COASTSIDE COUNTY WATER DISTRICT

766 MAIN STREET

HALF MOON BAY, CA 94019

REGULAR MEETING OF THE BOARD OF DIRECTORS

Tuesday, March 13, 2018 - 7:00 p.m.

AGENDA

The Coastside County Water District (CCWD) does not discriminate against persons with disabilities. Upon request, the agenda and agenda packet materials can be provided in a format to accommodate special needs. If you require a copy of the agenda or related materials in an alternative format to accommodate a disability, or if you wish to attend this public meeting and will require special assistance or other special equipment, please call the District at (650) 726-4405 in advance and we will make every reasonable attempt to provide such an accommodation.

All public records relating to an open session item on this agenda, which are not exempt from disclosure pursuant to the California Public Records Act, that are distributed to a majority of the legislative body will be available for public inspection at the CCWD District Office, located at 766 Main Street, Half Moon Bay, CA at the same time that the public records are distributed or made available to the legislative body.

This agenda and accompanying materials can be viewed on Coastside County Water District's website located at: <u>www.coastsidewater.org</u>.

The Board of the Coastside County Water District reserves the right to take action on any item included on this agenda.

1) ROLL CALL

2) PLEDGE OF ALLEGIANCE

3) **PUBLIC COMMENT**

At this time members of the public may address the Board of Directors on issues not listed on the agenda which are within the purview of the Coastside County Water District. Comments on matters that are listed on the agenda may be made at the time the Board is considering each item. Each speaker is allowed a maximum of three (3) minutes and must complete and submit a speaker slip. The President of the Board will recognize each speaker, at which time the speaker should proceed to the podium, give their name and address and provide their comments to the Board.

4) CONSENT CALENDAR

The following matters before the Board of Directors are recommended for action as stated by the General Manager. All matters listed hereunder constitute a Consent Calendar, are considered as routine by the Board of Directors, and will be acted upon by a single vote of the Board. There will be no separate discussion of these items unless a member of the Board so requests, in which event the matter shall be removed from the Consent Calendar and considered as a separate item.

- A. Approval of disbursements for the month ending February 28, 2018: Claims: \$828,725.10; Payroll: \$101,055.44 for a total of \$929,780.54 (attachment)
 ➢ February Monthly Financial Claims reviewed and approved by Director Coverdell
- B. Acceptance of Financial Reports (attachment)
- C. Approval of Minutes of February 10, 2018 Regular Board of Directors Meeting (attachment)
- **D.** Installed Water Connection Capacity and Water Meters Report (attachment)
- E. Total CCWD Production Report (attachment)
- F. CCWD Monthly Sales by Category Report –February 2018 (attachment)
- G. Monthly Rainfall Reports (attachment)
- H. S.F.P.U.C. Hydrological Report for the month of January 2018 (attachment)
- I. S.F.P.U.C. Hydrological Report for the month of February 2018 (attachment)
- J. Approval for President Feldman to attend the Association of California Water Agencies (ACWA) Spring Conference in Sacramento, May 8-11, 2018 (attachment)

5) MEETINGS ATTENDED / DIRECTOR COMMENTS

6) **GENERAL BUSINESS**

- A. Agreement with Cornerstone Structural Engineering Services Group for Seismic Evaluation of El Granada Tank # 1 (<u>attachment</u>)
- **B.** Agreement with West Yost for a Feasibility Study of Optimizing Local Water Source Treatment (attachment)
- C. Award of Contract with Pump Repair Service to procure and install new 350 HP and 500 HP motors at Crystal Springs Pump Station (attachment)
- **D.** Fiscal Year 2018-2019 Budget Process Timeline information only (attachment)
- E. Draft Fiscal Year 2018-2019 Operations Budget, Draft Fiscal Year 2018/19 to 2027/28 Capital Improvement Program (CIP) and Draft Fiscal Year 2018-2019 Financing Plan (attachment)

7) MONTHLY INFORMATIONAL REPORTS

- A. Assistant General Manager's Report (attachment)
 - AMI Advanced Metering Infrastructure Installation
 - Letter from State Senator, Jerry Hill

- SFPUC Memo from Steven Ritchie Updated Water Supply Availability Estimate
- **B.** Superintendent of Operations Report (<u>attachment</u>)
- C. Water Resource Report (attachment)

8) DIRECTOR AGENDA ITEMS - FUTURE BOARD AND COMMITTEE MEETINGS AND REQUESTS FOR FUTURE BOARD MEETINGS AGENDA ITEMS

- Finance Committee Meeting March 13, 2018 3:00 p.m. Review Draft Financing Plan and Preliminary Rate Study Findings
- Regular Board Meeting Tuesday, April 10, 2018 agenda items include: Presentation of Draft Operations and Maintenance Budget and Capital Improvement Program and Financing Plan

9) CLOSED SESSION

A. Public Employee Performance Evaluation Pursuant to California Government Section 54957 Title: General Manager

10) RECONVENE TO OPEN SESSION

Public Report of closed session action.

11) ADJOURNMENT

COASTSIDE COUNTY WATER DISTRICT CLAIMS FOR FEBRUARY 2018

		CHECKS			
CHECK DATE	CHECK NO.	VENDOR	VOID CHECK		<u>AMOUNT</u>
02/09/2018	25022	AT&T		\$	3,650.82
02/09/2018	25023	COMCAST		\$	200.39
02/09/2018	25024	JAMES COZZOLINO, TRUSTEE		\$	200.00
02/09/2018	25025	CURLEY & RED'S INC. BODY SHOP		\$	1,096.49
02/09/2018	25026	DEL GAVIO GROUP		\$	733.75
02/09/2018	25027	ERS INDUSTRIAL SERVICES INC.		\$	2,698.00
02/09/2018	25028	FEDAK & BROWN LLP		\$	510.00
02/09/2018	25029	FIRST NATIONAL BANK		\$	2,261.65
02/09/2018	25030	HASSETT HARDWARE		\$	1,142.91
02/09/2018	25031	HUE & CRY, INC.		\$	24.00
02/09/2018	25032	MASS MUTUAL FINANCIAL GROUP		\$	1,974.65
02/09/2018	25033	REPUBLIC SERVICES		\$	419.06
02/09/2018	25034	STAT PADS, LLC		\$	125.00
02/09/2018	25035	STATE WATER RESOURCES CONTROL BD		\$	24,106.00
02/09/2018	25036	STANDARD INSURANCE COMPANY		\$	521.13
02/09/2018	25037	LISA SULZINGER		\$	122.16
02/09/2018	25038	TEAMSTERS LOCAL UNION #856		\$	1,256.00
02/09/2018	25039	MICHAEL BRIAN CASEY		\$	1,617.66
02/09/2018	25040	TPX COMMUNICATIONS		\$	1,812.89
02/09/2018	25041	SUSAN TURGEON		\$	139.11
02/09/2018	25042	UNITED STATES POSTAL SERV.		\$	600.00
02/09/2018	25043	JASON MALFATTI		\$	925.00
02/09/2018	25044	VALIC		\$	3,880.00
02/09/2018	25045	JUAN CARLOS SALAZAR		\$	1,120.00
02/09/2018	25046	ASSOC. CALIF. WATER AGENCY		\$	11,638.78
02/13/2018	25047	HEALTH BENEFITS ACWA-JPIA		\$	44,389.22
02/13/2018	25048	RECORDER'S OFFICE		\$	98.00
02/13/2018	25049	PACIFIC GAS & ELECTRIC CO.		\$	33.683.48
02/13/2018	25050	SAN FRANCISCO WATER DEPT.		\$	77,887.20
02/23/2018	25051	ADP. INC.		\$	962.70
02/23/2018	25052	FRANK YAMELLO		\$	10.852.19
02/23/2018	25053	ANDREINI BROS. INC.		\$	125,586,21
02/23/2018	25054	ANIXTER INC		\$	1.222.85
02/23/2018	25055	AT&T LONG DISTANCE		\$	241.33
02/23/2018	25056	AZTEC GARDENS, INC.		\$	190.00
02/23/2018	25057	BADGER METER, INC.		\$	27.00
02/23/2018	25058	BAY AREA AIR QUALITY MGMT DIST		\$	332.00
02/23/2018	25059	BAY ALARM COMPANY		\$	1 659 24
02/23/2018	25060	BIG CREEK LUMBER		\$	36.90
02/23/2018	25061	INSTITUTE FOR ENVIRONMENTAL HEALTH INC.		\$	760.00
02/23/2018	25062	CALCON SYSTEMS INC		¢ ¢	35 348 93
02/23/2018	25063	CLARK PEST CONTROL OF STOCKTON INC		Ψ ¢	125.00
02/23/2018	25064	COAST TRANSMISSIONS		Ψ ¢	244 37
02/23/2018	25065	PETTY CASH		¢ ¢	89.75
02/23/2018	25066	RECORDER'S OFFICE		Ψ ¢	98.00
02/23/2018	25067			Ψ ¢	6 835 46
02/23/2010	25068	D/B/A CLISTOM TRUCK CLISTOM TOPS INC		¢ ¢	2 032 50
02/23/2010	25069			Ψ ¢	2,002.00
02/23/2010	25070	IAMES DERBIN		Ψ ¢	1 500 00
02/23/2010	25070			¢ ¢	765.00
02/23/2010	25071			¢	250.00
02/23/2010	25072	CRAINGER INC		Ψ ¢	200.00 1 627 52
02/23/2010	25073			¢ ¢	4,007.02 2 102 70
02/23/2010	25074			¢ ¢	J, 193.12
02/23/2010	25075			ф Ф	1,200.02
02/23/2010	25070			ф Ф	1/0.00
02/23/2010	25077			ф Ф	3,409.00
02/23/2010	25070			Φ Φ	013.91 1 220 50
02/23/2018	20019	IRVINE CONSULTING SERVICES, INC.		Ф	4,332.59

02/23/2018	25080	IRVINE CONSULTING SERVICES, INC.	\$ 84.99
02/23/2018	25081	KINGS MOUNTAIN ARBOR HEALTH & SAFETY	\$ 7,500.00
02/23/2018	25082	LIEBERT CASSIDY WHITMORE	\$ 2,774.20
02/23/2018	25083	GLENNA LOMBARDI	\$ 118.00
02/23/2018	25084	MASS MUTUAL FINANCIAL GROUP	\$ 1,974.65
02/23/2018	25085	MISSION UNIFORM SERVICES INC.	\$ 221.79
02/23/2018	25086	MONTEREY COUNTY LAB	\$ 1,710.00
02/23/2018	25087	NATIONAL METER & AUTOMATION	\$ 3,857.80
02/23/2018	25088	NORTHSTAR CHEMICAL	\$ 3,916.80
02/23/2018	25089	OFFICE DEPOT	\$ 764.66
02/23/2018	25090	ONTRAC	\$ 714.00
02/23/2018	25091	PACIFICA COMMUNITY TV	\$ 250.00
02/23/2018	25092	PAULO'S AUTO CARE	\$ 205.91
02/23/2018	25093	PITNEY BOWES	\$ 211.91
02/23/2018	25094	PROFESSIONAL METERS, INC.	\$ 187,796.70
02/23/2018	25095	PUMP REPAIR SERVICE CO. INC.	\$ 54,597.34
02/23/2018	25096	RAFTELIS FINANCIAL CONSULTANTS, INC.	\$ 8,399.84
02/23/2018	25097	RAY A MORGAN COMPANY INC.	\$ 362.87
02/23/2018	25098	ROBERTS & BRUNE CO.	\$ 18,591.59
02/23/2018	25099	ROGUE WEB WORKS, LLC	\$ 486.50
02/23/2018	25100	SAN MATEO CTY PUBLIC HEALTH LAB	\$ 636.00
02/23/2018	25101	SERVICE PRESS	\$ 209.54
02/23/2018	25102	SHOE DEPOT, INC	\$ 94.47
02/23/2018	25103	SIMMS PLUMBING & WATER EQUIP, INC.	\$ 646.33
02/23/2018	25104	STATE WATER RESOURCES CONTROL BD	\$ 60.00
02/23/2018	25105	STANDARD INSURANCE COMPANY	\$ 521.13
02/23/2018	25106	STRAWFLOWER ELECTRONICS	\$ 16.26
02/23/2018	25107	JAMES TETER	\$ 9,282.34
02/23/2018	25108	TOTAL COMPENSATION SYSTEMS, INC	\$ 1,710.00
02/23/2018	25109	TYLER TECHNOLOGIES, INC	\$ 17,175.99
02/23/2018	25110	ULINE, INC	\$ 451.04
02/23/2018	25111	UPS STORE	\$ 542.99
02/23/2018	25112	USA BLUE BOOK	\$ 171.96
02/23/2018	25113	VALIC	\$ 3,880.00
02/23/2018	25114	RAYMOND WINCH	\$ 240.15
02/22/2018	25115	KIMBERLY VALDES	\$ 20.49
02/22/2018	25116	LINDSEY REGER	\$ 28.65
02/22/2018	25117	CYNTHIA GAGE	\$ 23.68
02/28/2018	25118	CHEVRON/TEXACO UNIVERSAL CARD	\$ 1,710.26
02/28/2018	25119	HANSONBRIDGETT. LLP	\$ 6,837.00
02/28/2018	25120	JAMES WILLIAM NESS	\$ 490.00
02/28/2018	25121	VERIZON WIRELESS	\$ 433.35
		SUBTOTAL CLAIMS FOR MONTH	\$ 769.293.12

WIRE PAYMENTS

<u>MONTH</u>		VENDOR	<u>AMOUNT</u>
02/08/2018	DFT0000109	PUB. EMP. RETIRE SYSTEM	\$ 13,391.67
02/08/2018	DFT0000110	CalPERS FISCAL SERVICES DIVISION	\$ 27,620.90
02/08/2018	DFT0000111	CalPERS FISCAL SERVICES DIVISION	\$ 40.03
02/22/2018	DFT0000112	PUB. EMP. RETIRE SYSTEM	\$ 13,407.97
2/28/2018		BANK & CREDIT CARD FEES	\$ 4,971.41
		SUBTOTAL WIRE PAYMENTS FOR MONTH	\$ 59,431.98

