

CRESCENTA VALLEY WATER DISTRICT

2700 FOOTHILL BOULEVARD
LA CRESCENTA, CALIFORNIA

To be held on
July 10, 2020 at 9:00 AM

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

Posted July 9, 2020 at 9:00 AM

TELECONFERENCING NOTICE

[This meeting will be held by teleconference only.]

Pursuant to the provisions of Executive Order N-29-20 issued by Governor Gavin Newsom on March 18, 2020, the public may not attend the meeting in person.

Any member of the public may participate using a touchtone phone. You may select any of the following phone numbers (there are more than one for increased reliability during this time of increased phone traffic)

(669) 900-6833

(346) 248-7799

(929) 205-6099

(253) 215-8782

(301) 715-8592

(312) 626-6799

Then, enter Access Code: 841 8378 9232

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

Any person may make a request for a disability-related modification or accommodation needed for that person to be able to participate in the public meeting by contacting the District by phone or in writing at the above email address. Requests must specify the nature of the disability and the type of accommodation requested. A telephone number or other contact information should be included so that District staff may discuss appropriate arrangements. Persons requesting a disability-related accommodation should make the request with adequate time before the meeting for the District to provide the requested accommodation.

Call to Order

Adoption of Agenda

Public Comment:

At this time, members of the public shall have an opportunity to address the Committee on items of interest that are within the subject matter jurisdiction of this Committee. This opportunity is non-transferable, and speakers are limited to three (3) minutes each.

Action Items

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

1. Discussion of Conceptual Plan – Design/Build/Operate a New Nitrate Removal Treatment Facility at CVWD's Mills Plant
2. Project Update - FY 20/21 Capital Improvement Project Program

Committee Member's Request for Future Agenda Items

Next Engineering Committee Meeting – August 14, 2020

Adjournment

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Action Item No. 1
July 10, 2020

To: Engineering Committee
From: David S. Gould, P.E. – Director of Engineering
Subject: **Conceptual Plan – Design/Build/Operate a new Nitrate Removal Treatment Facility at CVWD’s Mills Plant**

BACKGROUND:

Staff has been investigating ways to reduce CVWD’s dependence on imported water from Foothill Municipal Water District (FMWD) and Metropolitan Water District (MWD) and to better utilize its local groundwater source within the Verdugo Basin (Basin). Groundwater pumped from the Basin has high levels of nitrates that are above the federal and state MCL (maximum containment level) of 45 mg/L, and the water needs to be treated before going into the water distribution system.

CVWD has a variety of methods to remove nitrates from groundwater including an existing ion exchange treatment plant at the Glenwood plant, a recently installed nitrate removal system (ARoNite) at Well 2 and by blending groundwater with imported water at the Paschall blending station for the Mills plant. The blending method at the Mills plant requires that, when the Mills booster pumps are in service, the Paschall booster must be in service even during the winter season.

The value of installing a nitrate removal treatment system at the Mills plant would provide CVWD the ability to utilize groundwater without having to blend with imported water at the same time. This is particularly beneficial during the winter season when water demand can be met by groundwater production and reduced imported water.

The District’s 10-year Capital Improvement Project (CIP) program includes plans to install a nitrate removal treatment system at the Mills plant. The estimated timeline is FY 2026/27 at a preliminary construction cost estimate between \$1.2M to \$1.5M.

DISCUSSION:

Staff has met several times with Mr. Terry Applebury about the design and construction of a new ARoNite treatment system at the Mills Plant with a higher design capacity. Mr. Applebury represents APTWater, the company that partnered with the District for the recently completed and now operational ARoNite treatment system at Well 2. Staff and Mr. Applebury also discussed CVWD’s position regarding available funding through the water rate and/or bond financing for future capital projects.

Mr. Applebury proposed to CVWD, a design/build/operate (DBO) treatment system at the Mills plant. The proposal goes beyond the Well 2 project by including the operations component of a design/build/operate treatment system model. In other words, APTWater would be responsible for not only designing and constructing but then operating the system. CVWD would purchase the water back at a negotiated rate structured that would be lower than FMWD’s rate per ac-ft. In addition to water supply sustainability, the agreement structure could mitigate what is expected to be the rising cost of imported water from FMWD and MWD.

Mr. Applebury would be working with UpWell Water LLC (UpWell) for the financing component of the project. UpWell is a capital financing company whose team is comprised of long-term participants in the water industry with a proven track record of providing agencies with upfront capital financing while reducing costs for the agencies and ultimately their ratepayers.

Staff has put provided a summary of the treatment status and a scenario if a new treatment system (Option 1) were installed at the Mills Plant that shows preliminary imported water reduction and resultant cost savings to the District. (See Attachment No. 1).

Staff also had discussions with APTWater about how the District could better utilize its Verdugo Basin adjudication by pumping additional groundwater beyond the new system at the Mills Plant, thereby further reducing the District's dependence on FMWD.

Mr. Applebury suggested including an additional option in the DBO proposal for the installation of new groundwater wells with treatment (Option 2). Staff has summarized current Basin and groundwater conditions with the estimated number of new groundwater wells to meet the District's annual adjudicated water rights. (See Attachment No. 2).

Staff also looked at a hybrid option with Options 1 and 2, which is a combination of installation of the nitrate treatment plant at Mills and installation of new groundwater wells with treatment to meet CVWD's annual adjudicated water rights. (See Attachment No. 3).

A conference call was held last week with Mr. Chris Morrison and Mr. Tamin Pechet from UpWell, Mr. Applebury, and staff regarding the project. Mr. Morrison discussed the philosophy of UpWell, their background in the water industry, and how they can assist CVWD in meeting its objectives. Attached is UpWell's presentation (Attachment No. 4) for discussion with the Engineering Committee.

NEXT STEP:

Following direction and comments from the Engineering Committee, the project team will make a formal presentation to the Board of Directors at the July 28, 2020 Board meeting. If the Board expresses interest in further pursuing the project, the project team will prepare preliminary drafts of a water purchase agreement that is structured to ensure a materially lower cost of water than FMWD while protecting ratepayers by minimizing operational and financial risk to the District.

Staff is excited about this "out-of-the-box" opportunity with respect to capital financing, reducing the amount of purchased water and addressing key goals in CVWD's Strategic Plan. This conceptual plan will help with developing long-term water supply reliability and addressing future infrastructure reliability (i.e. new groundwater wells).

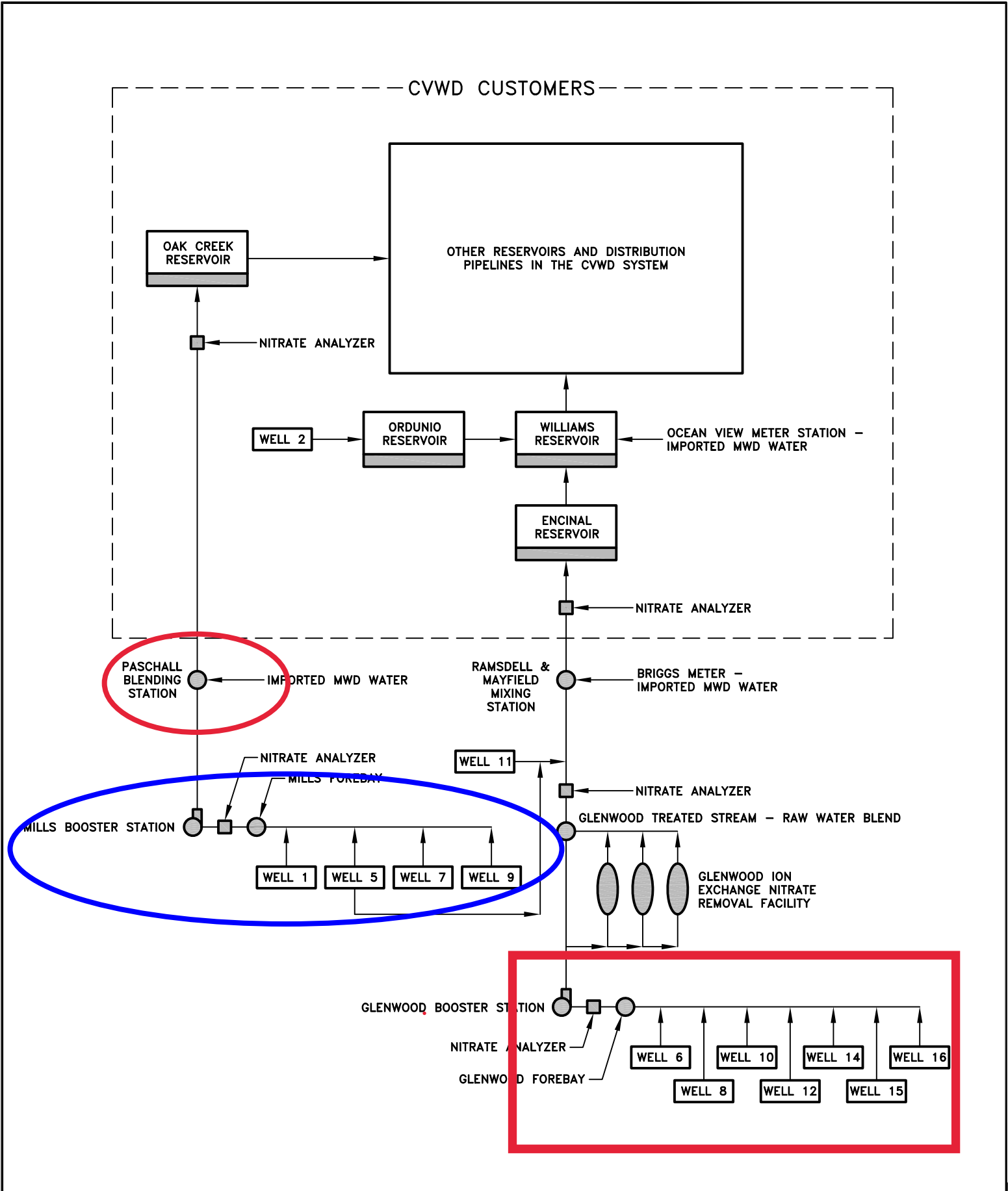
Finally, this proposed conceptual plan translates to APTWater with UpWell being responsible for the design and construction of assets at no initial cost to the District which were included in CVWD's 10-year CIP program. The results would be that the District will be able to focus on increasing the annual amount of pipeline replacement and upgrades to our booster pump facilities with future funding options.

