installing wells diverting runoff water that would normally flow into the Los Angeles River channel and move it underground.

Once filtered and treated, district customers throughout La Crescenta — and small portions of La Cañada, Montrose and Glendale — could use the water.

The park was chosen for its remote and low location in the community, Gould said.

"This is the first time doing a feasibility study in this area," said David Gould, district engineer for the water district. Gould is overseeing the project with three field technicians. "Droughts are detrimental and will cause costs to increase if we don't conserve."

The district, Gould said, receives a majority of its water from the Verdugo Basin, but recent droughts have strained that source.

The study came in response to a drought in 2008. The district spent \$1.8 million to import water from the Metropolitan Water District of Southern California via the Foothill Municipal Water District during that drought.

So far, the study has installed monitoring stations at Crescenta Valley Park, measuring the flow of water from the Verdugo Wash when storms move through the region.

"If it ever rains," he said.

The study remains in its early stages with more intricate data-collecting equipment still to be installed. Monitoring wells, reaching 150 to 200 feet underground, will look at the geology and water saturation of the rocks below.

The wells, covered by manholes, will be located along Honolulu Avenue on the south side of the park and near New York Avenue.

Crescenta Valley Town Council President Robbyn Battles has seen her share of droughts while living in the area for 49 years. She said it will be interesting to see what the study yields.

"I do think it's important for our water district to be on the forefront of finding other resources and ways to collect water," Battles said. "The more we're prepared for it, the better off our community will be."

The study is slated to run for two years, ending in March 2016.

info item

glendalenewspress.com/news/tn-gnp-me-lawsuit-over-utility-fund-transfer-continues-20141002,0,4919611.story

Glendale News Press

Lawsuit over utility-fund transfer continues

City's attorney says a trial over utility-fund transfers could begin in mid-2015.

By Arin Mikailian, arin.mikailian@latimes.com

5:25 PM PDT, October 2, 2014

As a trial on the legitimacy of Glendale's utility-fund transfer continues to inch forward, advertisement critics of the practice continue to claim it is illegal, while city attorneys counter the transfer has always been proper.

Both sides are due back in court Dec. 2 to set a trial date, and Michael Colantuono, who is representing the city, said he believes a trial could start in mid-2015.

In February, the Glendale Coalition for Better Government [filed a lawsuit against the city to force it to stop transferring tens of millions of dollars from its utility to the general fund](#) and send back \$90 million in utility money that's been shifted since 2010.

While city officials have contended the fees pay for police, parks and other general services, critics call the move a backdoor tax and say it artificially inflates utility rates.

"The coalition is essentially seeking that the city use electrical revenue for electrical works and use water revenue for water works so that it no longer uses these revenues for other purposes," said attorney Arthur Jarvis Cohen.

The local group believes the city can only make such transfers from a surplus under the city charter, based on the state constitution.

But according to court documents filed by Colantuono, the claims of illegal activity are canceled out because the transfer was approved decades before the constitutional provision, known as Proposition 26, was drafted.

The utility transfer was approved by local voters more than 60 years ago as a tool for maintaining city services.

Los Angeles Superior Court Judge James C. Chalfant combined the coalition lawsuit with a similar complaint made by the International Brotherhood of Electrical Workers Local 18.

Attorneys representing the city and the coalition said combining the like cases simplifies the litigation process for the judge, but they could be split up once again when they go to trial.

Information Shared on Stormwater Recharge Project



Posted by [Robin Goldsworthy](#) on Oct 2nd, 2014 and filed under [News](#). You can follow any responses to this entry through the [RSS 2.0](#). You can skip to the end and leave a response. Pinging is currently not allowed.

By Jason KUROSU

A project to recharge the Verdugo Basin in Crescenta Valley Park has been in the works for the past few years, with the Crescenta Valley Water District continuing to assess the feasibility of the park as a stormwater recharge area.

CVWD District Engineer David Gould headed a stakeholder meeting Wednesday morning, updating the progress on the feasibility study, which has so far included a topographic survey of the north end of CV Park, as well as identifying the park's trees.

"Our goal is to utilize this information to further develop any plans for infiltration galleries to eventually get stormwater to the ground and provide this information to L.A. County Parks and Recreation so they have an accurate topography of the area and a survey of all the trees," said Gould.

CVWD was awarded a Local Groundwater Assistance grant from the Dept. of Water Resources (DWR) to pursue the project in 2002, which is intended to capture stormwater for recharge, as well as improve groundwater quality and reduce surface water pollution.

Two flow monitoring stations have been installed in the park in order to record the amount of water coming down the Verdugo Wash and Dunsmore Channel. Gould said they hoped to have some flow data in October, though low water levels have made that difficult thus far.