TOTAL CLAIMS FOR THE MONTH

828,725.10

\$



Monthly Budget Report

Account Summary

For Fiscal: 2017-2018 Period Ending: 02/28/2018

				Variance				Variance		
		February	February	Favorable	Percent	YTD	YTD	Favorable	Percent	
		Budget	Activity	(Unfavorable)	Variance	Budget	Activity	(Unfavorable)	Variance	Total Budget
Revenue										
RevType: 1 - Operating										
<u>1-4120-00</u>	Water Revenue	733,237.00	847,397.83	114,160.83	15.57 %	7,382,540.00	7,853,215.91	470,675.91	6.38 %	10,805,600.00
	Total RevType: 1 - Operating:	733,237.00	847,397.83	114,160.83	15.57 %	7,382,540.00	7,853,215.91	470,675.91	6.38 %	10,805,600.00
RevType: 2 - Non-Operating	g									
<u>1-4170-00</u>	Water Taken From Hydrants	4,165.00	4,097.56	-67.44	-1.62 %	33,320.00	40,121.32	6,801.32	20.41 %	50,000.00
<u>1-4180-00</u>	Late Notice - 10% Penalty	4,998.00	-1,030.17	-6,028.17	-120.61 %	39,984.00	37,086.70	-2,897.30	-7.25 %	60,000.00
<u>1-4230-00</u>	Service Connections	833.00	1,260.22	427.22	51.29 %	6,664.00	7,999.35	1,335.35	20.04 %	10,000.00
<u>1-4920-00</u>	Interest Earned	0.00	0.00	0.00	0.00 %	4,630.00	5,943.12	1,313.12	28.36 %	6,174.00
<u>1-4930-00</u>	Tax Apportionments/County Checks	50,000.00	70,633.51	20,633.51	41.27 %	425,000.00	510,110.58	85,110.58	20.03 %	700,000.00
<u>1-4950-00</u>	Miscellaneous Income	3,083.00	930.00	-2,153.00	-69.83 %	24,667.00	14,606.09	-10,060.91	-40.79 %	37,000.00
<u>1-4955-00</u>	Cell Site Lease Income	12,833.00	13,057.84	224.84	1.75 %	102,667.00	103,936.83	1,269.83	1.24 %	154,000.00
<u>1-4965-00</u>	ERAF Refund - County Taxes	0.00	0.00	0.00	0.00 %	250,000.00	366,651.07	116,651.07	46.66 %	250,000.00
	Total RevType: 2 - Non-Operating:	75,912.00	88,948.96	13,036.96	17.17 %	886,932.00	1,086,455.06	199,523.06	22.50 %	1,267,174.00
	Total Revenue:	809,149.00	936,346.79	127,197.79	15.72 %	8,269,472.00	8,939,670.97	670,198.97	8.10 %	12,072,774.00
Fxnense										
ExpType: 1 - Operating										
1-5130-00	Water Purchased	47.921.00	94,794,20	-46.873.20	-97.81 %	1.544.625.00	1.301.837.14	242.787.86	15.72 %	2.106.991.00
1-5230-00	Nunes T P Pump Expense	3.356.00	2.421.17	934.83	27.86 %	26.853.00	24.799.32	2.053.68	7.65 %	40.280.00
1-5231-00	CSP Pump Station Pump Expense	8.000.00	-20.293.55	28.293.55	353.67 %	283.000.00	233.574.18	49.425.82	17.46 %	318.000.00
1-5232-00	Other Trans. & Dist Pump Expense	1.440.00	1.727.08	-287.08	-19.94 %	17.440.00	15.390.27	2.049.73	11.75 %	25.440.00
1-5233-00	Pilarcitos Canvon Pump Expense	3.000.00	1.495.93	1.504.07	50.14 %	19.400.00	19.828.75	-428.75	-2.21 %	32.309.00
1-5234-00	Denniston T P Pump Expense	12.000.00	4.115.75	7.884.25	65.70 %	44.000.00	59.983.43	-15.983.43	-36.33 %	92.220.00
1-5242-00	CSP Pump Station Operations	875.00	973.58	-98.58	-11.27 %	7,000.00	6,679.39	320.61	4.58 %	10,500.00
1-5243-00	CSP Pump Station Maintenance	1,388.00	704.86	683.14	49.22 %	11,104.00	6,153.84	4,950.16	44.58 %	37,000.00
1-5246-00	Nunes T P Operations - General	6,000.00	1,661.44	4,338.56	72.31 %	48,000.00	31,866.91	16,133.09	33.61 %	72,000.00
1-5247-00	Nunes T P Maintenance	10,200.00	36,520.28	-26,320.28	-258.04 %	81,650.00	78,547.15	3,102.85	3.80 %	122,500.00
1-5248-00	Denniston T P Operations-General	3,000.00	7,443.38	-4,443.38	-148.11 %	20,500.00	32,788.87	-12,288.87	-59.95 %	34,500.00
1-5249-00	Denniston T.P. Maintenance	5,000.00	3,787.94	1,212.06	24.24 %	40,000.00	61,563.33	-21,563.33	-53.91 %	60,000.00
1-5250-00	Laboratory Expenses	3,000.00	4,443.78	-1,443.78	-48.13 %	30,000.00	39,808.73	-9,808.73	-32.70 %	53,000.00
1-5260-00	Maintenance - General	24,308.00	64,525.59	-40,217.59	-165.45 %	194,466.00	184,551.91	9,914.09	5.10 %	291,700.00
1-5261-00	Maintenance - Well Fields	3,000.00	0.00	3,000.00	100.00 %	26,500.00	0.00	26,500.00	100.00 %	40,000.00
1-5263-00	Uniforms	0.00	0.00	0.00	0.00 %	8,700.00	4,763.62	3,936.38	45.25 %	10,000.00
1-5318-00	Studies/Surveys/Consulting	20,000.00	13,109.84	6,890.16	34.45 %	80,000.00	52,444.84	27,555.16	34.44 %	160,000.00
1-5321-00	Water Resources	3,083.00	0.00	3,083.00	100.00 %	24,667.00	9,241.79	15,425.21	62.53 %	37,000.00

Monthly Budget Report

For Fiscal: 2017-2018 Period Ending: 02/28/2018

		February	February	Variance Favorable	Percent	YTD	YTD	Variance Favorable	Percent	
		Budget	Activity	(Unfavorable)	variance	Budget	Activity	(Unfavorable)	Variance	Total Budget
<u>1-5322-00</u>	Community Outreach	3,000.00	900.00	2,100.00	70.00 %	21,700.00	19,549.78	2,150.22	9.91 %	54,700.00
<u>1-5381-00</u>	Legal	9,166.00	5,299.20	3,866.80	42.19 %	73,334.00	30,306.20	43,027.80	58.67 %	110,000.00
<u>1-5382-00</u>	Engineering	8,334.00	480.00	7,854.00	94.24 %	66,667.00	24,654.82	42,012.18	63.02 %	100,000.00
<u>1-5383-00</u>	Financial Services	0.00	10.00	-10.00	0.00 %	20,000.00	13,938.00	6,062.00	30.31 %	20,000.00
<u>1-5384-00</u>	Computer Services	12,067.00	13,557.74	-1,490.74	-12.35 %	96,534.00	79,319.35	17,214.65	17.83 %	144,800.00
<u>1-5410-00</u>	Salaries/Wages-Administration	88,500.00	73,173.67	15,326.33	17.32 %	752,500.00	573,922.42	178,577.58	23.73 %	1,150,980.00
<u>1-5411-00</u>	Salaries & Wages - Field	97,400.00	97,711.56	-311.56	-0.32 %	827,800.00	876,331.78	-48,531.78	-5.86 %	1,266,081.00
<u>1-5420-00</u>	Payroll Tax Expense	13,120.00	12,969.45	150.55	1.15 %	111,515.00	102,743.03	8,771.97	7.87 %	170,555.00
<u>1-5435-00</u>	Employee Medical Insurance	38,629.00	37,912.07	716.93	1.86 %	292,538.00	260,363.07	32,174.93	11.00 %	447,056.00
<u>1-5436-00</u>	Retiree Medical Insurance	4,102.00	4,004.82	97.18	2.37 %	30,807.00	26,580.95	4,226.05	13.72 %	47,215.00
<u>1-5440-00</u>	Employees Retirement Plan	41,875.00	32,628.15	9,246.85	22.08 %	355,940.00	336,118.58	19,821.42	5.57 %	544,380.00
<u>1-5445-00</u>	Supplemental Retirement 401a	0.00	0.00	0.00	0.00 %	0.00	0.00	0.00	0.00 %	35,000.00
<u>1-5510-00</u>	Motor Vehicle Expense	4,225.00	9,490.35	-5,265.35	-124.62 %	33,800.00	48,754.25	-14,954.25	-44.24 %	50,700.00
<u>1-5620-00</u>	Office & Billing Expenses	18,792.00	20,008.77	-1,216.77	-6.47 %	150,336.00	150,526.96	-190.96	-0.13 %	225,500.00
<u>1-5625-00</u>	Meetings / Training / Seminars	2,000.00	5,022.55	-3,022.55	-151.13 %	16,000.00	16,562.19	-562.19	-3.51 %	24,000.00
<u>1-5630-00</u>	Insurance	10,000.00	15,596.02	-5,596.02	-55.96 %	80,000.00	85,581.63	-5,581.63	-6.98 %	120,000.00
<u>1-5687-00</u>	Membership, Dues, Subscript.	2,000.00	2,705.09	-705.09	-35.25 %	46,000.00	54,149.16	-8,149.16	-17.72 %	75,350.00
<u>1-5689-00</u>	Labor Relations	0.00	0.00	0.00	0.00 %	5,000.00	0.00	5,000.00	100.00 %	6,000.00
<u>1-5700-00</u>	San Mateo County Fees	1,667.00	0.00	1,667.00	100.00 %	13,333.00	12,855.62	477.38	3.58 %	20,000.00
<u>1-5705-00</u>	State Fees	0.00	24,438.00	-24,438.00	0.00 %	4,000.00	26,619.95	-22,619.95	-565.50 %	24,000.00
	Total ExpType: 1 - Operating:	510,448.00	573,338.71	-62,890.71	-12.32 %	5,505,709.00	4,902,701.21	603,007.79	10.95 %	8,179,757.00
ExpType: 4 - Capital Related										
<u>1-5712-00</u>	Debt Service/Existing Bonds 2006B	0.00	0.00	0.00	0.00 %	361,956.25	362,514.63	-558.38	-0.15 %	486,776.00
<u>1-5715-00</u>	Debt Service/CIEDB 11-099	0.00	0.00	0.00	0.00 %	336,269.00	336,269.36	-0.36	0.00 %	336,269.00
1-5716-00	Debt Service/CIEDB 2016	0.00	0.00	0.00	0.00 %	324,652.00	324,651.94	0.06	0.00 %	324,652.00
	Total ExpType: 4 - Capital Related:	0.00	0.00	0.00	0.00 %	1,022,877.25	1,023,435.93	-558.68	-0.05 %	1,147,697.00
	Total Expense:	510,448.00	573,338.71	-62,890.71	-12.32 %	6,528,586.25	5,926,137.14	602,449.11	9.23 %	9,327,454.00
	Report Total:	298,701.00	363,008.08	64,307.08		1,740,885.75	3,013,533.83	1,272,648.08		2,745,320.00

COASTSIDE COUNTY WATER DISTRICT MONTHLY INVESTMENT REPORT February 28, 2018

RESERVE BALANCES	Current Year as of 2/28/18	Prior Year as of 2/28/17
CAPITAL AND OPERATING RESERVE	\$5,089,378.99	\$4,133,916.31
RATE STABILIZATION RESERVE	\$250,000.00	\$250,000.00
TOTAL DISTRICT RESERVES	\$5,339,378.99	\$4,383,916.31

ACCOUNT DETAIL

This report is in conformity with CCWD's Investment Policy.