Prepared & Submitted by:

A handwritten signature in blue ink, appearing to read 'D. Gould', is written over a horizontal line.

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

Attachments:



CRESCENTA VALLEY WATER DISTRICT

SCALE: NONE	BLENDING AND NITRATE REMOVAL OPERATION COMPONENTS SCHEMATIC	DATE: 11/16/15	
DR. BY: P. HILKE		JOB NO.	FILE NO.
APP'D.			1

Option 1

Install Nitrate Treatment Removal System at Mill Plant

Current Status - Nitrate Removal Process at Mills Plant

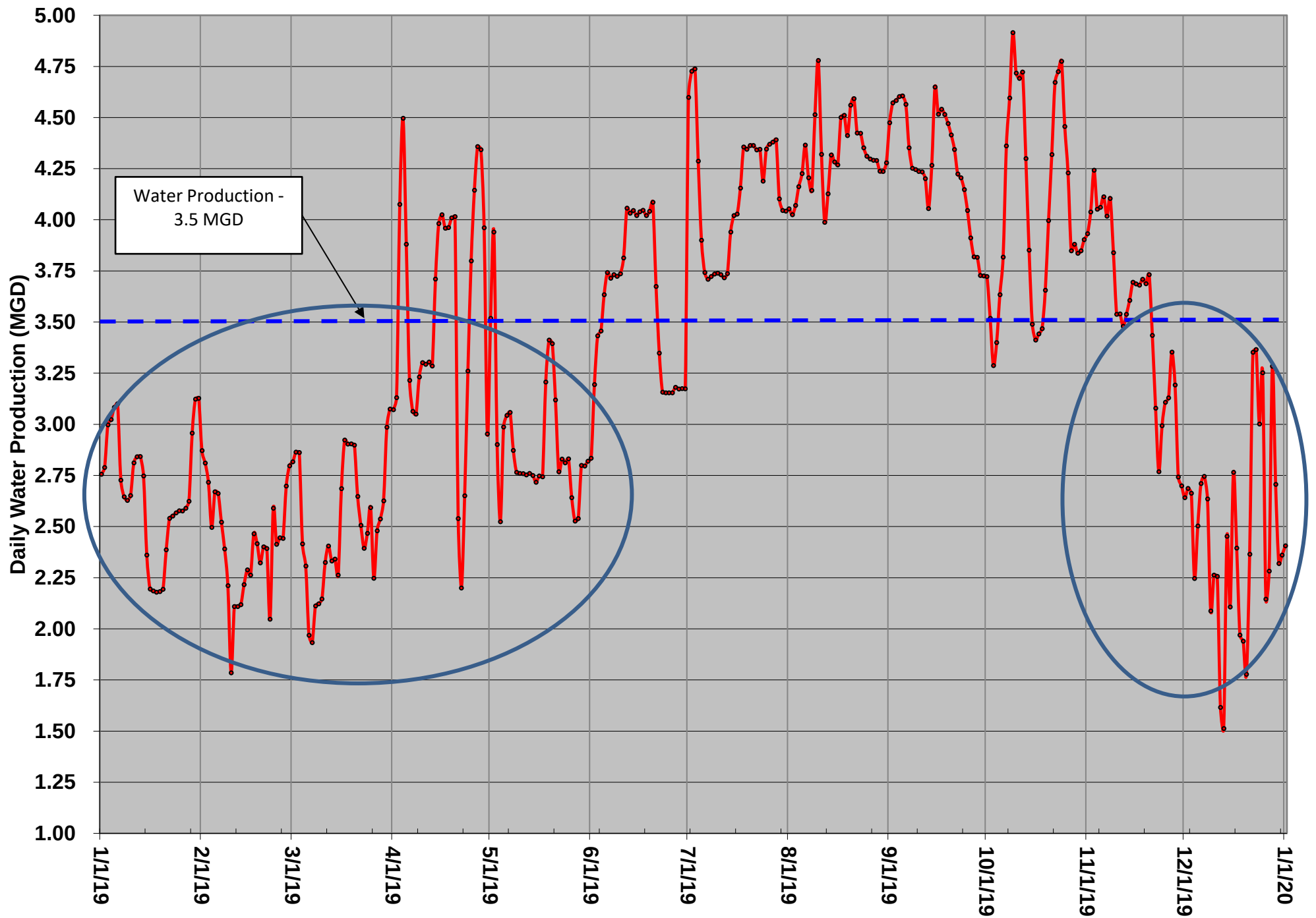
1. CVWD Wells 1, 5, 7 & 9 combine into one pipeline = Raw Water; Nitrate Level - Avg. 56 mg/L
2. Raw Water treated for low pH by adding Oxygen through cascading water down a 29-foot-tall aeration tower
3. Raw Water stored in Mills Forebay with a total of 20,000 gallons to maintain Booster Pumps NPSH or Net Positive Suction Head
4. Raw Water is treated with chlorine when leaving the Mills Plant
5. Raw water is blended with MWD/FMWD treated (low nitrate) water at the Paschall Blending Station to reduce high nitrate level to below MCL
6. If Mills Booster Pumps are turned off due to low water demand, power outage or Operator override, then Paschall Booster Pumps at the Blending Station are automatically (via SCADA) turned off to prevent high nitrate water from entering the water distribution system.

Option 1

Imported Water Reduction – Treatment System at Mills

1. When CVWD's daily water demands are below 3.5 MGD, Water supply can be met by:
 - a. Groundwater production from the Glenwood Plant - Wells 8, 10, 12, 14, & 16; Nitrate treatment - Ion Exchange Plant; Well 5 & 11 outside Glenwood.
 - b. Groundwater production from Well 2 – Nitrate Treatment – ARoNite System
 - c. MWD/FMWD water from Briggs Meter connection
 - d. Groundwater Production from Mills Plant with new ARoNite System.
2. How many days/year is CVWD daily water demand below 3.5 MGD?
 - a. 185 days/year daily water demand below 3.5 MGD based on 5-year average of daily water demand.
 - b. 180 days/year daily water demand above 3.5 MGD = CVWD needs additional water supply from MWD/FMWD at Paschall Boosters to meet daily demand.
3. Reduction of MWD/FMWD at Paschall results in cost savings by avoiding purchasing expensive imported water less cost/ac-ft to buy back water. (See Table)