The next portions of the project will include the installation of groundwater monitoring wells, which will monitor groundwater levels, water quality and geological information on soil conditions. CVWD determined where they will put the wells, using information on past wells drilled in the area, as well as ensuring the wells are located away from trees. Well No. 1 will be on the south side of the park near New York Avenue in between a fence and kid's park. Well No. 2 will be on the north side of the park along Honolulu Avenue.

"Our goal is by utilizing these monitoring wells and the existing well information we can get a better idea where the best place is to put these infiltration galleries in the future," said Gould, who anticipated the wells would start drilling in January.

The next step would be conducting percolation tests, in which the rate of flow of water into the ground would be monitored with pits, six-foot holes in the ground filled with water. Again, CVWD is in the process of determining the location of the test pits. Gould said one potential location is the south side of the softball field, likely to be done in February.

Gould summarized the questions which would be answered by the feasibility study, "Can we get the water in the ground, how much water can we get into the ground, what kind of recharge can help our groundwater basin?"

CVWD expects the project to be completed by March 2016.

Memorandum

DATE: October 3, 2014
TO: Board of Directors
FROM: Dennis A. Erdman 
RE: General Manager's Report
CC: Management Staff

The recent spell of hot weather has put us on alert to fire danger associated with Santa Ana wind conditions and the extremely dry conditions in the wild land areas to the north of the District. The operations department is keeping reservoirs as full as possible and our emergency generators have been inspected and are ready for service if needed.

The past month has had CVWD crews busy with several weekend repair jobs. Work at the upper end of Ocean View was performed on September 27 to prepare for the installation of a large diameter storm drain which is being installed by Los Angeles County Flood Control. CVWD crews also performed a night repair on October 1 on Adams due to a broken lateral which had a substantial water flow.

On October 2, the District held the second of two training sessions related to construction safety. All field staff and a number of engineering department staff were scheduled to attend these classes. ACWA JPIA conducted the class.

The District has worked 115 days without a lost time accident. Presently there are two employees who are off work due to injury and at this time their return to work status is not known.

There are three employee anniversaries this month, Jim Halasznski (17 years), Natalie Bellissimo (8 years), and Jaysen Ortega (1 year). Customer service representative Cesar Avila recently passed the certification exam for Wastewater Collections I. Congratulations to Cesar.

CRESCENTA VALLEY WATER DISTRICT

Crescenta Valley County Park

Stormwater Recharge Facility Study

Task Force Committee

September 24, 2014 at 9:00 am

Crescenta Valley County Park Community Room

1. Introduction

2. Background

- CVWD received Local Groundwater Assistance Grant from DWR - \$158,500
- Completed within 2-years – March 2016

3. Project Goal

- The goal of the Study is to evaluate the feasibility of using portions of CVC Park to capture stormwater to increase water-supply reliability, and improve surface water quality in downstream receiving waters.

4. Project Scope of Work - Update

- **Topographic Survey** – Completed – North side of CVC Park
- **Tree Identification** – Completed
- **Flow Monitoring Stations** – To monitor volume of stormwater in the Verdugo Wash
 - Stations installed
 - Finalizing Calibration
- **Water Quality Sampling** – To get water quality data of stormwater in the Verdugo Wash
 - Waiting on rainfall – Maybe start in October or November
- **Two Groundwater Monitoring Wells** – To get geological and water level information
 - Monitoring Well 1 – Located near south end of New York Ave,
 - Monitoring Well 2 – Located south side of Honolulu between Fredrick and Willalee
 - Bidding Documents completed
- **Percolation Test Pit** – To get rate of flow of water into the ground
 - Location – Near south side of Softball Field
 - Work to be done by CVWD crews
- **Task Force Committee** - To provide oversight and review of the feasibility study
 - Provide guidance on the technical, economic and programmatic feasibility of establishing a groundwater recharge project in the Verdugo Basin
 - Advice on potential community impacts of a recharge groundwater recharge program
- **Stormwater Recharge Feasibility Study Report** – Final report

5. **Project Schedule – October 2014 – April 2015**

- **Flow Monitoring Stations**
 - Starting in October 2014 to April 2015
- **Water Quality Sampling**
 - Starting in October 2014 to April 2015
- **Two Groundwater Monitoring Wells**
 - Bidding postponed until Oct/Nov 2014
 - Drilling start in January 2015
- **Percolation Test Pit**
 - Work to start in February 2015

6. **Task Force Meeting**

- Next Meeting – March 18, 2015

7. **Questions & Answers**

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Verdugo Basin Storm Water Recharge Facility Study Stakeholder Meeting No. 3