COASTSIDE COUNTY WATER DISTRICT APPROVED CAPITAL IMPROVEMENT PROJECTS FISCAL YEAR 2017-2018

	2/28/2018				
Approved	Actual	Projected		%	Project Status/
CIP Budget	To Date	Year-End	Variance	Completed	Comments
FY 17/18	FY 17/18	FY 17/18	vs. Budget		

Equipment Purchases & Replacement

06-03	SCADA/Telemetry/Electrical Controls Replacement	\$ 50,000	\$ 30,693	\$ 50,000	\$ -	61%	
08-12	New Service Truck	\$ 250,000	\$ 213,603	\$ 213,603	\$ 36,397	100%	
99-02	Vehicle Replacement	\$ 90,000	\$ 28,844	\$ 90,000	\$ -	32%	on order
99-03	Computer Systems	\$ 5,000	\$ -	\$ -	\$ 5,000	0%	included in operating expenses
99-04	Office Equipment/Furniture	\$ 3,000	\$ -	\$ -	\$ 3,000	0%	included in operating expenses

Facilities & Maintenance

08-08	PRV Valves Replacement Project	\$ 30,000	\$ 11,812	\$ 30,000	\$ -	39%	
09-07	Advanced Metering Infrastructure	\$ 850,000	\$ 925,267	\$ 980,000	\$ (130,000)	109%	Overage in AMI/Meter change program - relates to utilizing an installation contractor, approved by the Board in August, 2017
99-01	Meter Change Program	\$ 600,000	\$ 823,698	\$ 900,000	\$ (300,000)	137%	Includes \$70K ordered in prior fiscal year/received in current year
09-09	Fire Hydrant Replacement	\$ 40,000	\$ 19,012	\$ 40,000	\$ -	48%	
16-07	Sample Station Replacment Project	\$ 20,000	\$ 26,375	\$ 26,375	\$ (6,375)	132%	
14-14	Pilarcitos Canyon Road Improvements	\$ 100,000	\$ 20,454	\$ 20,454	\$ 79,546	20%	Moved to FY2020

Pipeline Projects

06-02	Highway 1 South Pipeline Replacement Project	\$ 80,000	\$ -	\$ 80,000	\$ -	0%	
07-03	Pilarcitos Canyon Pipeline Replacement	\$ 150,000	\$ 31,927	\$ 50,000	\$ 100,000	21%	Moved to FY2020
14-01	Replace 12" Welded Steel Line on Hwy 92 at La Nebbia	\$ 300,000	\$ 212,114	\$ 300,000	\$ -	71%	
14-26	Replace 2" Pipe in Downtown Half Moon Bay	\$ 500,000	\$ 164,424	\$ 660,000	\$ (160,000)	33%	
18-12	Installation of two (2) valves - Ritz Carlton	\$ 20,000		\$ 20,000	\$ -	0%	

Pump Stations / Tanks / Wells

06-04	Hazen's Tank Replacement	\$ 30,000			\$ 30,000	0%	Moved to FY2019
08-14	Alves Tank Recoating (Interior & Exterior)	\$ 100,000	\$ 2,868	\$ 100,000	\$ -	3%	
13-08	Crystal Springs Spare 350 HP Motor	\$ 60,000	\$ -	\$ 64,000	\$ (4,000)	0%	
18-02	CSP Air Relief Valves	\$ 40,000	\$ -	\$ 50,000	\$ (10,000)	0%	
18-03	CSP Spare 500 Pump Rehabilitation	\$ 30,000	\$ 64,161	\$ 64,161	\$ (34,161)	58%	
18-05	Tank THM Control (Mixer & Blower)	\$ 80,000	\$ -	\$ 80,000	\$ -	0%	
18-07	EG #2 Tank Chlorination System (Residual Control System)	\$ 50,000	\$ -	\$ 50,000	\$ -	0%	
18-08	CSP Communications	\$ 50,000	\$ 24,705	\$ 24,705	\$ 25,295	49%	IQ Replacement

Water Supply Development

17-12	Recycled Water Project Development	\$ 100,00	0 \$ -	\$-	\$ 100,000	0%	Moved to FY18/19

Water Treatment Plants

17-04	Denniston Dam Spillway Repairs	\$ 90,000		\$ 90,000	\$ -	0%	
18-09	Denniston Heater	\$ 15,000		\$ 15,000	\$ -	0%	
18-10	Nunes Treatment Plan Improvements - Study (Filter 5, Filter Coasting, etc.)	\$ 100,000	\$ -	\$ 100,000	\$ -	0%	
18-11	Nunes Bulk Caustic Tank	\$ 40,000	\$ -		\$ 40,000	0%	Moved to FY18/19
99-05	Denniston Maintenance Dredging	\$ 35,000	\$ 23,811	\$ 23,811	\$ 11,189	68%	(This amount is reflected as an annual expense under Denniston maintenance vs. CIP.)

COASTSIDE COUNTY WATER DISTRICT APF FISC

PROVED CAPITAL IMPROVEMENT PROJECTS		2/28/2018				
CAL YEAR 2017-2018	Approved	Actual	Projected		%	Project Status/
	CIP Budget	To Date	Year-End	Variance	Completed	Comments
	FY 17/18	FY 17/18	FY 17/18	vs. Budget		

\$ 3,908,000 \$ 2,623,767 \$ 4,122,109 \$ (214,109) FY 17/18 TOTALS

FY2016/17 CIP Projects in process - paid in FY 2017/18

06-03	El Granada Tank #3 Recoating Project	\$	197,351	\$ 197,351	\$ (197,351)	Carryover of project from 2016/17; project completed 10- 2017; funded by Ibank Ioan
10-02 & 12-04	Denniston Booster Pump Station & Bridgeport Pipeline Project	\$	352,352	\$ 370,000	\$ (370,000)	Carryover of project from 2016/17; project is near completion/awaiting pump repair; funded by Ibank loan
17-06	Crystal Springs Pump Station Discharge Valve Replacement	\$	365	\$ 365	\$ (365)	
13-02	Replace 8inch Pipeline Under Creek at Pilarcitos Ave (Strawflower Pipeline Replacement Project)	\$	194,638	\$ 194,638	\$ (194,638)	Carryover of project from 2016/17; projected completed in August 2017
17-08	Nunes Filter Surface Wash Repairs	\$	14,850	\$ 14,850	\$ (14,850)	
17-05	CSP Pump Station Motor Controls			\$ 20,000	\$ (20,000)	

PREVIOUS YEAR TOTALS \$ - \$ 759,557 \$ 797,204 \$ (797,204)

UNSCHEDULED ITEMS (CAPITAL EXPENDITURES) FOR CURRENT FISCAL YEAR 17/18

17-16	CSP P3 Soft Start Pump/Shafting Replacement & Motor refurbishment	\$ 13,677	\$ 13,677	\$ (13,677)	Work related to FY2016/17 emergency pump replacement -approved at February 2017 Board meeting
	CSP 500 HP Motor		\$ 49,000	\$ (49,000)	(added to CIP Feb 2018)
12-12	Denniston/San Vicente Water Supply Development	\$ 43,968	\$ 43,968	\$ (43,968)	Legal fees & gaging
	Door Replacement at Nunes	\$ 17,450	\$ 17,450	\$ (17,450)	
	Door Replacement at Denniston	\$ 9,370	\$ 9,370	\$ (9,370)	
	Wavecrest Road Pipeline Replacement Project	\$ 20,213	\$ 20,213	\$ (20,213)	
	El Granada Tank #3 - Pump #1 Rebuild/Motor Replacement	\$ 11,666	\$ 11,666	\$ (11,666)	
	Denniston WTP and Tank Road Repairs/Paving	\$ 27,016	\$ 27,016	\$ (27,016)	
	El Granada Tank #1 Refurbishment Project	\$ 7,791	\$ 7,791	\$ (7,791)	
	Bell Moon Pipeline Replacement Project	\$ 507	\$ 507	\$ (507)	
	Grandview 2-inch Replacment Project	\$ 507	\$ 507	\$ (507)	

NON-BUDGETED TOTALS \$ 152,165 \$ 201,165 \$ (201,165) - \$

CIP TOTALS \$ 3,908,000 \$ 3,535,489 \$ 5,120,478 \$ (1,212,478)

Legal Cost Tracking Report 12 Months At-A-Glance

Acct. No.5681 Patrick Miyaki - HansonBridgett, LLP Legal

Month	Admin (General Legal Fees)	Water Supply Develpmnt	Recycled Water	Transfer Program	СІР	Personnel	Water Shortage	Lawsuits	Infrastructure Project Review (Reimbursable)	TOTAL
Mor 17	1 250		605	1 210	1 510			1		4 770
	1,350		695	1,219	1,510					4,773
Apr-17	7,572			724	544					8,840
May-17	5,739			500	30					6,269
Jun-17	1,846		272	379	393	19,831				22,721
Jul-17	2,476			108		2,716				5,300
Aug-17	2,925		748	387	2,984					7,043
Sep-17	1,625		195	374	4,602	1,778				8,573
Oct-17	975			222	130	1,268				2,595
Nov-17	2,418			226	2,340	525				5,509
Dec-17	4,934			138	1,300	130				6,502
Jan-18	878			412	260				2,178	3,727
Feb-18	4,485			1,052	260	1,040				6,837

TOTAL	37,223	0	1,909	5,739	14,352	27,287	0	0	2,178	88,687

Engineer Cost Tracking Report 12 Months At-A-Glance

Acct. No. 5682 JAMES TETER Engineer

Month	Admin & Retainer	CIP	Studies & Projects	TOTAL	Reimburseable from Projects
Mar-17	480	7,552		8,032	
Apr-17	480	5,594		6,074	
May-17	587	9,988		10,575	
Jun-17	480	620		1,100	
Jul-17	480		1,606	2,086	1,606
Aug-17	1,241	117	2,186	3,544	2,186
Sep-17	480		845	1,325	845
Oct-17	480		930	1,410	930
Nov-17	480		3,007	3,487	3,006
Dec-17	480		338	818	
Jan-18	480	1,935	1,683	4,098	1,683
Feb-18	480	1,014	7,788	9,282	7,788

TOTAL	6,627	26,820	18,383	51,830	18,044

Calcon T&M Projects Tracking as of 2/28/18

Project No.	Name	Status	Proposal Date	Approved Date	Project Budget	Project Total Billing (thru 6/30/17)	Project Billing FY2017-18	Project Budget Remaining
CAL-13-01	EG Tank 2 Recoating Project	Closed	9/30/13	10/8/13	\$8,220.00	\$8,837.50		-\$617.50
CAL-13-02	Nunes Control System Upgrades	Closed	9/30/13	10/8/13	\$46,141.00	\$55,363.60		-\$9,222.60
CAL-13-03	Win 911 and PLC Software	Closed	9/30/13	10/8/13	\$9,717.00	\$12,231.74		-\$2,514.74
CAL-13-04	Crystal Springs Surge Tank Retrofit	Closed	11/26/13	11/27/13	\$31,912.21	\$66,572.54		-\$34,660.33
CAL-13-05		Closed				\$0.00		\$0.00
CAL-13-06	Nunes Legacy Backwash System Removal	Closed	11/25/13	11/26/13	\$6,516.75	\$6,455.00		\$61.75
CAL-13-07	Denniston Backwash FTW Valves	Closed	11/26/13	11/27/13	\$6,914.21	\$9,518.28		-\$2,604.07
CAL-14-01	Denniston Wash Water Return Retrofit	Closed	1/28/14	2/14/14	\$13,607.00	\$13,591.60		\$15.40
CAL-14-02	Denniston Calrifier SCADA Data	Closed	4/2/14	4/7/14	\$4,125.00	\$4,077.50		\$47.50
CAL-14-03	Nunes Surface Scatter Turbidimeter	Closed	4/2/14	4/7/14	\$2,009.50	\$0.00		\$2,009.50
CAL-14-04	Phase I Control System Upgrade	Closed	4/2/14	4/7/14	\$75,905.56	\$44,459.14		\$31,446.42
CAL-14-06	Miramar Control Panel	Closed	8/28/14	8/28/14	\$37,953.00	\$27,980.71		\$9,972.29
CAL-14-08	SFWater Flow & Data Logger/Cahill Tank	Closed	8/20/2014	8/20/2014	\$1,370.00	\$1,372.00		-\$2.00
CAL-15-01	Main Street Monitors	Closed				\$6,779.42		-\$6,779.42
CAL-15-02	Dennistion To Do List	Closed				\$2,930.00		-\$2,930.00
CAL-15-03	Nunes & Denniston Turbidity Meters	Closed			\$6,612.50	\$12,536.12		-\$5,923.62
CAL-15-04	Phase II Control System Upgrade		6/23/2015	8/11/2015	\$195,000.00	\$194,102.50	\$8,125.00	-\$7,227.50
CAL-15-05	Permanganate Water Flow	Closed				\$1,567.15		-\$1,567.15
CAL-16-04	Radio Network		12/9/2016	1/10/2017	\$126,246.11	\$116,633.18	\$22,567.50	-\$12,954.57
CAL-16-05	El Granada Tank No. 3 Recoating		12/16/2016		\$6,904.50	\$3,860.00	\$2,985.00	\$59.50
CAL-17-01	Crystal Springs Leak Valve Control		2/8/2017	2/14/2017	\$8,701.29	\$6,390.00		\$2,311.29
CAL-17-02	Crystal Springs Requirements & Addtl Controls		2/8/2017	2/14/2017	\$38,839.50	\$16,467.06	\$24,705.00	-\$2,332.56
CAL-17-03	Nunes Valve Control		6/29/2017	7/11/2017	\$73,281.80	\$64,184.35	\$14,850.00	-\$5,752.55
CAL-17-04	Denniston Booster Pump Station		7/27/2017	8/8/2017	\$21,643.75	\$1,230.00	\$28,530.00	-\$8,116.25
CAL-17-05	Crystal Springs Pump Station #3 Soft Start		7/27/2017	8/8/2017	\$12,213.53	\$0.00	\$12,178.13	\$35.40
CAL-17-06	Nunes Flocculartor & Rapid Mix VFD Panels		12/6/2017	12/12/2017	\$29,250.75	\$0.00	\$29,138.93	\$111.82

SUBTOTAL		\$763,084.96	\$677,139.39	\$143,079.56	-\$57,133.99
Other: Maintena	nce				
CAL-17-EMG EI	mergency Callout				
Та	anks		\$	1,620.00	
С	rystal Springs Maintenance		\$	9,144.43	
N	unes Maintenance		\$	4,286.81	
D	enniston Maintenance		\$	3,700.00	
D	stribution System		\$	15,177.44	
TOTAL FY2017/1	8		\$	177,008.24	

COASTSIDE COUNTY WATER DISTRICT

766 MAIN STREET

HALF MOON BAY, CA 94019

MINUTES OF THE REGULAR BOARD OF DIRECTORS MEETING

Tuesday, February 13, 2018

1) ROLL CALL - President Robert Feldman called the meeting to order at 7:00 p.m. Present at roll call: Directors Chris Mickelsen, Glenn Reynolds, Arnie Glassberg and Vice-President Ken Coverdell.

Also present: David Dickson, General Manager; Mary Rogren, Assistant General Manager; James Derbin, Superintendent of Operations; Patrick Miyaki Legal Counsel; JoAnne Whelen, Administrative Assistant/Recording Secretary; Cathleen Brennan, Water Resources Analyst; and Gina Brazil, Office Manager.

2) PLEDGE OF ALLEGIANCE

3) **PUBLIC COMMENT –** There were no public comments.