2019 - Daily Water Production



Attachment No. 1**TABLE 1**
Daily Use with FMWD off at Paschall Booster

Daily Use with FMWD off at Paschall Booster	Max GPM	Max Gals/Day	Number of days per year Daily Water Production ⁽¹⁾⁽²⁾ (5-yr Average)	Reduction from FMWD Paschall ⁽³⁾ (gpm)	Reduction from FMWD Paschall (gals/year)	Reduction from FMWD Paschall (ac-ft/year)	Total FMWD Cost per ac-ft (FY 19/20)	Cost Savings	Total Variable FMWD Cost per ac-ft (FY 19/20)	Cost Savings
All Wells & 1.0 cfs at Briggs Meter	1,950	2,808,000	101	540	78,537,600	241	\$1,767	\$425,832	\$1,350	\$325,456
All Wells & 2.0 cfs at Briggs Meter	2,400	3,456,000	84	540	65,318,400	200	\$1,767	\$354,158	\$1,350	\$270,677
Total Reduction - FMWD			185			441	\$1,767	\$779,990	\$1,350	\$596,133
Due to variation in weather - assume a reduction of 85% for planning					85%	375	\$1,767	\$662,992	\$1,350	\$506,713
<u>Assume</u> cost/ac-ft to purchase water back from APTWater - \$650/ac-ft						375	\$650	\$243,917	\$650	\$243,917
Annual Cost Savings to District								\$419,075		\$262,796
<u>Assume</u> cost/ac-ft to purchase water back from APTWater - \$850/ac-ft						375	\$850	\$318,968	\$850	\$318,968
Annual Cost Savings to District								\$344,024		\$187,745

Notes:

1. 5-year Average of number of days per year for daily water production between 2.0 MGD & 3.0 MGD = 101 days
2. 5-year Average of number of days per year for daily water production between 3.0 MGD & 3.5.0 MGD = 84 days
3. Reduction from FMWD = Not Blending for Nitrates at Paschall
4. Avg. Groundwater cost - \$450/ac-ft

Attachment No. 1

Fiscal Year	Total or Projected FMWD Usage (Ac-Ft)	Percent change from previous year	Tier 1 Cost /Ac-ft (Based on MWD rate change on Jan. 1)		Tier 1 Cost percent increase from previous year	Tier 1 Cost	FMWD Operation Monthly Cost	FMWD Operation Monthly Cost percent increase from previous year	FMWD Power Monthly Cost	FMWD Power Monthly Cost percent increase from previous year	FMWD CIP Monthly Cost	FMWD CIP Monthly Cost percent increase from previous year	Tier 2 FMWD Usage (Ac-Ft)	Tier 2 Cost /Ac-ft	Tier 2 Cost	MWD Capacity Charge	MWD Capacity percent increase from previous year	MWD Readiness to Serve Charge	MWD RTS percent increase from previous year	Credits/ Debit	Total Invoice	Total Invoice percent increase from previous year	Total - Avg. Cost /Ac-ft	Avg. Cost/ac-ft percent increase from previous year	Variable FMWD/MWD Cost Total (Columns B,	Variable Cost per ac-ft	Variable FMWD/MWD Cost Total percent increase from previous year
2015/2016	1,573	-19%	\$923	\$942	2%	\$1,463,644	\$392,362	3%	\$228,193	-21%	\$204,665	0%	0	\$1,076	\$0	\$39,945	40%	\$120,792	-11%	(\$307,491)	\$2,454,524	-12%	\$1,561	6%	\$1,852,573	\$1,177	3%
2016/2017	2,100	25%	\$942	\$979	4%	\$2,013,001	\$417,562	6%	\$265,675	16%	\$204,665	0%	0	\$1,073	\$0	\$49,058	23%	\$103,326	-14%	\$1,652	\$3,055,621	20%	\$1,455	-7%	\$2,431,059	\$1,158	-2%
2017/2018	2,192	4%	\$979	\$1,015	4%	\$2,179,060	\$451,647	8%	\$309,543	17%	\$204,663	0%	55	\$1,101	\$5,123	\$43,347	-12%	\$95,688	-7%	\$300	\$3,302,573	7%	\$1,507	3%	\$2,627,638	\$1,199	4%
2018/2019	1,998	-10%	\$1,015	\$1,050	3%	\$2,052,572	\$484,335	7%	\$306,225	-1%	\$204,663	0%	74	\$1,136	\$6,381	\$40,642	-6%	\$96,822	1%	\$0	\$3,191,008	-3%	\$1,597	6%	\$2,496,260	\$1,249	4%
2019/2020	1,959	-2%	\$1,050	\$1,078	3%	\$2,081,237	\$505,578	4%	\$291,777	-5%	\$204,665	0%	0	\$1,165	\$0	\$42,230	4%	\$98,424	2%	(\$631)	\$3,221,891	1%	\$1,644	3%	\$2,513,668	\$1,283	3%
2020/2021	1,740	-13%	\$1,078	\$1,104	2%	\$1,893,660	\$509,827	1%	\$297,600	2%	\$214,811	5%	0	\$1,146	\$0	\$53,559	27%	\$104,724	6%	\$0	\$3,074,181	-5%	\$1,767	7%	\$2,349,543	\$1,350	5%
2021/2022	1,740	0%	\$1,104	\$1,143	4%	\$1,948,650	\$515,788	1%	\$294,200	-1%	\$224,957	5%	0	\$1,185	\$0	\$62,896	17%	\$113,832	9%	\$0	\$3,160,323	3%	\$1,816	3%	\$2,419,578	\$1,391	3%
2022/2023	1,900	8%	\$1,143	\$1,200	5%	\$2,219,580	\$538,871	4%	\$340,900	16%	\$224,957	0%	0	\$1,244	\$0	\$68,691	9%	\$127,998	12%	\$0	\$3,520,997	10%	\$1,853	2%	\$2,757,169	\$1,451	4%
2023/2024	2,070	8%	\$1,200	\$1,260	5%	\$2,538,000	\$563,778	5%	\$391,950	15%	\$224,957	0%	0	\$1,306	\$0	\$72,129	5%	\$144,450	13%	\$0	\$3,935,263	11%	\$1,901	3%	\$3,146,529	\$1,520	5%
2024/2025	2,240	8%	\$1,260	\$1,311	4%	\$2,876,460	\$586,116	4%	\$447,400	14%	\$224,957	0%	0	\$1,359	\$0	\$75,367	4%	\$161,322	12%	\$0	\$4,371,622	10%	\$1,952	3%	\$3,560,549	\$1,590	5%
2025/2026	2,310	3%	\$1,311	\$1,377	5%	\$3,099,860	\$618,732	6%	\$484,450	8%	\$214,806	-5%	0	\$1,427	\$0	\$78,766	5%	\$174,094	8%	\$0	\$4,670,708	6%	\$2,022	3%	\$3,837,170	\$1,661	5%

Option 2

Install New Groundwater Wells with Treatment to Maximizing CVWD Adjudicated Water Rights

Current Status – Verdugo Basin

1. CVWD Water Rights = 3,294 ac-ft/yr; Glendale Water Rights = 3,856 ac-ft/Yr; Verdugo Basin Safe Yield = 7,150 ac-ft/yr
2. 5-yr avg groundwater production = 1,620 ac-ft/yr due to drought and variable rainfall amounts for recharge; Water Level of basin decreased by 30 feet
3. Minimal water storage in basin due to slope in groundwater basin; CVWD must capture groundwater as it flows by.
4. Shallow groundwater basin, depth to bedrock- average 200 ft; uncertain geology makes it difficult to determine location of new groundwater wells.
5. La Crescenta/Glendale area is 95% built out; Difficult to find open areas to drill new wells; high land acquisition costs

Option 2

Imported Water Reduction – Additional GW Wells

1. Increase amount of groundwater produced with new wells to
 - a. Maximize water rights
 - b. Decrease amount of imported water
2. For Planning: Assume (See Table 2):
 - a. GW from existing wells = 2,200 ac-ft/yr
 - b. GWP = 250 ac-ft/yr
 - c. Import = 1,850 ac-ft/yr
 - d. Total Water Demand = 4,300 ac-ft/yr
3. Goal: Increase GW by 1,094 ac-ft with New Groundwater Wells - See Table 2
4. Based on a total well capacity of 695 gpm; up to 4 new wells would need to be installed with treatment = 1,094 ac-ft/yr