Date: September 24, 2014

Location: Crescenta Valley County Park Community Room
3901 Dunsmore, La Crescenta, CA 91214

Time: 9:00 am

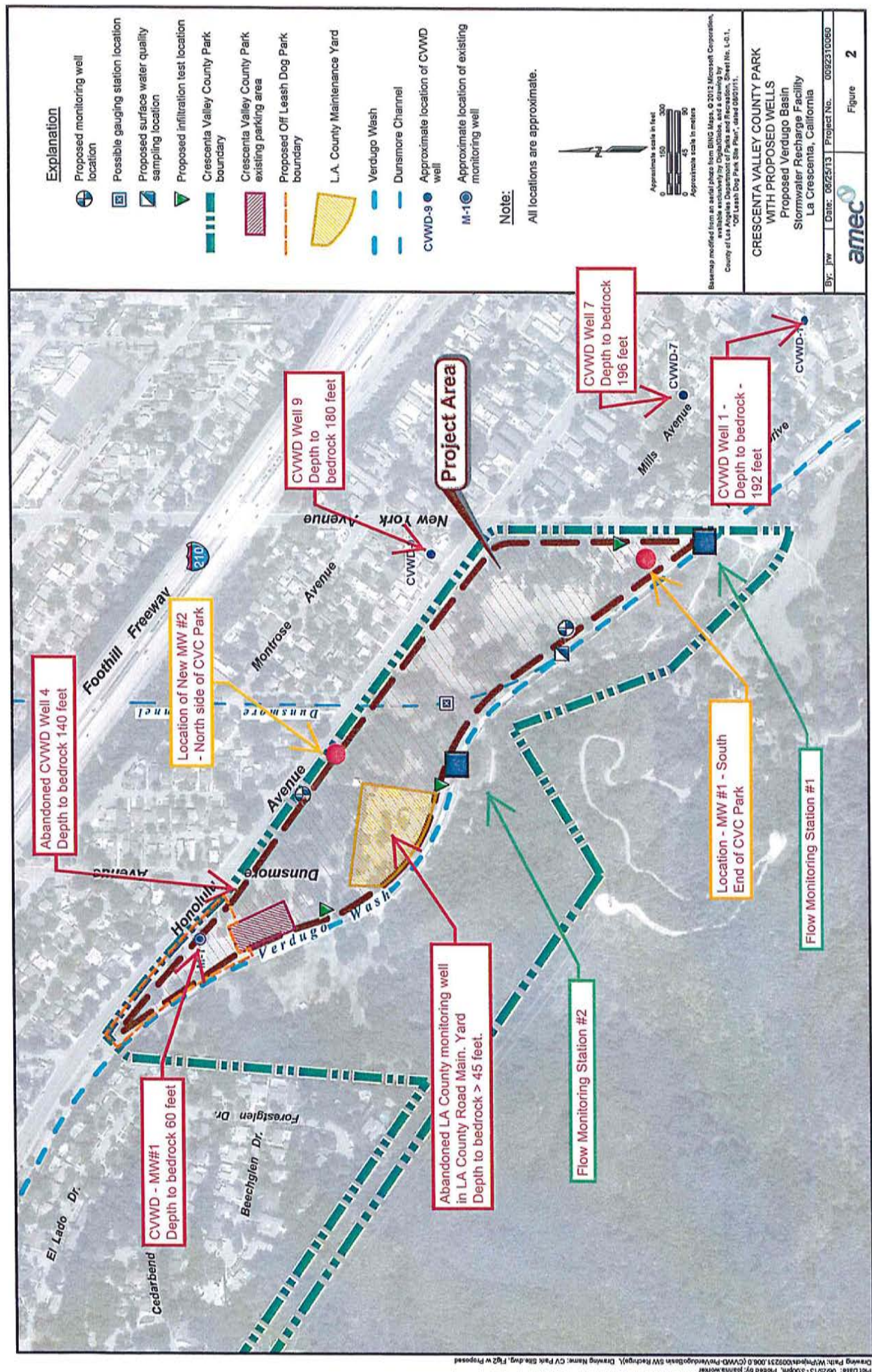
Crescenta Valley Water District (CVWD) was awarded a Local Groundwater Assistance (LGA) grant from the Department of Water Resources (DWR) to perform a Feasibility Study at Crescenta Valley County Park. This study will be used to determine if Crescenta Valley County Park (CVC Park) can be used as a stormwater recharge area for the Verdugo Basin.