4) CONSENT CALENDAR

- A. Approval of disbursements for the month ending January 31,2018: Claims: \$611,804.85; Payroll: \$97,172.79 for a total of \$708,977.64
- **B.** Acceptance of Financial Reports
- C. Approval of Minutes of January 9, 2018 Regular Board of Directors Meeting
- **D.** Approval of Minutes of January 17, 2018 Special Board of Directors Meeting
- E. Monthly Water Service Connection Transfer Report
- F. Installed Water Connection Capacity and Water Meters Report
- **G.** Total CCWD Production Report
- H. CCWD Monthly Sales by Category Report January 2018
- I. Monthly Rainfall Reports
- J. S.F.P.U.C. Hydrological Report for the month of December 2017
- **K.** Notice of Completion Denniston Treated Water Pump Station & Transmission Pipeline Project
- L. Notice of Completion El Granada Tank 1 Slide Stabilization Project

Director Mickelsen reported that he had reviewed the monthly financial claims and found all to be in order.

ON MOTION BY Director Coverdell and seconded by Director Mickelsen, the Board voted by roll call vote to approve the Consent Calendar in its entirety:

Vice-President Coverdell	Aye
Director Glassberg	Aye
Director Mickelsen	Aye
Director Reynolds	Aye
President Feldman	Aye

5) MEETINGS ATTENDED / DIRECTOR COMMENTS

There were no reports of meetings attended.

6) **GENERAL BUSINESS**

A. <u>District Transparency Certificate of Excellence awarded through the Special</u> <u>District Leadership Foundation</u>

Mr. Dickson introduced this item, advising the Board that originally a representative from the Special District Leadership Foundation was scheduled to present the District Transparency Certificate of Excellence award, however the representative had become ill and was not able to attend the Board meeting. He provided a brief background about the program and recognized JoAnne Whelen's efforts in achieving the District's award.

B. <u>Contract with Dal Porto Electric for Denniston Pump Station Transformer Work</u>

Mr. Derbin explained the need for the installation due to the new electrical demand following the installation of the Denniston Finished Water Pump Station. He briefly summarized the components of the project, the work schedule, and the list of contractors bidding the project, followed by a request to award the contract to Dal Porto Electric.

ON MOTION BY Director Coverdell and seconded by Director Reynolds, the Board voted by roll call vote to authorize the General Manager to execute a contract with Dal Porto Electric for the installation of a PG&E transformer pad with protective bollards, underground electrical conduit, wires and grounding, and a 400 Amp 277/480 volt 4-wire main service enclosure for a cost of \$38,840:

Vice-President Coverdell	Aye
Director Glassberg	Aye
Director Mickelsen	Aye
Director Reynolds	Aye
President Feldman	Aye

C. Fiscal Year 2018-2019 Budget Process Timeline

Ms. Rogren reviewed the updated Budget Process Timeline and goals of the various scheduled meetings.

D. Draft Fiscal Year 2018-2019 Operations Budget and Draft Fiscal Year 2018/2019 to 2027/2028 Capital Improvement Program (CIP)

Ms. Rogren began her presentation with an introduction to the District's Fiscal Year 2018/2019 proposed Operations Budget, including a review of key assumptions and potential budget risks. She emphasized the impact of utilizing the District's local water sources, highlighting that in FY 2015/16, 50 MG was budgeted in annual production at Denniston and for FY 2018/2019, 200+ MG was budgeted.

Next Ms. Rogren presented the draft 10-year Capital Improvement Program (CIP), and focused on a review of the key projects projected in the 5-year draft plan. At this point President Feldman and Director Reynolds, both members of the District's Facilities Committee, briefly reported on their recent tour of the District's water tanks and the importance in pursuing evaluations and potential retrofitting of the District's tanks. Additionally, Ms. Rogren showed a comparison between Fiscal Year 2019 versus Fiscal Year 2018 with regards to the draft 5-year CIP, featuring a review of equipment purchases and replacement, facilities and maintenance, pipeline projects, pump stations, tanks and wells, water supply development, and water treatment plants.

7) MONTHLY INFORMATIONAL REPORTS

Assistant General Manager's Report

- Advanced Metering Infrastructure (AMI) Ms. Rogren provided an update on the progress with the AMI installations.
- SFPUC Memo from Steven Ritchie Initial Water Supply Availability Estimate Ms. Rogren shared this recent memo advising that at this time SFPUC does not anticipate the need to request demand reductions for the retail and wholesale service areas.

A. <u>Superintendent of Operations Report</u>

Mr. Derbin reviewed the monthly operations highlights, including the addition of new delay pilots to the altitude valves on the Alves and El Granada 1 tanks to improve water quality, load testing of emergency generators, the status of the revised specifications and standards, new Environmental Protection Agency (EPA) required sampling, and a first-grade class tour of the Nunes Water Treatment Plant.

B. <u>Water Resources Report</u>

Ms. Brennan provided an informational report on the February 2018 Snow Survey results and summarized some actions the State Water Resources Control Board is considering with regards to proposed water conservation regulations.

8) DIRECTOR AGENDA ITEMS - REQUESTS FOR FUTURE BOARD MEETINGS

There were no requests for future agenda items.

There was a brief break provided at 8:15 p.m. to clear the Board room to prepare for discussion of the Closed Session agenda item. The Closed Session discussion began at 8:22 p.m.

9) CLOSED SESSION

- A. Conference with Legal Counsel Anticipated Litigation Significant Exposure to Litigation Pursuant to Government Code Section 54956.9(d)(2) One Potential Case
- **10) RECONVENE TO OPEN SESSION –** The meeting reconvened to open session at 8:47 p.m., with Patrick Miyaki reporting that no action was taken in the closed session.
- **11) ADJOURNMENT –** The meeting was adjourned at 8:48 p.m.

Respectfully submitted,

David R. Dickson, General Manager Secretary to the District

Robert Feldman, President Board of Directors

COASTSIDE COUNTY WATER DISTRICT Installed Water Connection Capacity & Water Meters

FY 2018 Meters

Installed Water Meters	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Мау	Jun	Total
HMB Non-Priority													
0.5" capacity increase													
5/8" meter	10	1	8		1		1	1					23
3/4" meter													
1" meter													
1 1/2" meter													
2" meter													
3" meter													
HMB Priority													
0.5" capacity increase													
5/8" meter													
3/4" meter													
1" meter													
1 1/2" meter		1		1									2
2" meter													
County Non-Priority													
0.5" capacity increase													
5/8" meter	6												6
3/4" meter													
1" meter													
County Priority													
5/8" meter													
3/4" meter	1												1
1" meter													
Totals	17	2	8	1	1	0	1	1					32

5/8" meter = 1 connection

3/4" meter = 1.5 connections

1" meter = 2.5 connections

1.5" meter = 5 connections

2" meter = 8 connections

3" meter= 17.5 connections

FY 2018 Capacity (5/8" connection equivalents)	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Мау	Jun	Totals
HMB Non-Priority	10	2	8		1		1	1					23
HMB Priority		5		5									10
County Non-Priority													0
County Priority	7.5												7.5
Total	17.5	7	8	5	1	0	1						40.5

	CCWD Sources		es	SFPUC	Sources			
	DENNISTON WELLS	DENNISTON RESERVOIR	PILARCITOS WELLS	PILARCITOS LAKE	CRYSTAL SPRINGS RESERVOIR	RAW WATER TOTAL	UNMETERED WATER	TREATED TOTAL
JUL	0.87	25.93	0.00	0.00	45.87	72.67	3.45	69.22
AUG	2.32	24.89	0.00	0.00	42.86	70.07	3.85	66.22
SEPT	2.21	19.72	0.00	0.00	38.88	60.81	3.80	57.01
ОСТ	1.63	15.79	0.00	0.00	50.08	67.50	3.37	64.13
NOV	4.82	21.54	18.4	0.00	12.45	57.21	2.57	54.64
DEC	0.09	22.00	14.32	0.00	10.04	46.45	3.25	43.20
JAN	0.09	15.70	11.20	0.00	11.40	38.39	3.15	35.24
FEB	0.00	20.02	9.37	0.00	14.41	43.80	2.58	41.22
MAR								
APR								
MAY								
JUN								
TOTAL	12.03	165.59	53.29	0.00	225.99	456.90	26.02	430.88
% MONTHLY TOTAL	0.00%	45.71%	21.39%	0.00%	32.90%	100.00%	5.88%	94.12%
% ANNUAL TO DATE TOTAL	2.6%	36.2%	11.7%	0.0%	49.5%	100.0%	5.69%	94.3%
Local vs Imported-month	67.1%	32.90%	CCWD vs SI	FPUC- month	67.1%	32.9%		
Local vs Imported-annual	50.5%	49.5%	CCWD vs SI	FPUC- annual	50.5%	49.5%		
	Local Source	Imported Source						

TOTAL CCWD PRODUCTION (MG) ALL SOURCES- FY 2018

12 Month Running Treated Total

625.21

TOTAL CCWD PRODUCTION (MG) ALL SOURCES- FY 2017

	DENNISTON WELLS	DENNISTON RESERVOIR	PILARCITOS WELLS	PILARCITOS RESERVOIR	CRYSTAL SPRINGS RESERVOIR	RAW WATER TOTAL	UNMETERED WATER	TREATED TOTAL
JUL	1.58	15.50	0.00	37.11	7.05	61.24	4.36	56.88
AUG	2.55	10.84	0.00	4.40	51.18	68.97	4.12	64.85
SEPT	2.28	10.35	0.00	0.00	45.04	57.67	3.37	54.30
OCT	0.49	1.71	0.00	0.00	57.09	59.29	1.76	57.53
NOV	0.01	1.13	10.91	0.00	26.92	38.97	2.15	36.82
DEC	0.00	13.01	13.18	0.00	17.59	43.78	2.05	41.73
JAN	0.00	2.32	18.25	0.00	14.98	35.55	2.24	33.31
FEB	0.00	0.00	23.75	4.01	6.36	34.12	3.72	30.41
MAR	0.43	5.18	25.41	13.01	1.80	45.83	3.33	42.50
APR	0.00	14.05	0.00	25.41	1.87	41.33	3.54	37.79
MAY	0.00	24.60	0.00	29.40	3.25	57.25	3.53	53.72
JUN	0.41	24.25	0	21.59	17.65	63.90	3.58	60.32
TOTAL	7.75	122.94	91.50	134.93	250.78	607.90	37.75	570.14
% TOTAL	1.3%	20.2%	15.1%	22.2%	41.3%	100.0%	6.21%	93.8%

Monthly Production FY 17 vs FY 18





Coastside County Water District Monthly Sales By Category (MG) FY2018

	JUL	AUG	SEPT	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	MG to Date
RESIDENTIAL	20.823	40.192	21.242	40.000	18.734	31.360	17.800	29.710					219.86
COMMERCIAL	3.369	3.103	3.521	2.770	3.543	2.340	3.032	2.330					24.01
RESTAURANT	1.783	1.563	1.745	1.450	1.601	1.170	1.572	1.200					12.08
HOTELS/MOTELS	2.762	2.777	2.388	2.290	2.412	1.650	2.079	2.020					18.38
SCHOOLS	0.567	0.735	0.934	0.810	0.604	0.420	0.540	0.310					4.92
MULTI DWELL	2.768	3.107	2.817	3.100	2.660	2.760	2.671	2.780					22.66
BEACHES/PARKS	0.554	0.589	0.708	0.530	0.340	0.090	0.178	0.140					3.13
AGRICULTURE	6.107	6.007	8.518	7.420	6.220	6.520	4.656	6.300					51.75
RECREATIONAL	0.266	0.354	0.215	0.320	0.197	0.290	0.215	0.290					2.15
MARINE	0.597	0.666	0.640	0.440	0.653	0.590	0.446	0.330					4.36
IRRIGATION	6.166	5.258	1.570	2.250	0.986	0.880	0.767	0.850					18.73
RAW WATER	8.783	10.435	7.389	8.250	4.969	0.010	0.013	1.700					41.55
DETECTOR CHECKS	0.019	0.044	0.022	0.030	0.002	0.030	0.016	0.050					0.21
PORTABLE METERS	0.267	0.248	0.323	0.290	0.203	0.190	0.041	0.150					1.71
CONSTRUCTION	NA	NA	NA	NA	0.108	0.270	0.188	0.150					0.11
TOTAL - MG	54.83	75.08	52.03	69.95	43.23	48.57	34.21	48.31	0.00	0.00	0.00	0.00	426.22
Non Residential Usage Running 12 Month Total 12 mo Residential 12 mo Non Residential	34.007	34.886	30.790	29.950	24.498	17.210	16.414	18.600 598.82 309.70 206.35	0.000	0.000	0.000	0.000	

FY 2017

	JUL	AUG	SEPT	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	MG to Date
RESIDENTIAL	19.638	39.197	19.950	34.540	16.008	28.428	17.071	24.825	12.670	27.256	15.528	34.380	289.49
COMMERCIAL	3.731	3.032	3.597	2.698	2.969	2.321	2.599	1.930	2.766	2.203	3.143	2.435	33.42
RESTAURANT	1.745	1.569	1.937	1.353	1.596	1.260	1.343	0.975	1.405	1.204	1.682	1.325	17.40
HOTELS/MOTELS	3.004	3.420	2.778	2.425	2.239	1.857	2.048	1.700	2.288	2.200	2.795	2.323	29.08
SCHOOLS	0.659	0.754	0.723	0.722	0.332	0.223	0.131	0.470	0.238	0.329	0.503	0.573	5.66
MULTI DWELL	2.572	2.697	2.403	2.659	2.161	2.671	2.377	2.503	2.403	2.717	2.718	2.741	30.62
BEACHES/PARKS	0.579	0.500	0.406	0.343	0.206	0.120	0.153	0.097	0.198	0.185	0.337	0.414	3.54
AGRICULTURE	5.160	5.131	4.784	7.124	5.950	4.090	4.353	4.155	5.704	6.320	6.927	5.422	65.12
RECREATIONAL	0.242	0.282	0.221	0.220	0.186	0.211	0.185	0.192	0.214	0.263	0.227	0.300	2.74
MARINE	0.498	0.524	0.638	0.391	0.501	0.565	0.464	0.418	0.462	0.427	0.496	0.372	5.76
IRRIGATION	1.538	3.239	2.703	2.395	0.471	0.406	0.377	0.199	0.304	0.489	2.257	3.172	17.55
RAW WATER	10.081	8.593	9.711	8.440	0.141	2.079	0.000	0.000	0.004	0.703	3.586	5.068	48.41
Detector Checks	0.009	0.011	0.013	0.007	0.008	0.025	0.022	0.019	0.062	0.021	0.019	0.023	0.24
Portable Meters	0.099	0.895	0.404	0.496	0.299	0.155	0.094	0.083	0.141	0.159	0.220	0.286	3.33
TOTAL - MG	49.55	69.85	50.27	63.81	33.07	44.41	31.22	37.57	28.86	44.48	40.44	58.83	552.35