Attachment No. 2

Table 2

Fiscal Year	GW (ac-ft)	GWP (ac-ft)	Import (ac-ft)	Total (ac-ft)
2000/01	3,360	0	2,216	5,576
2001/02	3,471	0	2,394	5,865
2002/03	2,917	0	2,706	5,623
2003/04	2,609	0	3,318	5,927
2004/05	3,051	0	2,255	5,305
2005/06	3,687	0	1,704	5,392
2006/07	3,144	0	2,530	5,674
2007/08	3,222	0	2,212	5,434
2008/09	3,084	0	2,004	5,088
2009/10	2,702	0	1,721	4,422
2010/11	2,788	0	1,544	4,332
2011/12	3,099	0	1,460	4,559
2012/13	3,075	0	1,582	4,658
2013/14	2,372	0	2,410	4,782
2014/15	2,146	0	1,876	4,022
2015/16	1,761	169	1,573	3,504
2016/17	1,411	348	2,107	3,865
2017/18	1,414	327	2,188	3,929
2018/19	1,503	224	2,000	3,728
2019/20	1,906	104	1,994	4,004
20-yr Avg (FY 00/01 - FY 19/20)	2,636	0	2,090	4,784
10-yr Avg (FY 10/11 - FY 19/20)	2,148	117	1,873	4,138
5-yr Avg (FY 10/11 to FY 14/15) Before Drought	2,696	0	1,774	4,471
5-yr Avg (FY 15/16 to FY 19/200) During Drought	1,599	234	1,972	3,806
For Planning Purpose Use	2,200	250	1,850	4,300

New Groundwater Production						
CVWD Water Rights						3,294
Average Annual GW Production						2,200
GW Production required to meet Water Rights						1,094
Number of New Wells with on-site Nitrate treatment						
Well No.	Current GPM	Hours /day	Gals/Day	CFS	Ac-ft /day	Ac-ft /yr
1	210	24	302,400	0.47	0.93	339
2	200	24	288,000	0.45	0.88	323
3	145	24	208,800	0.32	0.64	234
4	125	24	180,000	0.28	0.55	202
Total	680					1,097

New Groundwater Wells - Annual Cost Savings	Additional GW Production (ac-ft)	Annual FMWD Cost per ac-ft (FY 19/20)	Total Cost to FMWD	Total Variable FMWD Cost per ac-ft (FY 19/20)	Cost Savings
Additional Groundwater Production with New Groundwater Wells	1,094	\$1,767	\$1,933,098	\$1,350	\$1,476,900
Assume cost/ac-ft to purchase water back from APTWater - \$650/ac-ft	1,094	\$650	\$711,100	\$650	\$711,100
Annual Cost Savings to District			\$1,221,998		\$765,800
Assume cost/ac-ft to purchase water back from APTWater - \$850/ac-ft	1,094	\$850	\$929,900	\$850	\$929,900
Annual Cost Savings to District			\$1,003,198		\$547,000

Hybrid Option - Option 1 & 2

Imported Water Reduction

1. Option 1 - Nitrate Treatment Plant at Mills Plant; Increase groundwater production by 375 ac-ft/yr
2. Option 2 - New groundwater wells; Increase groundwater production by 1,094 ac-ft/yr
3. Option 1 & 2 - Install Nitrate Treatment Plant at Mills Plant & Install New Groundwater Wells with Treatment
4. 1,094 ac-ft/yr - 375 ac-ft/yr = 719 ac-ft/yr - additional GW needed to meet annual adjudicated water rights
5. Based on average well capacity of 445 gpm; up to 3 new wells would need to be installed with treatment to get to 719 ac-ft/yr

New Groundwater Wells - Annual Cost Savings	Additional GW Prod. (ac-ft)	Annual FMWD Cost per ac-ft (FY 19/20)	Total Cost to FMWD	Total Variable FMWD Cost per ac-ft (FY 19/20)	Cost Savings
Additional Groundwater Production with New Groundwater Wells	719	\$1,767	\$1,270,473	\$1,350	\$970,650
Assume cost/ac-ft to purchase water back from APTWater - \$650/ac-ft	719	\$650	\$467,350	\$650	\$467,350
Annual Cost Savings to District			\$803,123		\$503,300
Assume cost/ac-ft to purchase water back from APTWater - \$850/ac-ft	719	\$850	\$611,150	\$850	\$611,150
Annual Cost Savings to District			\$659,323		\$359,500

Attachment No. 4



APT + UPWELL SOLUTION TO CVWD

JUNE, 2020

CONFIDENTIAL & PROPRIETARY, UPWELL WATER LLC

LEGAL DISCLAIMER

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This presentation also includes express and implied forward-looking statements regarding our current intentions, beliefs or expectations with respect to our businesses and operations, market conditions, results of operations and financial condition, capital adequacy and other specified provisions and practices that are not statements of historical fact. Such forward-looking statements may be identified with the words "believes," "may," "will," "potentially," "estimates," "continues," "anticipates," "intends," "projects" and similar expressions. Readers are cautioned not to place undue reliance on these forward looking-statements, which speak only as of the date of this presentation, and not to construe them as statements of fact. The accuracy of such statements is dependent upon future events, and involves known and unknown risks and uncertainties that are outside of our control. These factors may cause our actual results, performance or achievements to differ materially and adversely from those anticipated or implied by such forward-looking statements, and we do not undertake any obligation to release the result of any revisions to these forward-looking statements to reflect events or circumstances occurring after the date hereof. While we believe that the expectations reflected in these forward-looking statements are reasonable, we cannot guarantee that the future results specified in such forward-looking statements will be achieved or occur. Past performance is not a reliable indicator of future performance.



UPWELL WATER OVERVIEW

Vision

The world's leading water finance company, delivering capital solutions to ensure a sustainable water future.

Impact

Transformational, systemic impact by providing functioning capital markets solutions to improve water resource management.

Leadership

Unique mix of capital markets and water industry operational leadership, positioned to grow the world's highest-impact, highest-value water platform.



GLOBAL WATER LEADERSHIP



Tamin Pechet

Tamin Pechet leads Upwell and its subsidiary, Upwell Water. He has developed and led industry-leading natural resource, finance, and operating platforms representing over \$1.5 billion in assets. He founded Imagine H2O and Banyan Water. Previously as a member of Goldman Sachs Special Situations Investing, he launched GS subsidiaries in natural resources and specialty finance.



Jesse Cuevas

Jesse Cuevas is the General Counsel of Upwell Water. He spent over ten years in private practice representing top-tier private equity firms and investment banks in capital markets and M&A transactions. He practiced at Cravath, Swaine & Moore LLP and Ropes & Gray LLP, and was also an investment banker at Lazard. He is a graduate of Stanford University and Stanford Law School.



Chris Morrison

Chris Morrison is an Operating Partner at Upwell Water. Over more than three decades at Nalco, through its acquisition by Ecolab, he held multiple senior executive roles across water treatment, solution sales, and technology. He is an advisor to multiple water companies and former Chairman, Marin Municipal Water District



Christopher Schilling

Chris Schilling is an Operating Partner at Upwell Water. Most recently, Chris was the Chief Operating Officer at Southwest Water Company. Previously, he was the Chief Executive Officer and member of the Board of Directors of Park Water through its sale. Prior to that role, he was a Managing Director at Bank of America in its investment banking division.



John Sylvia

John Sylvia is an Operating Partner at Upwell Water. Most recently, John was a Partner at TEM Capital. Previously, he was a Partner at TPG, where he co-founded TPG Aqua International Partners. Prior to that role, he was CFO of CalEnergy, acquired by Berkshire Hathaway.



Brian Matthay

Brian Matthay is an Investment Committee member of Upwell Water. He is also CIO at Cypress Creek Renewables and a board member of Imagine H2O. Brian was SVP of Environmental Finance at Wells Fargo. He has led over \$3 billion in project financing.



Mark Bruinooge

Mark Bruinooge is an Investment Committee member of Upwell Water. He is also CIO of Clearpath and the 2040 Fund. He is one of the most active investors in public and private water opportunities. His prior roles included investment banking at Bank of America, Hambrecht & Quist, and Brown Brothers Harriman.



VALUE PROPOSITION

EASY ADOPTION OF WATER SOLUTIONS



Clients get water solutions they need without having to wait for budget cycles, pay upfront costs, or own assets they don't want to own.

Water solution providers eliminate barriers to sales: capital, liquidity, financial solutions.