An element of the study will be that CVWD make use of a Task Force Group of local stakeholders to evaluate and oversee the project data and conclusions, to interact and coordinate with Los Angeles County Department of Public Works, Los Angeles County Parks & Recreation Department, City of Glendale, ULARA Watermaster, and other interested parties regarding the study and its findings.

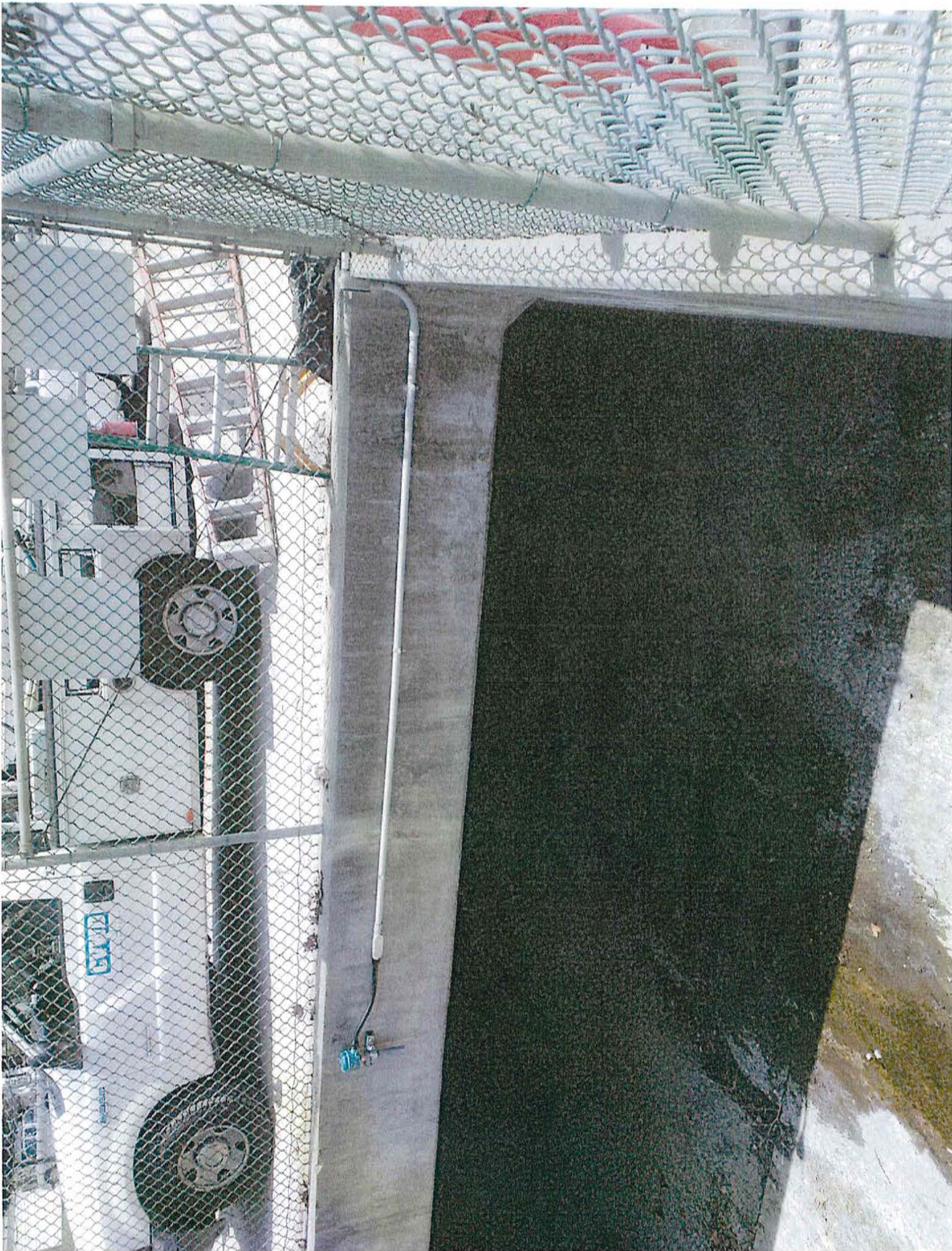
CVWD is scheduling the next Task Force meeting for September 24, 2014 to discuss the overall project, the project schedule and the following tasks which have occurred over the last year.