Coastside County Water District 766 Main Street July 2017 - June 2018

			201	17		2018						
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June
1	0	0	0	0.01	0	0	0	0				
2	0.01	0	0	0	0	0.03	0	0				
3	0.01	0	0	0	0.04	0	0.24	0				
4	0	0.02	0	0	0.48	0	0.05	0				
5	0	0	0	0	0	0	0.43	0				
6	0	0.02	0	0	0.01	0	0.02	0				
7	0	0	0	0	0	0	0	0				
8	0	0.01	0	0	0.14	0	1.91	0				
9	0	0.01	0.02	0	0.15	0	1.28	0				
10	0	0.01	0	0	0.01	0	0.03	0				
11	0	0.02	0.07	0	0.01	0	0.01	0				
12	0	0	0.01	0	0	0	0.01	0				
13	0	0.02	0.01	0	0.19	0	0	0				
14	0	0.02	0	0	0.01	0	0	0				
15	0	0	0.02	0	0.06	0	0	0				
16	0	0	0	0	1.15	0	0.02	0				
17	0	0	0.01	0	0.45	0	0	0				
18	0	0	0.02	0	0.14	0	0.38	0				
19	0	0	0	0.06	0	0	0.03	0				
20	0	0	0.02	0.22	0	0.09	0.01	0				
21	0	0	0	0.01	0	0	0.01	0				
22	0	0	0.01	0	0	0	0.22	0				
23	0	0	0	0	0	0	0	0				
24	0	0.01	0	0	0	0	0.43	0				
25	0	0	0	0	0	0	0.05	0				
26	0	0	0	0	0.26	0	0.01	0.27				
27	0	0	0	0	0.14	0	0.01	0				
28	0	0	0	0.01	0.01	0	0	0.2				
29	0	0	0	0	0.01	0	0					
30	0	0	0	0	0	0	0					
31	0	0		0		0	0					
Mon.Total	0.02	0.14	0.19	0.31	3.26	0.12	5.15	0.06				
Year Total	0.02	0.16	0.35	0.66	3.92	4.02	9.17	9.23				





San Francisco Public Utilities Commission Hydrological Conditions Report January 2018

J. Chester, C. Graham, & N. Waelty, February 14, 2018



The February snow survey was performed January 26-29, 2018. The snow survey sites in the Tuolumne Basin were generally developed in the 1950s and 1960s. Bell Meadow was developed in 1958 – see map above. End points are designated by orange signs on large trees (left photo – note upper sign for high snow years), and survey points are located fixed distances from these trees along specified bearings. All of the Tuolumne Surveys have 10 survey points per course, and there are 17 snow courses in the Tuolumne Basin. The exact same survey points have been sampled since the establishing of the sites, allowing for robust long term data comparison.

System Storage

Current Tuolumne System and Local Bay Area storage conditions are summarized in Table 1.

	Table 1 Current Storage As of February 1, 2018											
	Curren	t Storage	Maximu	m Storage	Available	Capacity	Percentage					
Reservoir	Acre-Feet	Millions of Gallons	Acre-Feet	Millions of Gallons	Acre-Feet	Millions of Gallons	of Maximum Storage					
Tuolumne System												
Hetch Hetchy ¹	316,199		340,000		23,801		93%					
Cherry ²	40,382		268,810		228,428		15%					
Eleanor ³	8,638		26,416		17,778		33%					
Water Bank	548,307		570,000		21,693		96%					
Tuolumne Storage	913,526		1,205,226		291,700		76%					
Local Bay Area Storag	ge											
Calaveras ⁴	20,833	6,788	96,824	31,550	75,991	24,762	22%					
San Antonio	41,442	13,504	50,496	16,454	9,054	2,950	82%					
Crystal Springs	50,256	16,376	58,377	19,022	8,121	2,646	86%					
San Andreas	16,874	5,498	18,996	6,190	2,122	692	89%					
Pilarcitos	2,143	698	2,995	976	852	278	72%					
Total Local Storage	131,548	42,865	227,688	74,192	96,140	31,327	58%					
Total System	1,045,074		1,432,914		387,840		73%					

¹Maximum Hetch Hetchy Reservoir storage with drum gates deactivated.

² Maximum Cherry Lake storage with flash-boards removed.

³ Maximum Lake Eleanor storage with 3 of 4 rows of flash-boards installed.

⁴ Available capacity does not take into account current DSOD storage restrictions.



Figure 1: Monthly system storage for past 12 months in thousand acre-feet (TAF). Color bands show relative contributions to total system storage. Solid black line shows total system storage for the past 12 months. Dashed black line shows total system storage the previous 12 months.

Hetch Hetchy System Precipitation Index 5/

Current Month: The January 2018 six-station precipitation index was 4.33 inches, or 67% of the average index for the month.



Figure 2: Monthly distribution of the Hetch Hetchy six-station precipitation index as percent of the annual average precipitation, as of February 1.

Cumulative Precipitation to Date: The accumulated six-station precipitation index for water year 2018 is 10.51 inches, which is 30% of the average annual water year total. Hetch Hetchy received 4.50 inches precipitation in January, for a total of 11.61 inches for Water Year 2018. The cumulative Hetch Hetchy precipitation is shown in Figure 3 in red.



Figure 3: Water year 2018 cumulative precipitation measured at Hetch Hetchy Reservoir through February 1st, 2018. Precipitation at the Hetch Hetchy gauge for wet, dry, median, and WY 2017 are included for comparison purposes.

⁵The precipitation index is computed using six Sierra precipitation stations and is an indicator of the wetness of the basin for the water year to date. The index is computed as the average of the six stations and is expressed in inches and in percent.

Tuolumne Basin Unimpaired Inflow

Unimpaired inflow to SFPUC reservoirs and the Tuolumne River at La Grange as of February 1, 2018 is summarized below in Table 2.

	Table 2 WY 2018 Calculated reservoir inflows and Water Available to City As of February 1, 2018										
*All flows are in		Januar	y 2018		October	1, 2017 throu	gh January 31,	2018			
acre feet	Observed Flow	Median ⁶	Mean ⁶	Percent of Mean	Observed Flow	Median ⁶	Mean ⁶	Percent of Mean			
Inflow to Hetch Hetchy Reservoir	19,874	15,724	23,253	85%	65,960	49,332	63,923	103%			
Inflow to Cherry Lake and Lake Eleanor	25,987	17,165	24,750	105%	77,363	52,114	69,887	110%			
Tuolumne River at La Grange	76,253	75,020	120,340	63%	230,902	180,751	269,849	86%			
Water Available to City	13,152	7,251	49,827	26%	48,548	22,226	102,402	47%			

⁶Hydrologic Record: 1919 – 2015

Hetch Hetchy System Operations

Power draft and releases from Hetch Hetchy Reservoir during the month of January totaled 21,195 acre-feet to meet instream release requirements. Precipitation to date puts Hetch Hetchy Reservoir in Year Type B through February 1, 2018. Hetch Hetchy minimum instream release requirements for January were 40 cfs, and for February is 50 cfs. Hetch Hetchy is currently at 304 TAF and is being drawn down to 282 TAF to accommodate spillway inspections in late February. Once inspections are complete Hetch Hetchy will be returned to seasonal storage target levels.

Valve releases from Cherry Lake totaled 561 acre-feet during the month of January. There was 12,541 acre-feet of water transferred via gravity from Lake Eleanor to Cherry Lake in January. The required minimum instream release from Cherry Lake is 5 cfs through June 30th, 2018. Required minimum release from Lake Eleanor is 5 cfs through March 1st. Lake Eleanor is at 33%, with releases targeting minimum instream release requirements.

Cherry Lake Butterfly valve repair work was completed the third week of January, allowing for lake refilling throughout the winter. The Cherry / Eleanor Tunnel was opened on 1/20/18; with a flow of 500-700 cfs. Water will continue to transfer to Cherry until Eleanor storage is dropped to 5 TAF and will be kept below 15 TAF through runoff, then refilled. The hollow jet replacement is scheduled to be completed in February, allowing for return to normal operations at Cherry Lake.

Regional System Treatment Plant Production

The Harry Tracy Water Treatment Plant average production rate for January was 27 MGD. The Sunol Valley Water Treatment Plant production for the month was 11 MGD.

Local System Water Delivery

The average January delivery rate was 173 MGD which is a 6% increase over the December delivery rate of 163 MGD.

Local Precipitation

Table 3 Precipitation Totals at Three Local Area Reservoirs for January 2018												
ReservoirMonth Total (inches)Percentage of Average for the MonthWater Year to Date 7Percentage of Average for the Year-to-Date 7												
Pilarcitos	8.77	122 %	16.06	77 %								
Lower Crystal Springs	6.65	129 %	11.34	78 %								
Calaveras	4.30	104 %	7.27	66 %								

January rainfall was above average across the local area watersheds. The rainfall summary for the month is presented in Table 3.

⁷ WY 2018: Oct. 2017 through Sep. 2018.

Snowmelt and Water Supply

A series of warm storms in January resulted in some snow accumulation at high elevations, and limited accumulation lower. On the February 1 snow survey, snow accumulation above 7000 ft. averaged 30% of average to date, while at sites below 7000 ft. the average was less than 10%. The automated snow pillows show a similar pattern, with our snow pillow index currently under 30%. Current snow accumulation is similar to 2015, which ended up having the lowest April 1 snowpack on record.

Hetch Hetchy storage remains relatively high. The latest seasonal inflow projections have Hetch Hetchy filling in all but the driest scenario. Total system storage is lower, with Cherry Lake and Lake Eleanor below seasonal targets. Water Bank, while currently near full, is projected to debit through March and April as Cherry Lake fills. Inflow projections have total system storage remaining below full in all but the wettest scenarios.



Figure 4: Tuolumne Snow Pillow and Snow Course Indices. While annual precipitation is higher than 2015, the snow accumulation is in line. Warm storms contributed to the low snow accumulation this year.



Figure 5: Calculated unimpaired flow at La Grange and the allocation of flows between the Districts and the City.

San Francisco Public Utilities Commission **Hydrological Conditions Report February 2018** J. Chester, C. Graham, & N. Waelty, March 6, 2018



Snow covered Cherry Lake after a winter storm.

System Storage

	Table 1 Current Storage As of March 1, 2018										
	Curren	t Storage	Maximu	m Storage	Available	e Capacity	Percentage				
Reservoir	Acre-Feet	Millions of Gallons	Acre-Feet	Millions of Gallons	Acre-Feet	Millions of Gallons	of Maximum Storage				
Tuolumne System											
Hetch Hetchy ¹	287,997		340,000		52,003		85%				
Cherry ²	49,571		268,810		219,239		18%				
Eleanor ³	9,740		26,416		16,676		37%				
Water Bank	553,158		570,000		16,842		97%				
Tuolumne Storage	900,466		1,205,226		304,760		75%				
Local Bay Area Storag	ge										
Calaveras ⁴	21,159	6,895	96,824	31,550	75,665	24,655	22%				
San Antonio	38,601	12,578	50,496	16,454	11,895	3,876	76%				
Crystal Springs	49,550	16,146	58,377	19,022	8,826	2,876	85%				
San Andreas	17,014	5,544	18,996	6,190	1,982	646	90%				
Pilarcitos	2,212	721	2,995	976	783	255	74%				
Total Local Storage	128,536	41,883	227,688	74,192	99,152	32,309	57%				
Total System	1,029,002		1,432,914		403,911		72%				

Current Tuolumne System and Local Bay Area storage conditions are summarized in Table 1.

¹Maximum Hetch Hetchy Reservoir storage with drum gates deactivated.

² Maximum Cherry Lake storage with flash-boards removed.

³ Maximum Lake Eleanor storage with 3 of 4 rows of flash-boards installed.

⁴ Available capacity does not take into account current DSOD storage restrictions.



Figure 1: Monthly system storage for past 12 months in thousand acre-feet (TAF). Color bands show relative contributions to total system storage. Solid black line shows total system storage for the past 12 months. Dashed black line shows total system storage the previous 12 months.

Hetch Hetchy System Precipitation Index ^{5/}

Current Month: The February 2018 six-station precipitation index was 0.79 inches, or 13% of the average index for the month. The March 1^{st} storm resulted in an early March six-station precipitation index of 4.14 inches.



Figure 2: Monthly distribution of the Hetch Hetchy six-station precipitation index as percent of the annual average precipitation, as of March 5, 2018.

Cumulative Precipitation to Date: As of March 1, the six-station precipitation index for water year 2018 was 11.3 inches, which is 31% of the average annual water year total. After the early March storm the accumulated six-station precipitation index for water year 2018 increased to 15.44. Hetch Hetchy received 0.96 inches precipitation in February, for a total of 12.57 inches for Water Year 2018. Hetch Hetchy received an additional 5.43 inches in precipitation during the March 1-3 storm resulting in a current water year total of 18.2 inches. The cumulative Hetch Hetchy precipitation (including the first few days of March) is shown in Figure 3 in red.



Figure 3: Water year 2018 cumulative precipitation measured at Hetch Hetchy Reservoir through March 5, 2018. Precipitation at the Hetch Hetchy gauge for wet, dry, median, and WY 2017 are included for comparison purposes.

⁵The precipitation index is computed using six Sierra precipitation stations and is an indicator of the wetness of the basin for the water year to date. The index is computed as the average of the six stations and is expressed in inches and in percent.