CAPITAL TO ENABLE WATER SOLUTIONS

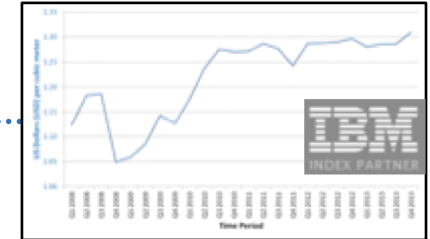
FINANCIAL SOLUTIONS



AssetCo

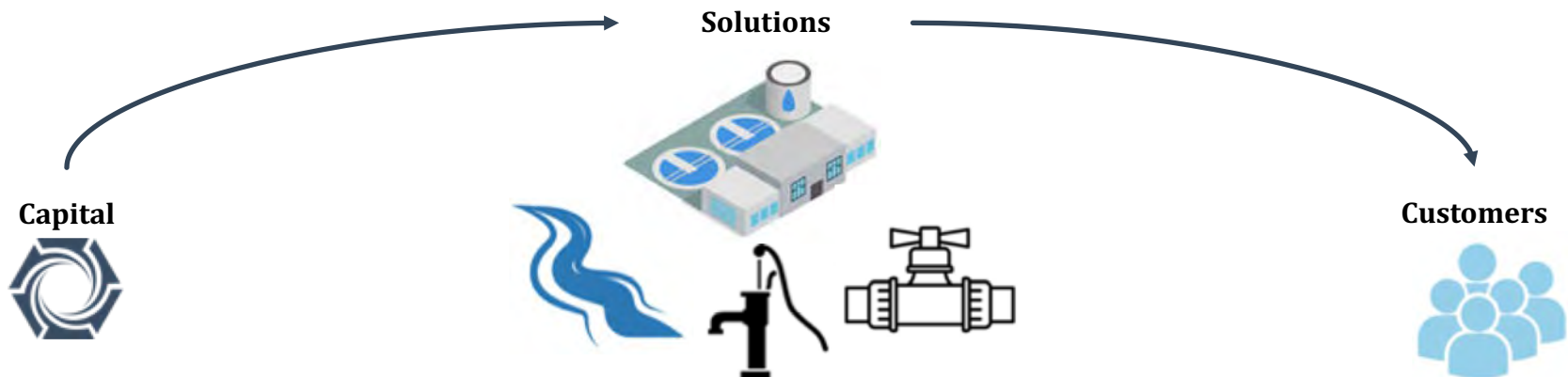


Corporate Finance



Fin. Instruments

ENABLING WATER SOLUTIONS



Solving Industry Pain Point



CVWD OBJECTIVES

THESE ARE THE GOALS THAT WE UNDERSTAND FROM YOU

1. Reduce ratepayers' cost of water

- Ensure water supply resiliency, minimize rate increases
- Work with things CVWD knows work (APT is proven at CVWD)

2. Minimize capital investment requiring rate increases or new debt

- Difficult to get rate payers to approve bonds or new debt
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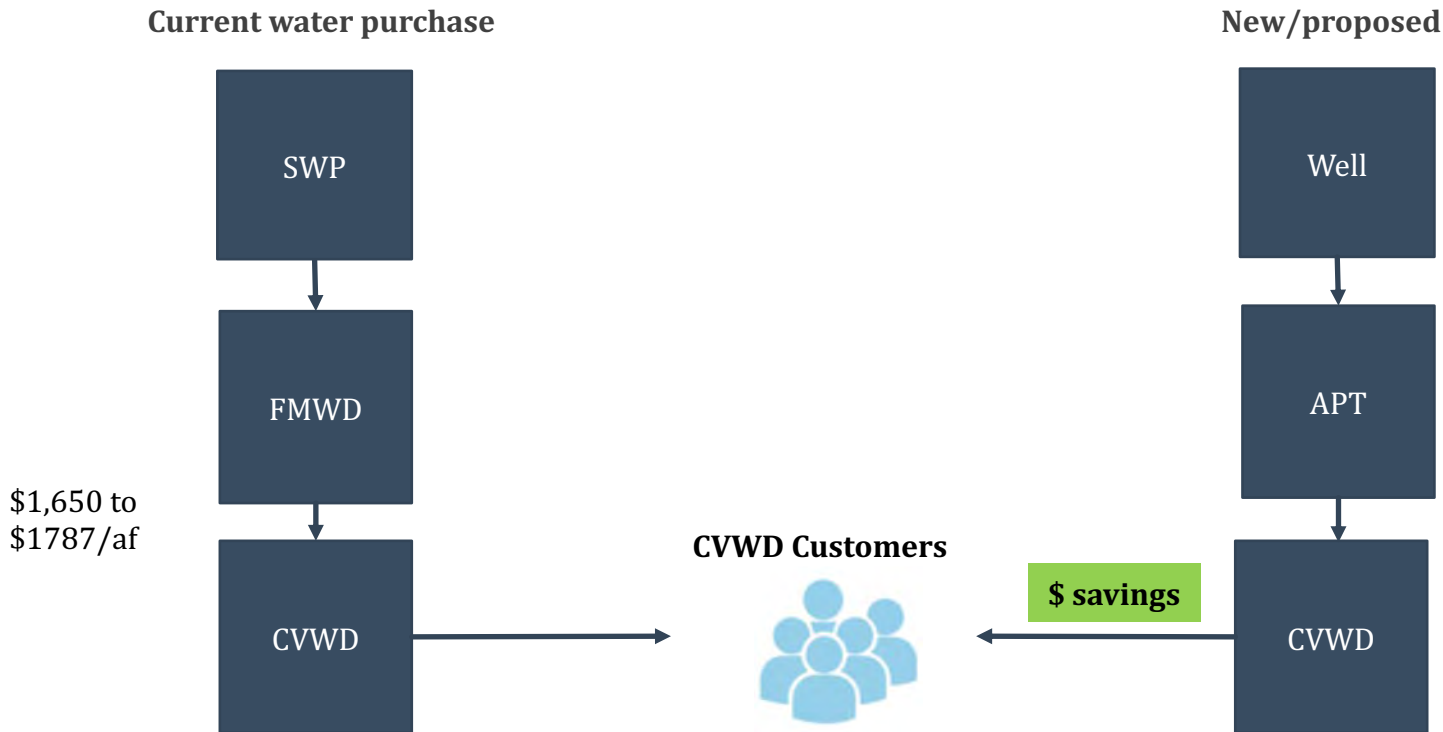


GOAL – SAVE RATEPAYERS/DISTRICT MONEY

OPPORTUNITY FOR CVWD TO REDUCE COST FOR WATER PURCHASED

We can provide alternative source for potable water to CVWD

- *APT has proven track record of providing reliable potable water that meets/exceeds all necessary requirements*
- Upwell Water has the financial strength and industry knowledge to provide packaged solution
- Foothills/SWP cost of water is expected to rise significantly over the next five years
- CVWD desires to buy high quality water and would prefer to source is locally



CVWD & UPWELL SOLUTION

TECHNICAL AND FINANCIAL SOLUTIONS



APT Proven Solution

APT's solution has proven successful at CVWD.

APT, uniquely, can deliver expand solution to enable reliable water supply at a savings to wholesale purchases.



UPWELLTM
WATER

Delivered "As A Service" Via Upwell

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Upwell purchases solutions from APT, funding the entire capital required, and enters into a water purchase agreement with CVWD.