- Topographic survey and identifying and cataloging the trees at CVC Park
- Installation of flow monitoring stations to monitor water flows in the Verdugo Wash
- Water quality sampling in the Verdugo Wash
- Drilling of 2 monitoring wells to assess soil conditions and monitor groundwater levels
- Installing a percolation test pit to evaluate soil infiltration capacity
- Update the groundwater model to evaluate groundwater mounding beneath CVC Park and surrounding areas

We look forward to see you at the Task Force meeting, if you have any questions or comments, please contact David Gould at (818) 236-4119 or e-mail dgould@cvwd.com



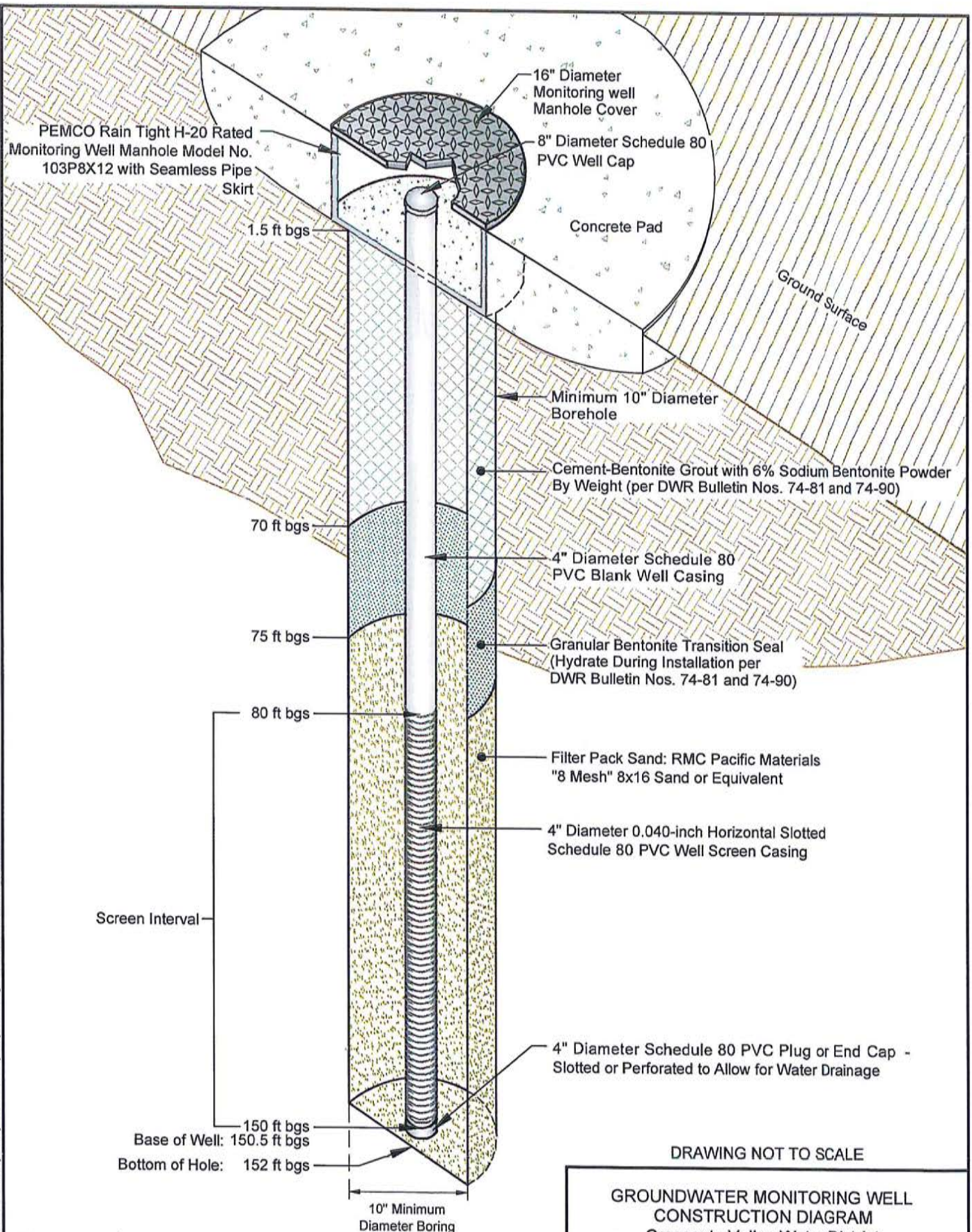








Plot Date: 04/08/14 - 10:00am, Plotted by: jaanna.worker
Drawing Path: W:\Projects\009231\000.0 (C:\VWD)\009231.007.0 (2014), Drawing Name: GW Mon Well Const.dwg



Notes:

1. ft bgs = feet below ground surface.
2. PVC = polyvinyl chloride.

DRAWING NOT TO SCALE

GROUNDWATER MONITORING WELL CONSTRUCTION DIAGRAM Crescenta Valley Water District Los Angeles County, California

By: jrw Date: 04/08/14 Project No. 0092310070



Figure 1