Tuolumne Basin Unimpaired Inflow

	1000 2.									
Table 2WY 2018 Calculated reservoir inflows and Water Available to CityAs of March 1, 2018										
*All flows are in acre feet	February 2018				October 1, 2017 through February 28,2018					
	Observed Flow	Median ⁶	Mean ⁶	Percent of Mean	Observed Flow	Median ⁶	Mean ⁶	Percent of Mean		
Inflow to Hetch Hetchy Reservoir	12,476	22,324	25,029	50%	78,436	70,997	88,829	88%		
Inflow to Cherry Lake and Lake Eleanor	8,884	22,805	26,535	33%	86,247	73,826	96,422	89%		
Tuolumne River at La Grange	37,490	114,214	141,362	27%	268,392	312,576	410,559	65%		
Water Available to City	0	20,399	53,559	0%	48,548	55,984	155,962	31%		

Unimpaired inflow to SFPUC reservoirs and the Tuolumne River at La Grange as of March, 2018 is summarized below in Table 2.

⁶ Hydrologic Record: 1919 – 2015

Hetch Hetchy System Operations

Power draft and releases from Hetch Hetchy Reservoir during the month of February totaled 41,078 acre-feet. Precipitation as of March 1st results in a water year Type C for Hetch Hetchy Reservoir through March 31, 2018. Hetch Hetchy minimum instream release requirements for February were 40 cfs, and for March are 35 cfs. The latest water supply forecasts show that water from Hetch Hetchy will be available for power generation through June. Hetch Hetchy inflows are currently being managed via power draft.

Valve releases from Cherry Lake totaled 405 acre-feet during the month of February. The required minimum instream release from Cherry Lake is 5 cfs through June 30th, 2018. Required minimum release from Lake Eleanor is 5 cfs through June 30th. Lake Eleanor is at 37% of seasonal storage capacity, with releases targeting minimum instream release requirements.

Cherry Lake Butterfly valve repair work was completed, allowing for refilling of the lake by natural inflow and a diversion via the Cherry-Eleanor diversion tunnel throughout the winter and spring. The hollow jet replacement is scheduled to be completed during the month of March, allowing for return to normal operations at Cherry Lake. Transfer from Eleanor to Cherry will occur when during the runoff season.

Regional System Treatment Plant Production

The Harry Tracy Water Treatment Plant average production rate for February was 9 MGD. The Sunol Valley Water Treatment Plant production for the month was 31 MGD.

Local System Water Delivery

The average February delivery rate was 176 MGD which is a 2% increase over the January delivery rate of 173 MGD.

Local Precipitation

Table 3 Precipitation Totals at Three Local Area Reservoirs for February 2018								
Reservoir	Month Total (inches)	Percentage of Average for the Month	Water Year to Date ⁷ (inches)	Percentage of Average for the Year-to-Date ⁷				
Pilarcitos	0.68	10 %	16.74	61 %				
Lower Crystal Springs	0.54	11 %	11.88	61 %				
Calaveras	0.66	17 %	7.93	52 %				

Dry weather persisted through February across the local area watersheds. The rainfall summary for the month is presented in Table 3.

⁷ WY 2018: Oct. 2017 through Sep. 2018.

Snowmelt and Water Supply

February was dry with little precipitation recorded for the month. On the February snow survey, snow accumulation above 8000 ft. averaged 30% of average to date, while at sites below 8000 ft. the average was less than 10%. The March survey, which was completed before February 28, sampled the snowpack prior to the large storm in early March. As of February 28, the snow pack was 20% of average to date. The large March storm is estimated to increase the snow on ground to over 50% of average to date.

Hetch Hetchy Reservoir storage remains relatively high. The current seasonal inflow forecast projects Hetch Hetchy Reservoir will fill with 99% certainty. Additional water will also be available for power generation during the runoff season. Total system storage is near 75% due to the low storage levels in Cherry Lake and Lake Eleanor. Water Bank is projected to debit throughout March and April as the reservoirs fill. Inflow forecasts project that the total system storage remaining will fill at the 20% exceedance level and wetter.



Figure 4: Tuolumne Snow Pillow and Snow Course Indices. A large storm event in early March resulted in an increase in snowpack.



Figure 5: Calculated unimpaired flow at La Grange and the allocation of flows between the Districts and the City. Current Water Available to the City is 49,993 acre feet in WY2018.



Figure 6: Water year 2018 conditions for the Tuolumne River at La Grange and for the 80% water supply forecast range (triangles represent the 90% and 10% forecasts, the open diamond represents the median forecast).
To:Coastside County Water District Board of DirectorsFrom:David Dickson, General ManagerAgenda:March 13, 2018Report Date:March 5, 2018Subject:Approval for President Feldman to attend the Association of California
2018

Recommendation:

Approve expense reimbursement for President Feldman's attendance at the Association of California Water Agencies (ACWA) Spring Conference in Sacramento, CA, May 8 through May 11, 2018, including the \$370.00 registration fee and luncheon, and travel expenses for attending the May 9 session.

Background:

District policy in Section X11.b of Resolution 2004-06 (Code of Conduct) states that "Each member of the Board of Directors is encouraged to participate in those outside activities and organizations that in the judgement of the Board further the interests of the District. Expenses incurred by Board members in connection with such activities are reimbursable, where authorized in advance or subsequently ratified by the Board."

President Feldman plans to attend the Wednesday, May 9 session of the ACWA Spring Conference and requests that the Board approve reimbursement of his expenses.

ACWA Conferences provide an excellent opportunity for Directors and water utility staff to learn about California water issues. The District has reimbursed Director's attendance at these conferences in the past.

То:	Coastside County Water District Board of Directors
From:	David Dickson, General Manager
Agenda:	March 13, 2018
Report Date:	March 7, 2018
Subject:	Agreement with Cornerstone Structural Engineering Services Group for Seismic Evaluation of El Granada Tank #1

Recommendation:

Authorize the General Manager to execute a Professional Services Agreement with Cornerstone Structural Engineering Services Group for seismic evaluation of El Granada Tank #1 at a time-and-materials cost not to exceed \$32,450.

Background:

El Granada Tank #1, with a capacity of 200,000 gallons, was built in 1950 and has never undergone a complete recoating/rehabilitation. The proposed FY19-FY28 Capital Improvement Program provides funding for recoating and rehabilitating the tank, starting with \$100,000 for evaluation and engineering design in FY18/19.

Based on discussion with our consultants, staff believes that performing an evaluation of the tank's ability to meet current seismic standards is an essential first step in providing input for the design process. Failure of the tank in an earthquake would have devastating consequences for people and property and would limit the District's ability to maintain water service for its customers.

Staff proposes to contract with Cornerstone Structural Engineering Services Group (CSEG) for the seismic evaluation. We have met with CSEG to discuss the project and have reviewed similar tank evaluations done for other water utilities. Their proposal dated February 12, 2018 (attached) outlines their scope of work and provides a not-to-exceed cost of \$32,450.

Fiscal Impact:

Cost of \$32,450. The proposed FY18/19– FY27/28 CIP includes \$100,000 in funding in FY18/19 for engineering related to the Alves Tank rehabilitation project.

www.cseg.com

January 30, 2018 Revised: February 12, 2018 2018XXX

Coastland County Water District 766 Main Street Half Moon Bay, CA 94019

CORNERSTONE

structural engineering group

Attention: David Dickson

Subject: Water Tank Seismic Retrofit Strategy El Granada Tank #1 Coastside County Water District Half Moon Bay, CA Structural Engineering Services

Dear Mr. Dickson:

Per your request, Cornerstone Structural Engineering Group would like to submit this proposal to provide engineering services for the subject water tank. We understand that the existing tank was constructed in approximately 1950, and is approximately 38 feet in diameter, approximately 24 feet tall and has a capacity of approximately 0.2MG. The District would like Cornerstone to perform a seismic and conditional assessment of the tank using the current AWWA D100 as the acceptance standard for an essential services facility performance level.

Based on our conversations, a site visit, our understanding of the scope of structural engineering services is as follows:

SCOPE OF SERVICES

ASSESSMENT and STRATEGY REPORT

- 1. Review available documents for water tank, including structural drawings and previous reports.
- 2. Perform a site visit to observe the existing structural conditions for the tank.
- 3. Determine interior framing sizes from previous report data and site visit.
- 4. Perform a seismic evaluation of the primary structural system of the water tank based on AWWA D100 guidelines. List and compare deficient elements performance to current code level design criteria. A seismic importance factor of 1.5 will be applied if this tank is to be considered an essential services facility.
- 5. Provide commentary on conditional issues and potential remediation strategies.
- 6. Prepare a report describing the findings of our structural review and seismic risk assessment for the tank with specific information related to the likely structural performance in a code-level earthquake, provide qualitative commentary on construction access, and provide commentary on qualitative conceptual seismic and conditional rehabilitation strategies.
- 7. Compile CSEG assessment recommendations and summarize final seismic strengthening goals.

- 8. Coordinate with a tank manufacturer for general quality assurance consultation, cost estimating purposes and constructability quality control peer review.
- 9. Attend 1 project meeting.
- 10. Provide conceptual details as applicable for:
 - a. Rafter strengthening, rafter straightening, and stability bracing
 - b. Foundation remediation (ring beam and pressure grouting)
 - c. Tie-down anchors for shell
 - d. Corrosion repairs of bottom plate
- 11. Provide commentary on conditional issues and extents of work.
- 12. Prepare a report describing the construction recommendations based on our structural review and seismic risk assessment for the tank with specific detail sketches for cost estimating.
- 13. Prepare cost estimates and coordinate with PCG.
- 14. The report summary will be itemized with discussion so the District can select which combination of options they prefer to pursue further.

ASSUMPTIONS AND LIMITATIONS:

- 1. Design services for either retrofit or replacement of the tank are not included in this proposal.
- 2. Geotechnical report and additional recommendations will be provided by other subconsultants if necessary.
- 3. Civil Engineer will provide existing tank size and geometry.
- 4. We understand that as-built shop drawing plans may not available for the tank. Material data may be available for our use from previous investigations. This fee does not include materials investigations or as-built documentation if necessary.
- 5. The scope of our services is limited to structural engineering issues only. Project management services will be provided by others.
- 6. Reimbursable expenses are included in the base fee but are not anticipated beyond minor printing and shipping.



Cornerstone Structural Engineering Group proposes to provide the structural engineering services described above on a time and materials basis not to exceed the amounts outlined below per attached rate sheet:

Assessment and Strategy Report:	\$27,500
Tank mfr. consultation:	\$4,500
Sub-consultant Markup:	\$450
Total:	\$32,450

Should you have any questions or comments please do not hesitate to call.

Sincerely,

CORNERTSTONE STRUCTURAL ENGINEERING GROUP, INC

Thomas L. Swayze, SE Principal



CHARGE RATE SCHEDULE

Principal	215.00/hr
Associate	200.00
Construction Manager	160.00
Engineering Manager	160.00
Resident Engineer/Structure Representative	150.00
Assistant Structure Representative	140.00
Project Administrator	150.00
Senior Engineer	145.00
Project Engineer	130.00
Staff Engineer	115.00
Structural Designer II	105.00
Structural Designer I	100.00
Junior Engineer	95.00
Senior Computer Drafter	105.00
Computer Drafter	100.00
Junior Computer Drafter	85.00
Accounting Assistant	100.00
Administrative Assistant II	80.00
Administrative Assistant I	75.00
Expert Witness Services	300.00
Subconsultants	Cost Plus 10%
Expenses	Cost Plus 15%
CADD Services	
Plots/Prints on Bond	\$1.50/sq. ft.
Mylar Plots	\$3.00/sq. ft.
Copies	\$0.05 per b/w copy
	\$1.00 per color copy

Charge Rates Applicable January 1, 2018 through December 31, 2018



То:	Coastside County Water District Board of Directors
From:	David Dickson, General Manager
Agenda:	March 13, 2018
Report Date:	March 7, 2018
Subject:	Agreement with West Yost for a Feasibility Study of Optimizing Local Water Source Treatment

Recommendation:

Authorize the General Manager to execute a Professional Services Agreement with West Yost Associates for an Optimization of Treatment of Local Water Sources Feasibility Analysis at a time-and materials cost not to exceed \$99,700.

Background:

Improvements to the Denniston Water Treatment Plant (DWTP) and the recent completion of the Denniston Booster Station/Bridgestone Transmission Main project have allowed the District to significantly increase production from local, District-owned sources. The DWTP produced 200 million gallons in 2017, saving nearly \$1.4 million in SFPUC water purchase cost. The District's water rights permit for diversions from Denniston and San Vicente Creeks offer the potential for significantly greater yields and savings in favorable years.

In order to take maximum advantage of local source water, we need to ensure that the DWTP can reliably treat the highest flows available from Denniston and San Vicente. We also need to improve the operational flexibility of the Nunes Water Treatment Plant (NWTP) to enhance its ability to treat low flows or shut down entirely when DWTP production can meet most or all of the District's demands.

The attached proposal from West Yost Associates describes limitations on local source production in more detail and outlines a feasibility study to further define modifications needed to increase DWTP yield. Estimated cost of the study is \$76,000. Optional tasks to further evaluate NWTP reliability improvements and to develop information to support an application to the Division of Drinking Water for increased DWTP pathogen removal credits add another \$23,700. Staff recommends proceeding with the study and the optional tasks, for a total of \$99,700.

Fiscal Impact:

Cost of \$99,700. Staff proposes to use the \$100,000 budgeted in the FY17/18 CIP for NWTP Improvements Study (Project 18-10) for this purpose.