Proven CVWD Solution

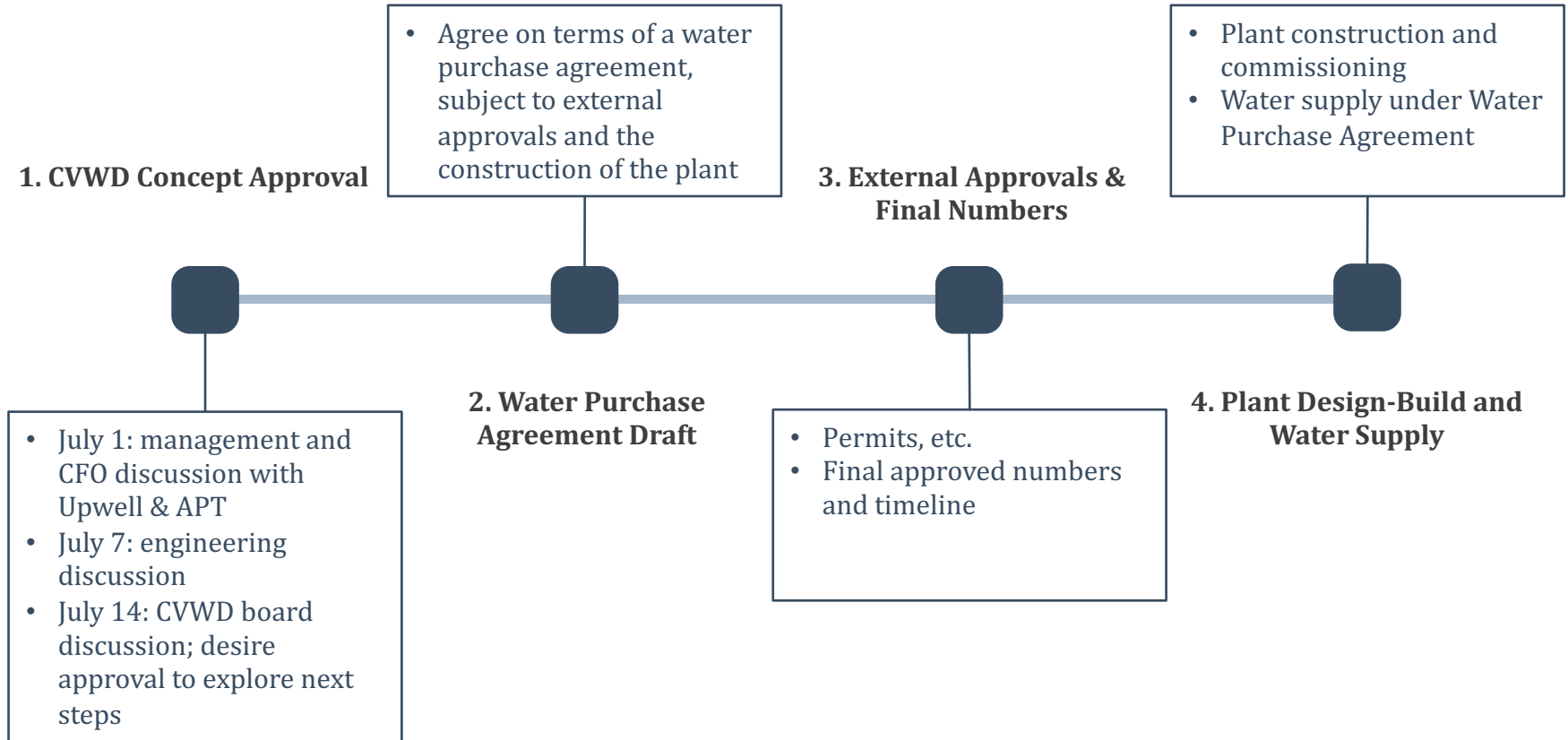
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Proven solution delivered at no upfront capital cost and ongoing savings



TIMELINE - DRAFT



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- Discuss feedback and prepare overview
- Bring in CFO and GM, discussions
- Bring in Engineering and board committee
- Get consensus of best path for CVWD
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- Provide Upwell with feedback
- Upwell to provide CVWD with term sheet for long term water provision
- Negotiations
- Signing of a term sheet
- Diligence:
- Documentation and closing
- New water with savings



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- Solution offered to CVWD is no upfront cost, and a discount to current/future wholesale water costs.

Public Win

- Recommissioning water while generating cost-savings.

Partner With Deep Water & Capital Leadership



Deutsche Bank

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GCA



NEXT STEPS

Upwell Water LLC

1160 Gorgas Ave., San Francisco, CA 94129

chris@upwell.co

tamin@upwell.co



Attachment No. 4



APT + UPWELL SOLUTION TO CVWD

JUNE, 2020

CONFIDENTIAL & PROPRIETARY, UPWELL WATER LLC

LEGAL DISCLAIMER

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This presentation also includes express and implied forward-looking statements regarding our current intentions, beliefs or expectations with respect to our businesses and operations, market conditions, results of operations and financial condition, capital adequacy and other specified provisions and practices that are not statements of historical fact. Such forward-looking statements may be identified with the words "believes," "may," "will," "potentially," "estimates," "continues," "anticipates," "intends," "projects" and similar expressions. Readers are cautioned not to place undue reliance on these forward looking-statements, which speak only as of the date of this presentation, and not to construe them as statements of fact. The accuracy of such statements is dependent upon future events, and involves known and unknown risks and uncertainties that are outside of our control. These factors may cause our actual results, performance or achievements to differ materially and adversely from those anticipated or implied by such forward-looking statements, and we do not undertake any obligation to release the result of any revisions to these forward-looking statements to reflect events or circumstances occurring after the date hereof. While we believe that the expectations reflected in these forward-looking statements are reasonable, we cannot guarantee that the future results specified in such forward-looking statements will be achieved or occur. Past performance is not a reliable indicator of future performance.



UPWELL WATER OVERVIEW

Vision

The world's leading water finance company, delivering capital solutions to ensure a sustainable water future.

Impact

Transformational, systemic impact by providing functioning capital markets solutions to improve water resource management.

Leadership

Unique mix of capital markets and water industry operational leadership, positioned to grow the world's highest-impact, highest-value water platform.



GLOBAL WATER LEADERSHIP



Tamin Pechet

Tamin Pechet leads Upwell and its subsidiary, Upwell Water. He has developed and led industry-leading natural resource, finance, and operating platforms representing over \$1.5 billion in assets. He founded Imagine H2O and Banyan Water. Previously as a member of Goldman Sachs Special Situations Investing, he launched GS subsidiaries in natural resources and specialty finance.



Jesse Cuevas

Jesse Cuevas is the General Counsel of Upwell Water. He spent over ten years in private practice representing top-tier private equity firms and investment banks in capital markets and M&A transactions. He practiced at Cravath, Swaine & Moore LLP and Ropes & Gray LLP, and was also an investment banker at Lazard. He is a graduate of Stanford University and Stanford Law School.



Chris Morrison

Chris Morrison is an Operating Partner at Upwell Water. Over more than three decades at Nalco, through its acquisition by Ecolab, he held multiple senior executive roles across water treatment, solution sales, and technology. He is an advisor to multiple water companies and former Chairman, Marin Municipal Water District



Christopher Schilling

Chris Schilling is an Operating Partner at Upwell Water. Most recently, Chris was the Chief Operating Officer at Southwest Water Company. Previously, he was the Chief Executive Officer and member of the Board of Directors of Park Water through its sale. Prior to that role, he was a Managing Director at Bank of America in its investment banking division.



John Sylvia

John Sylvia is an Operating Partner at Upwell Water. Most recently, John was a Partner at TEM Capital. Previously, he was a Partner at TPG, where he co-founded TPG Aqua International Partners. Prior to that role, he was CFO of CalEnergy, acquired by Berkshire Hathaway.



Brian Matthay

Brian Matthay is an Investment Committee member of Upwell Water. He is also CIO at Cypress Creek Renewables and a board member of Imagine H2O. Brian was SVP of Environmental Finance at Wells Fargo. He has led over \$3 billion in project financing.



Mark Bruinooge

Mark Bruinooge is an Investment Committee member of Upwell Water. He is also CIO of Clearpath and the 2040 Fund. He is one of the most active investors in public and private water opportunities. His prior roles included investment banking at Bank of America, Hambrecht & Quist, and Brown Brothers Harriman.



VALUE PROPOSITION

EASY ADOPTION OF WATER SOLUTIONS



Clients get water solutions they need without having to wait for budget cycles, pay upfront costs, or own assets they don't want to own.

Water solution providers eliminate barriers to sales: capital, liquidity, financial solutions.



CAPITAL TO ENABLE WATER SOLUTIONS

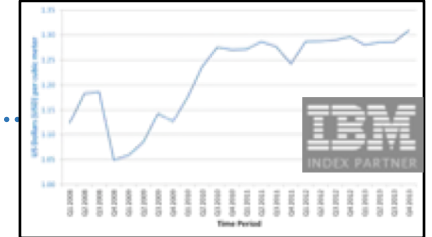
FINANCIAL SOLUTIONS



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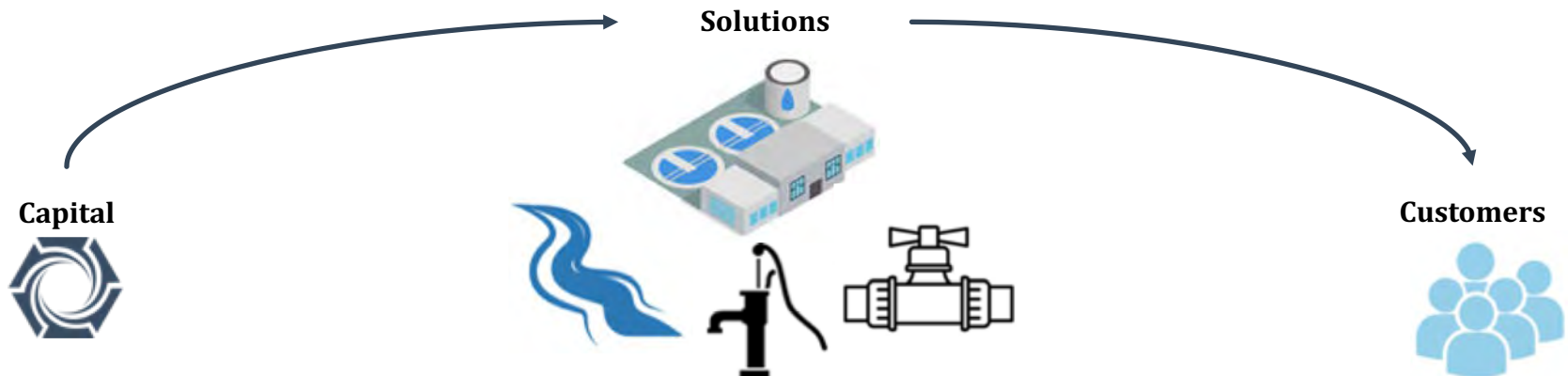