January 25, 2018

SENT VIA: EMAIL

Mr. David Dickson General Manager Coastside County Water District 766 Main Street Half Moon Bay, CA 94119

SUBJECT: Optimization of Treatment of Local Water Sources Feasibility Analysis

Dear Mr. Dickson:

West Yost appreciates this opportunity to provide this letter proposal to the Coastside County Water District (CCWD) for a feasibility study to assess the improvements needed at the Nunes Water Treatment Plant (NWTP) and Denniston Creek Water Treatment Plant (DCWTP) to optimize the treatment of the CCWD's local water supplies. This evaluation will include the following specific efforts:

- Identify improvements needed at the DCWTP to increase its reliable water treatment capacity from approximately 700 gallons per minute (gpm) to 1,500 gpm for regulatory-compliant and aesthetically pleasing treated water, and
- Identify improvements needed at the NWTP to:
 - Permit operating at lower water treatment process flow rates to augment CCWD's treated water demand during low-demand periods and when the DCWTP is in service, and
 - Permit stopping and restarting operation of the NWTP when the DCWTP can meet CCWD's total treated water demand.

In addition, during the visit to the NWTP, CCWD staff identified concerns related to absence of pretreatment redundancy and constraints on ability to remove water treatment units from service for scheduled maintenance tasks. West Yost has also identified an optional task in this letter proposal to evaluate alternatives for increasing DCWTP capacity to provide the desired redundancy. Part of this assessment will address whether providing the ability to increase treatment capacity at the DCWTP can achieve CCWD's objectives without having to construct additional treatment units at the NWTP.

Finally, we have identified an optional task that would include working with CCWD staff to prepare an operating permit amendment request that would be submitted to the State Water Resources Control Board's Division of Drinking Water (DDW) requesting that DDW give the same pathogen removal credits (2.5-log *Giardia*, 2-log *Cryptosporidium*, and 2-log virus) to the DCWTP that currently is given to water treatment plants (WTPs) that have the same combination of contact clarification and filtration (CC-F) treatment processes installed in gravity basins.

Additional discussion regarding our understanding of the need for each of these tasks, our proposed scope of services, and proposed fee estimate are included in this letter.

PROJECT UNDERSTANDING

An overview of the primary objectives for the DCWTP and NWTP evaluations is provided below. Also addressed are the two optional tasks.

DCWTP Evaluation

The DCWTP is permitted to treat surface and ground water supplies from the following three sources:

- **Denniston Creek:** CCWD's current water right permit allows CCWD to withdraw up to 2 cfs from Denniston Creek. However, the CCWD's water rights to Denniston Creek is subordinate to an adjacent landowner's agricultural water rights. In addition, the flow in Denniston Creek available to CCWD is constrained by the need to ensure a minimum flow rate of 2 cfs that is required by State of California Department of Fish and Wildlife.
- San Vicente Creek: CCWD's existing water right for San Vicente Creek also permits sending up to 2 cfs to the DCWTP. CCWD has not exercised its water right on San Vicente Creek for an estimated 15 to 20 years.
- **Two operational groundwater wells located south of Half Moon Bay Airport:** CCWD owns and currently uses two of its seven groundwater wells located south of the Airport as a supplemental water source, especially when its Denniston Creek water supply is limited. The wells produce groundwater that includes iron and manganese that must be removed in the DCWTP's contact clarifiers and/or filters. The wells are more than 40 years old, and have less capacity than when they were new.

The CCWD does not have to pay for its water used from the sources listed above. Consequently, maximizing treatment at the DCWTP provides for significant operational savings. Therefore, in the last four years, CCWD has worked to increase the water supply production from the DCWTP, and in 2017 the DCWTP's total production was approximately 200 million gallons (MG).

Based on discussions with CCWD staff, current limitations on treated water production at the DCWTP may include:

- 1. When source water turbidity in Denniston Creek is greater than 50 NTU,
- 2. DCWTP reliable treatment capacity,
- 3. Hydraulic capacity of screened inlet in Denniston Creek Reservoir,
- 4. The raw water pipeline's hydraulic capacity between Denniston Creek Reservoir Pump Station and the DCWTP,
- 5. The San Vicente Creek surface water diversion and conveyance pipeline to the Denniston Creek Reservoir pump station are not operational and require replacement, and
- 6. The age and condition of the groundwater wells near the Half Moon Bay Airport limit their capacity.

With respect to the first item, the current Operating Permit allows for treatment of Denniston Creek water up to a turbidity if 50 NTU (recently increased from 15 NTU). However, discussions with CCWD staff indicate that if source water supply is much higher than 35 NTU, the supply into the DCWTP could exceed 50 NTU. Therefore, the effective turbidity limit on Denniston Creek is currently approximately 35 NTU. As a result, there are periods during the year when water is available but the raw water turbidity does not permit treating raw water supplied from Denniston Creek Reservoir. CCWD recently submitted a request to amend its Operating Permit to allow treatment of Denniston Creek water up to a turbidity of 100 NTU. This would permit treating the Denniston Creek source water when turbidity is as high as approximately 75 to 80 NTU. If DDW approves CCWD's requested Operating Permit amendment, it is anticipated that additional source water can be treated during periods when the turbidity is between 35 and 75 NTU. This would permit increasing use of the District's Denniston Creek and possibly its San Vicente water supply.

With respect to the second item, CCWD recently completed an Environmental Impact Report that included provisions for increasing the DCWTP treatment capacity WTP to 1,500 gpm. The DCWTP's current treatment capacity is approximately 785 gpm. However, due to age of the existing facilities, the ability to reliably provide regulatory-compliant and aesthetically pleasing treated water at this flow rate is uncertain. Therefore, one of the primary objectives of this feasibility study will be to evaluate the facility improvements needed to increase the reliable treatment capacity up to 1,500 gpm.

The DCWTP CC-F system consists of contact clarification pretreatment process that is installed in two pressure vessels followed by "rapid sand" filtration in three pressure filter vessels. Disinfection occurs in the 1.5- MG Denniston Tank located on the hillside above the DCWTP. The DCWTP also includes a spent filter backwash water and sludge handling system. Based on West Yost's understanding of the DCWTP facilities, the CC-F systems would need to be expanded to meet the desired 1,500 gpm capacity. However, the remaining facilities should be adequately sized for the higher treatment flows.

We also understand that the DCWTP needs to be able to treat 2 cfs (approximately 900 gpm) of Denniston Creek source water supply for at least a one-month period prior to when CCWD's will need to submit its request to renew its Denniston Creek water supply permit, and CCWD's current Denniston Creek water supply permit is scheduled to be renewed in 2026. In addition, the San Vicente Creek water supply permit will also need to be renewed, and the ability to divert 2 cfs from this source must be demonstrated. This project must consider the ability to treat water from both source waters.

Finally, based on direction from CCWD staff, the capacity limitations associated with the last three items listed above will not be considered as part of this feasibility study. Moreover, for purposes of this evaluation, it should be assumed that the water supply to the DCWTP could be from any combination of the available water supplies. Since the groundwater supply requires treatment to remove both iron and manganese. Therefore, the well groundwater treatment needs will be considered in the treatment facilities feasibility study.

NWTP Evaluation

The NWTP treats surface water and groundwater under the influence of surface water from the following sources:

- 1. Six operational groundwater wells (of seven total) located along Pilarcitos Creek: This source is generally very high quality, but is typically limited to approximately 700 gallons per minute (gpm). Availability of water from these wells depends on flow in Pilarcitos Creek. Some of the wells are not able to produce water throughout the entire year.
- 2. Pilarcitos Creek surface water stored behind Stone Dam: This water is purchased from San Francisco Public Utilities Commission (SFPUC) at a cost of approximately \$5,000 per MG.
- 3. Surface Water stored in Crystal Springs Reservoir: This water is also purchased from SFPUC at a cost of approximately \$5,000 per MG, and is pumped over the coast range to the CCWD's Pilarcitos (raw water) pipeline at a cost of \$800 per MG.

The NWTP was expanded between 1990 and 1992, and currently has a nominal treatment capacity of 4.5 million gallon per day (mgd). Historically, NWTP has been CCWD's primary water treatment facility for meeting its treated water demands. However, with the DCWTP's 2013 improvements, it is anticipated that the NWTP will continue to be used in the future during most of the year, except at a reduced capacity during periods when the DCWTP is operating. During these periods, NWTP will be used to supplement DCWTP production to satisfy CCWD's treated water demands. With this change in operating strategy, the NWTP operation could be shut down several times a year for several weeks or even several months. In addition, when DCWTP is used to satisfy some of CCWD's peak day demands, the NTWP flow rate could be lower than its treatment capacity.

Improvements at the NWTP are needed to address these two operational needs. Therefore, the second primary objective of this feasibility study will be to evaluate the treatment process improvements needed to permit both more frequent shut downs of the NWTP and for satisfactory operation at reduced flow rate. Both objectives must be met without compromising treated water quality.

NWTP Reliability Assessment

As noted previously, CCWD staff have identified concerns related to NWTP treatment redundancy and the ability to take major units out of service for long-term maintenance activities. The NWTP has a conventional filtration treatment process that includes coagulation, one pretreatment train that includes three flocculation stages followed by sedimentation-clarification, four "rapid sand" filters, and disinfection in the three treated water tanks. CCWD staff have specifically identified the following redundancy issues:

- Staff report that all four "rapid sand" filter units are currently needed to provide reliable water treatment during the summer months. The four filters are at least 25 years old and cannot be removed from service during this period for major maintenance activities. Rehabilitation of the four existing filters will likely be needed during the next five to ten-year period. CCWD staff is concerned that the cost of rehabilitation will be greater if it must occur during the winter months because vendors are at their highest demand during this time.
- Staff report that it is difficult to take down the pretreatment train for regular cleaning, because the plant must operate without a pretreatment system during this time. In addition, because the NWTP can only be operated for a short period of time without pretreatment, major maintenance on the pretreatment facilities is not feasible. If a second pretreatment train were provided, staff could readily conduct both routine and major maintenance.

To address these two issues, West Yost has identified an optional task in this letter proposal to evaluate alternatives for providing an additional pretreatment train and one or two new filters. If approved by the CCWD, this assessment will also evaluate whether increasing the DCWTP treatment capacity can be achieved and provide the desired redundancy without having to construct additional treatment units (filters) at the NWTP.

DCWTP Pathogen Removal Credit Increase

The DCWTP is currently classified as having a direct filtration treatment process, and thus receives 2-log *Giardia* removal credit, 1-log virus removal credit, and 2-log *Cryptosporidium* removal credit¹. However, water treatment plants that have a CC-F process can receive 2.5-log *Giardia* removal credit, 2-log virus removal credit, and 2-log *Cryptosporidium* removal credit². These pathogen removal credits are the same pathogen removal credits given to water treatment plants

¹ As long as the filtered water turbidity is less than 0.3 NTU in at least 95% of the filtered water samples collected at 15 minute intervals during each month and does not exceed 1.0 NTU during the month

 $^{^{2}}$ As long as the filtered water turbidity is less than 0.2 NTU in at least 95% of the filtered water samples collected at 15 minute intervals during each month and does not exceed 1.0 NTU during the month.

that have a conventional filtration treatment process that includes coagulation, flocculation, sedimentation (or some other gravity clarification processes), and granular media filtration. Based on discussions with CCWD staff about the DCWTP's filtered water turbidity data, it appears that the DCWTP should be reclassified from being identified as having a direct filtration treatment process to being classified as having a CC-F treatment process, and should thus receive the higher pathogen removal credit.

Based on West Yost's experience, the DCWTP should be eligible to receive these higher pathogen removal credits since the DCWTP's has the same combination of CC-F treatment processes in pressure vessels that are installed in gravity basins at other WTPs in California, and since the DCWTP produces filtered water that meets the criteria identified in the State's Alternative Filtration Technologies Demonstration Report (AFTDR), as follows:

- a combination of CC-F units manufactured by either Roberts Filter Group (RFG) or Microfloc,
- 0.2 NTU turbidity or lower in at least 95 percent of the individual filter's filtered effluent (IFE), and
- combined filtered effluent (CFE) turbidity data collected during each month, and no IFE or CFE turbidity exceeding 1.0 NTU during each month.

If authorized by CCWD, West Yost will assist with development and submission to DDW a request to amend the current DCWTP Operating Permit to reclassify the water treatment process from a direct filtration treatment process to being the same CC-F treatment process in pressure vessels that is described in the AFTDR and to increase the pathogen removal credits. This justification would be based on using the DCWTP's IFE and its CFE turbidity data to demonstrate that the DCWTP's CC-F in pressure filter vessels meets the same performance criteria required for WTPs that have a CC-F treatment process in gravity basins.

A lower pathogen inactivation (disinfection) requirement may be important when the DCWTP is operating at CCWD's maximum desired capacity of 1,500 gpm, since the available disinfection contact time through the filtered water pipeline between the DCWTP and Denniston Tank, through the Denniston Tank, and between the Denniston Tank and the Denniston Treated Water pump station may not be adequate to provide the required pathogen inactivation credit if the Giardia and virus inactivation requirements remain at 1-log and 3-log, respectively.

SCOPE OF WORK

Task 1. Project Management, Quality Control, and Workshops

West Yost's Project Manager will monitor progress of the work and will coordinate quality control review procedures. These efforts will include maintaining regular contact with the CCWD's project manager to ensure that the CCWD is apprised of the progress of the work and is aware of any issues that may impact project completion.

In accordance with the West Yost Quality Assurance/Quality Control (QA/QC) policy, a West Yost staff member at the Principal Engineer level or higher will provide a review of key scope items and significant work products. The review will include timely suggestions for corrective actions, as needed.

This task also includes three workshops, as follows:

- A brief kickoff workshop will be held to confirm project goals and objectives, discuss the project schedule, and identify timing for receipt of data and site visit discussed under Task 2
- Following the completion of Tasks 3 through 4, a progress workshop will be held to review the results of the analysis with CCWD staff.
- A second progress workshop will be held after the Draft Local Water Treatment Optimization Evaluation Technical Memorandum.

Task 1 Deliverables: Monthly invoices detailing tasks completed for the billing period and remaining available budget.

Task 2. Review Background Information

West Yost will review water quality data for the CCWD's water sources and treated water from the five-year period between January 2013 and December 2017, plus source water quality data from prior periods identified by CCWD when unusual source water quality events made it more challenging/difficult to treat the source water.