Corporate Finance



Fin. Instruments

ENABLING WATER SOLUTIONS



Solving Industry Pain Point



CVWD OBJECTIVES

THESE ARE THE GOALS THAT WE UNDERSTAND FROM YOU

1. Reduce ratepayers' cost of water

- Ensure water supply resiliency, minimize rate increases
- Work with things CVWD knows work (APT is proven at CVWD)

2. Minimize capital investment requiring rate increases or new debt

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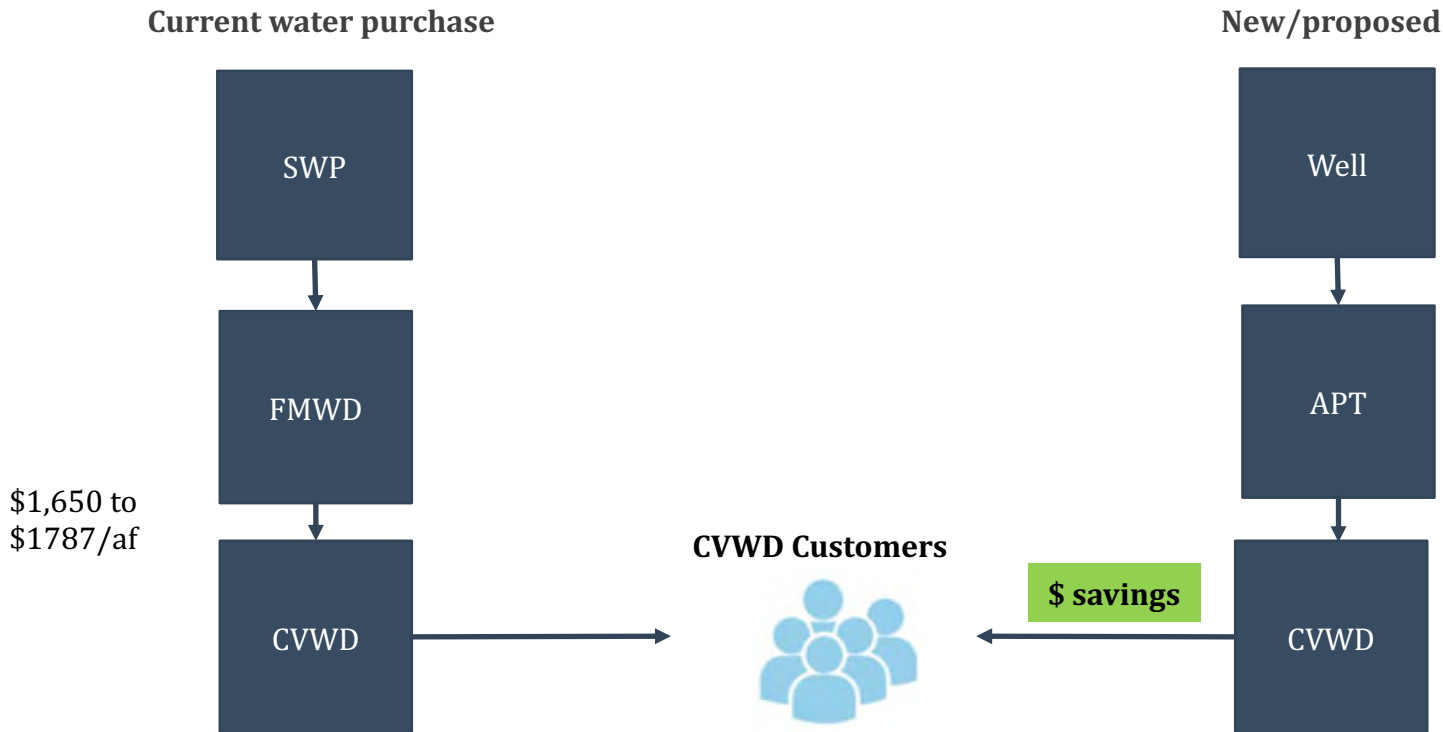


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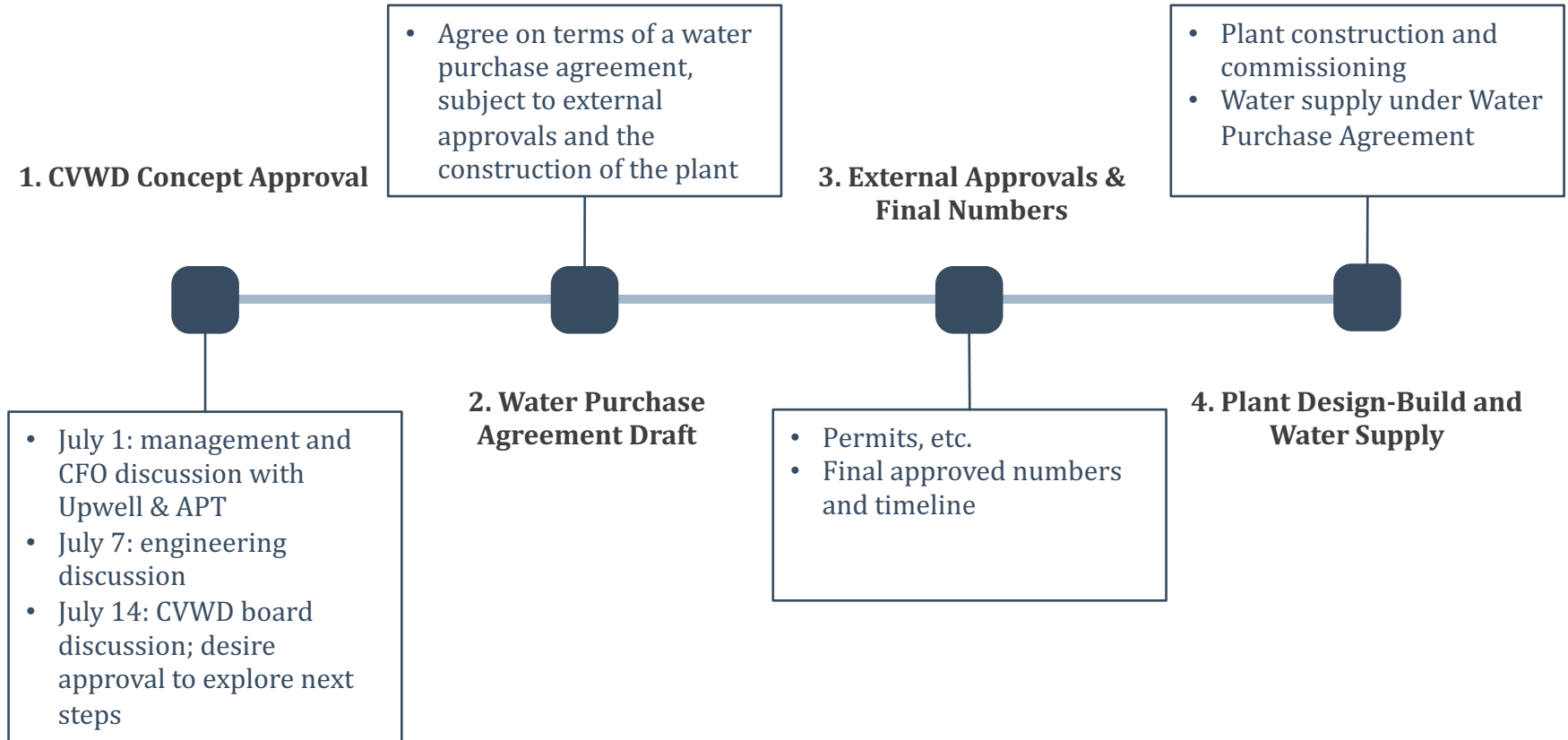
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GCA



NEXT STEPS

Upwell Water LLC

1160 Gorgas Ave., San Francisco, CA 94129

chris@upwell.co

tamin@upwell.co



CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Action Item No. 2
July 10, 2020

To: Engineering Committee
From: David S. Gould, P.E. – Director of Engineering
Subject: Project Update - FY 20/21 Water Capital Improvement Program

BACKGROUND:

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

Staff presented at previous Engineering Committee meeting, a CIP Program comparing the \$5M Bond and PayGo funding scenarios for discussion. The information provided indicated that the amount of expenditures required between July 2020 and December 2020 for consultants and construction would be below \$1M for both funding scenarios.

DISCUSSION:

The following is status update of the FY 20/21 CIP projects:

1. **Steel Reservoir Rehabilitation – Rosemont Reservoir** – This project is for the structural repairs and re-coating of the reservoir interior, which is necessary to maintain the District's water storage capacity and to increase the life expectancy of the steel tank. Harper and Associates Engineering (Harper) and staff are working on finalizing the plans and specifications for the project and preparing a construction cost estimate with the following project schedule:
 - July 28, 2020 - Approval to advertising for bids
 - August 25, 2020 - Award of Contract
 - Construction to begin in November 2020 and be completed in February 2021.
2. **Annual Pipeline Replacement** – This project is for the replacement of steel pipelines that are at least 50-years old or more in a timely manner.

Project 1 & 2: Staff has completed the design for the 2400 & 2500 Blocks of Janet Lee (Project 1) and started on the design of the 4300 Block of Rosemont (Project 2) with the following project schedule:

- September 8, 2020 - Approval to advertising for bids
- October 13, 2020 - Award of Contract
- Construction to begin in November 2020 and be completed by February 2021.

Projects 3 & 4: Staff is preparing a request for proposal (RFP) for a consulting firm to provide engineering services for the pipeline replacement on the 3400 & 3500 Blocks of Encinal (Project 3) and the 4800 Block of Dyer, 2800 Block of El Caminito, 4800 Block of Glenwood, 2800 Block of Stevens and 2700 Block of Paraiso Way (Project 4) with the following project schedule:

- August 4, 2020 - RFP Due
- August 11, 2020 - Award of Consulting Contract
- October 27, 2020 - Approval to advertising for bids
- November 24, 2020 - Award of Contract
- Construction to begin in January 2021 and be completed by July 2021

3. **Groundwater Well Rehabilitation** – This project is for the rehabilitation of Well 9, which was last rehabilitated in 2014. The design will be completed by Mr. Yared with following project schedule:
 - November 10, 2020 - Approval to advertising for bids
 - December 8, 2020 - Award of Contract
 - Construction to begin in February 2021 and be completed by April 2021
4. **New Pressure Reducing Station & Upgrade Ramsdell Mixing Station** – This project is for the installation of a new PRV station near the intersection of Mayfield Ave and Ramsdell Ave. to provide water from Zone 2 to Zone 1 when Encinal Reservoir is out of service during construction of the upgrades to the Ramsdell/Mayfield Mixing Station (Mixing Station). Most of the design will be completed by staff, with additional assistance from DMC Engineering for topographic and right-of-way survey, Cannon for the electrical design and APEX for SCADA programming and integration with following project schedule:
 - September 22, 2020 - Approval to advertising for bids
 - November 10, 2020 - Award of Contract
 - Construction to begin in February 2021 and be completed by July 2021
5. **Replacement of Supervisory Control and Data Acquisition (SCADA) System Upgrade** - CVWD has an existing SCADA system with RTU/PLC's installed at each of the District's facilities that provides information on the status of the system, controls to operate booster pumps and provides alarms to the System Operators. CVWD plans to design and install an upgraded SCADA system such that the equipment, programming and integration are based on industry standards and can be installed, repaired, and/or replaced by various companies.

Staff is currently working on an assessment of the current equipment and programming to prepare a request for proposal that will be used to define the scope of work from a consulting firm. Staff is planning a presentation at a future Engineering Committee meeting to discuss the scope of work and possible options with preliminary construction costs.

6. **Replacement of SCADA Communication Radio Network** – CVWD has an existing radio communication network that operates on the 900 MHz radio frequency. In the past year, the radio system has seen interference with other communication devices and the equipment, which was installed 6 years ago, is nearing the end of its useful life, and has been malfunctioning.

Staff is currently working on an assessment of the current equipment and reviewing options with respect to available radio frequencies or a licensed frequency. This information will be used for a presentation at a future Engineering Committee meeting and possible that this scope will be included in the SCADA system upgrades.

7. **Local Hazard Mitigation Plan** - CVWD was awarded a grant from Cal OES and FEMA to prepare a Local Hazard Mitigation Plan (LHMP) to address high priority hazards related to its water and sewer systems during a drought, energy shortage/outage, wildfire, earthquake, terrorism and cyber-attack. The total grant amount to prepare a local hazard mitigation plan is \$165,000, with \$125,000 grant funding from FEMA and \$40,000 funding from CVWD.

Staff has sent out a request for proposal to 11 firms and held a pre-proposal meeting on June 22. The proposals are due on July 10, 2020 and the proposal will be reviewed with the Engineering Committee at the August meeting.

- RFP – Due July 10, 2020
- August 7, 2020 – Review at Engineering Committee
- August 11, 2020 - Award of Consulting Contract
- LHMP to begin in August 2020 and be completed by October 2021

8. **Annual Booster Pump Replacement** – This project is for the replacement of one (1) booster pump of CVWD's 34 booster pumps. Mr. Yared will be preparing the design specifications that will include replacing the existing motor will be with premium efficiency motors to decrease power costs and increase the "water to wire" efficiency with following project schedule:
- October 27, 2020 - Award of Contract
 - Construction to begin in January 2021 and be completed by March 2021
9. **Advanced Metering Infrastructure (AMI) Program** – This project has two (2) components, 1) replacement of ¾" & 1" meters with new Sensus iPERL "Smart Meters" in Pressure Zones 1 & 2, and 2) installation of the AMI network communication system.

Field crews have resumed replacing meters, and this will continue through FY 20/21.

Staff will be meeting with UtiliWorks Consulting to review the request for proposal for the AMI network communication including the installation of 50 – 100 collection points to verify the communication system. Staff will also coordinate with Highroad IT and the District's current customer service software. The schedule will be as follows:

- September 22, 2020 – Approval to advertising for bids
 - November 10, 2020 – Award of Contract
 - Installation to begin in January 2021 and be completed by May 2021
10. **Stormwater Recharge Program** - Stormwater Recharge Project at Crescenta Valley County Park (CVC Park) includes the design and install a stormwater infiltration system within CVC Park that will direct stormwater from the Verdugo Wash into infiltration galleries for groundwater recharge.
- The focus for the next two (2) months will be meeting and coordinating with the City of Los Angeles on storm water rights. Staff will be working with John Robinson Consulting and Mr. Bunn from Lagerlof on an agreement with the City of Los Angeles. The draft agreement will be presented at a future Engineering Committee meeting.
11. **Facility Improvement Program** – This project is for the installation of a new roof on the existing 70 ft diameter concrete reservoir at Encinal for material and equipment storage. Staff will be preparing an RFP for a consulting firm for the structural design of the new roof. The schedule will be as follows:
- August 19, 2020 – RFP Due
 - August 25, 2020 - Award of Consulting Contract
 - October 27, 2020 - Approval to advertising for bids
 - November 24, 2020 - Award of Contract
 - Construction to begin in January 2021 and be completed by July 2021
12. **Rehabilitation Surge Tank at Glenwood** – This project is the rehabilitation of the surge tank at the Glenwood plant. Staff has a preliminary design completed, and the next step will be completing the design and specifications for a specialty contractor to perform the repairs. The project will be awarded for construction in January 2021 and construction completed by April 2021. The schedule will be as follows:
- November 24, 2020 - Award of Contract
 - Construction to begin in January 2021 and be completed by March 2021

SUMMARY:

In summary, staff is underway with the design of several CIP projects and wanted to provide updated information to the Engineering Committee about the project schedule and future Board action items. In addition, this will information relates to the amount of expenditures needed between July 2020 and December 2020 for consultants and construction when discussing the bond financing in August/September 2020.

Prepared & Submitted by:

A handwritten signature in blue ink, appearing to read 'D. Gould', is written over a horizontal line.

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