The source water quality data is expected to include:

- Turbidity
- Hardness
- Alkalinity
- pH
- Total *Coliforms* and/or *E. coli*
- First and second round of source waters' *Cryptosporidium* monitoring data from April 2008 March 2010 and also from October 2016 September 2018 (include currently available data)
- Total organic carbon (TOC)
- Ultraviolet light absorbance at 254 nanometer (UV254), if available

The settled/clarified, filtered and treated water quality data is expected to include:

- Turbidity (settled or contact clarifiers', filters' (both IFE & CFE)
- Chlorine concentration in treated water leaving NWTP and DCWTP
- CT compliance data for NWTP and DCWTP
- Hardness, Alkalinity, pH
- Total Coliform data from monthly reports submitted to DDW
- Trihalomethane and Haloacetic Acid monitoring data (Stage 2 Disinfectants and Disinfection Byproducts Rule)
- TOC and UV254 data (if available)

Following our review of the above data, West Yost will participate in a site visit at the two WTPs to gain a better understanding of the current operations and any issues identified through the data evaluation efforts.

Task 3. DCWTP Capacity Expansion Evaluation

West Yost will evaluate the facilities needed to increase the DCWTP capacity to provide reliable treatment at flow rates as high as both 900 gpm and 1,500 gpm. Feasibility level cost estimates, and preliminary layouts of the recommended facilities will be developed. This assessment is expected to be limited to expansion of the CC-F systems, as well as associated support systems. This analysis will also consider whether specific treatment needs of the groundwater source need to be considered in the treatment facilities design.

The information developed under this task will be presented to CCWD in the progress workshop discussed under Task 1, and summarized in the Technical Memorandum discussed under Task 5.

Task 3 Deliverables: Tables and figures showing the results of the analysis. Workshop agenda and notes with identified decisions and action items.

Task 4. NWTP Turn Down/Shut Down Evaluation

West Yost will work with CCWD staff to evaluate the NWTP facilities to identify a reasonably achievable minimum treatment flow rate given the existing water treatment units' and ancillary systems, including chemical metering pumps' capacities. This analysis will consider improvements that can be made to existing treatment units and ancillary systems' components to improve operating turndown capacity. Of particular interest will be the chemical metering pumps. For any facility improvements identified, feasibility level cost estimates, and preliminary layouts of the recommended facilities will be developed.

West Yost will also work with CCWD staff to develop a conceptual shut-down/restart strategy for the NWTP. This effort is anticipated to include a focused workshop that includes West Yost and CCWD staff. The shut-down/restart evaluation will identify potential control system improvements, as well as modification and/or replacing equipment needed to accommodate frequent shut down/restart operations.

We will prepare a conceptual (feasibility) level opinion of probable project cost for improvements identified, and preliminary layouts of the recommended improvements.

The information developed under this task will be presented to CCWD in the progress workshop discussed under Task 1, and summarized in the Technical Memorandum discussed under Task 5.

Task 4 Deliverables: Bullet-list summary of recommended shut-down/restart operations protocol. Tables and figures showing the results of the analysis. Workshop agenda and notes with identified decisions and action items.

Task 5. Technical Memorandum

The information developed under the tasks described above will be summarized in a Draft Water Treatment Plants Optimization Evaluation Technical Memorandum (TM). The TM will also include recommendations for appropriate next steps to move forward with development of design for potential improvements. Feedback from CCWD, which is assumed will be provided as written comments, will be incorporated into a Final TM.

Task 5 Deliverables: One (1) electronic copy (in PDF format) of the Draft TM. One (1) electronic copy (in PDF format) of the Final TM.

Task 6. Optional NWTP Reliably Improvements Evaluation

If directed by CCWD, West Yost will evaluate the facilities needed to provide additional treatment redundancy at the NWTP. This assessment is expected to be limited to expansion of the pretreatment and filtration systems. The analysis will also consider whether increased operations of the DCWTP can achieve the desired reliably objectives. Feasibility level cost estimates, and preliminary layouts of the recommended facilities will be developed.

If this task is authorized, the information developed under this task will be presented to CCWD in a progress workshop (which is assumed to be in addition to the workshops discussed under Task 1). The information developed will also be summarized in the TM discussed under Task 5.

Task 6 Deliverables: Tables and figures showing the results of the analysis. Workshop agenda and notes with identified decisions and action items.

Task 7. Optional Assistance to Increase DCWTP Pathogen Removal Credit

If directed by CCWD, West Yost will provide engineering assistance to prepare a draft amendment for the DCWTP operating permit that CCWD can send to DDW requesting an increase in the DCWTP's pathogen removal credits. This effort will include a presentation of available IFE and CFE turbidity data do demonstrate that the DCWTP meets the same performance criteria required for treatment facilities that have a conventional filtration treatment process.

The request will be prepared on the operating permit amendment form, will be submitted to CCWD for review. A final letter will be developed based on CCWD input. It is assumed that the final letter will be printed by CCWD on CCWD letterhead, and submitted directly to DDW.

One conference call with DDW staff is also assumed to be included in this task.

Task 7 Deliverables: Draft and Final electronic copy (MS Word) of the request letter.

ESTIMATED FEE

The estimated fee for this project is \$76,000, and a breakdown of the fee is shown in Table 1. With the optional tasks included, the total estimated fee is \$99,700. All services will be performed on a time and materials basis in accordance with the terms defined in West Yost's current on call contract with CCWD. West Yost will not exceed the total fee listed in Table 1 without prior authorization from CCWD. We will notify CCWD's project manager when we have expended 80 percent of our budget. The distribution of budget between the project tasks may be adjusted, as needed, to meet the project needs.

Table 1. Estimated Fee by Task				
Task No.	Task	Estimated Fee, dollars		
1	Project Management, QC and Workshops	16,700		
2	Review Background Materials	11,000		
3	DCWTP Capacity Expansion Evaluation	13,900		
4	NWTP Turn Down/Shut Down Evaluation	14,100		
5	Technical Memorandum	20,300		
6	Optional NWTP Reliability Improvements Evaluation	18,600		
8	Optional DCWTP Pathogen Removal Credit Increase Assistance	5,100		
	76,000			
	99,700			

Sincerely,

WEST YOST ASSOCIATES

Craig Thompson

Craig Thompson, PE, BCEE Principal Engineer

CT:ap

То:	Coastside County Water District Board of Directors
From:	David Dickson, General Manager
Agenda:	March 13, 2018
Report Date:	March 7, 2018
Subject:	Award of Contract with Pump Repair Service to procure and install new 350 HP and 500 HP motors at the Crystal Springs Pump Station

<u>Recommendation</u>: Authorize the General Manager to execute a contract with Pump Repair Service (PRS) for the installation of new 350 HP and 500 HP motors at the Crystal Springs Pump Station (CSP) for a cost of \$112,006.03.

Background: In 2016, the 350 HP motor on CSP Pump #2 started leaking oil significantly and was deemed unrepairable due to age and the number of times it has previously been rebuilt. The District's spare 350HP motor was installed at that time.

In 2017, the 500 HP motor on CSP Pump #3 failed and District's spare 500HP motor was installed at that time. The failed 500 HP motor has been rewound twice in the past and is estimated to be 20 years old. Typically, once motor has been rewound twice, it is deemed to be beyond the useful life and time for replacement.

Since the warranty period starts upon delivery, PRS will install these new motors and have the motors that are in service, stored as spares.

Currently the District does not have any spare motors for CSP. Due to long lead time for these motors, 12-16 weeks, staff recommends the District have spare motors at CSP. Without spares, if one of these motors fails in the summer months, the District may not be able to meet water demand.

Three bids were solicited for this work as listed below:

	<u>350HP Motor</u>	500HP Motor	<u>Total</u>
Pump Repair Service	\$63,786.09	\$48,219.94	\$112,006.03
G3 Engineering Inc.	\$66,843.00	\$51,786.00	\$118,629.00
E&M	\$69,929.65	\$52,608.26	\$122,537.91

Fiscal Impact: Replacement of the 350HP motor was originally estimated in our CIP for \$60,000. The 500HP motor was not budgeted for as it was an unexpected failure.

То:	Coastside County Water District Board of Directors
From:	Mary Rogren, Assistant General Manager
Agenda:	March 13, 2018
Report Date:	March 9, 2018
Subject:	Fiscal Year 2018-2019 Budget Process Timeline

Recommendation:

None. Information only.

Background:

The attached Budget Process Timeline lays out the proposed schedule for presentation and consideration of the Fiscal Year 2018-2019 Budget and the Fiscal Year 18/19 – 27/28 Capital Improvement Program. Key timeline milestones follow the pattern established over the last three budget cycles, culminating in the public hearing on the budget scheduled for the regular June Board meeting.

Staff will review the budget process and answer any questions the Board may have.

<u>Fiscal Impact:</u> None.

Coastside County Water District BUDGET (CIP and O&M) PROCESS TIMELINE Fiscal Year 2018-2019

Description	Date
Staff Internal Budget Review – Distribute O&M Budget Worksheets and Update CIP budget spreadsheet	January 2018
Finance Committee Meeting - Introduction to Budget Process/Timeline	January 3, 2018
Present Budget Timeline for Board approval	January 9, 2018 Regular Board Meeting
Special Board Meeting - Rate Study Kickoff	January 17, 2018
Staff Internal Budget Review – Worksheets Due/Review CIP Budget	January 24, 2018
Facilities Committee Meeting – Review Draft CIP Budget	January 31, 2018
Finance Committee Meeting – Review Draft O&M Budget & CIP	February 8, 2018
Present "Draft" O&M Budget and CIP to Board of Directors at Board Meeting	February 13, 2018 Regular Board Meeting
Finance Committee Meeting – Review Draft Financing Plan and Preliminary Rate Study Findings	March 13, 2018 (3PM)
Present "Draft" O&M Budget, CIP, and Financing Plan to Board of Directors at Board Meeting	March 13, 2018 Regular Board Meeting
Customer Outreach – Website – Post Draft Budget and Finance Plan FY 2019	March 30, 2018
Customer Outreach – E-Newsletter – Shared with Facebook and Twitter Message: Public Meeting Schedule for Budget –Links to Operations Budget and CIP	April 3, 2018
Present "Draft" O&M Budget and CIP, and Financing Plan to Board of Directors at Board Meeting	April 10, 2018 Regular Board Meeting
Special Meeting: Budget/Finance Plan Work Session with Board of Directors; Approve Notice of Rate Increase (Prop 218)	April 16, 2018 Special Meeting

Mail Notice of Rate Increase (Prop 218) – Minimum 45-Day Notice Before Public Hearing and post Notice on Bulletin Board.	April 23, 2018
Prop 218 Notice published in the Half Moon Bay Review	April 25, 2018 & May 2, 2018
Customer Outreach – E-Newsletter Message: Understanding Budget and Proposed Rate Increase	May,2018
Present & Discuss "Draft" CIP and O&M Budget and Finance Plan	May 8, 2018 Regular Board Meeting
Rate Increase Hearing - Approve O&M Budget and CIP – Approve Rate Increase	June 12, 2018 Regular Board Meeting

То:	Coastside County Water District Board of Directors
From:	Mary Rogren, Assistant General Manager
Agenda:	March 13, 2018
Report Date:	March 9, 2018
Subject:	Draft Fiscal Year 2018-2019 Operations Budget, Draft Fiscal Year 2018/19 to 2027/28 Capital Improvement Program (CIP), and Draft Fiscal Year 2018-2019 Financing Plan.

Recommendation:

No Board action required at this time.

Background:

Staff presents for the Board's review the attached draft Fiscal Year 2018-2019 Operations Budget and draft Fiscal Year 2018/19 to 2027/28 Capital Improvement Program (CIP). Staff will also present the draft Fiscal Year 2018-2019 Financing Plan at the March 13, 2018 Board meeting.

Over the next few months, Staff will continue to meet with the Board to discuss the budget in further detail. (Please refer to the Budget Timeline for meeting dates. Note that Staff is also meeting with the Finance Committee on February 13 at 3 PM.)

There have been no changes to the draft Operations budget or CIP since the February 13 CCWD Board meeting.

Highlights of draft Operation Budget and CIP follow below:

Budget to Budget Comparison

- FY2019 Operations Budget assumes water sales at 580 MG, up from the 560 MG planned in the FY2018 Budget. As the rate adjustment is still to be determined, no rate adjustment has been included in the draft budget.
- FY2019 water purchases from SFPUC are \$280,000 less than the FY2018 budget primarily due to an increased use of local sources vs. SFPUC over prior years given our FY2017/FY2018 \$2.7M capital improvements at the Denniston Treatment Plant and Bridgeport pipeline which allow us to utilize more of our local water.
- Total FY2019 Operating Expenses are .5% higher than the FY2018 budget (or \$40,000), primarily due to inflationary increases offset by the decrease in water purchases.

CIP

- \$32,710,000 total 10-year CIP (FY2019 dollars)
- \$18,130,000 total 5-year CIP (average of \$3,626,000 per year)
 - Increase of \$2,390,000 for 5-year CIP over prior year's CIP for the same 5-year period, primarily due to increases in cost estimates for tank recoating/rehabilitation and pipeline projects.

Please note that due to the volume of paper, the individual detailed sheets for the Operations Budget are not included in this agenda packet. The individual detailed sheets are available in electronic form on the District's website at <u>www.coastsidewater.org</u> or hard copies may be obtained at the District's office.

Operations & Maintenance Budget - FY 2018-2019

07-Mar-18		Proposed Budget FY 18/19	Approved FY 17/18	FY18/19 Budget Vs. FY 17/18 Budget	FY18/19 Budget Vs. FY 17/18 Budget	Proj Year End	FY 18/19 Budget Vs. FY 17/18 Actual	FY 18/19 Budget Vs. FY 17/18 Actual	YTD Actual FY 17/18 as of February 28. 2018
Account Number	Description		Budget	\$ Change	% Change	FY 17/18	\$ Change	% Change	
	Water Sales *	¢11 145 000	¢10 905 600	\$220 400	2 10/	¢11 145 000	0.9	0.0%	¢7 052 016
Total Operating	Revenue	\$11,145,000	\$10,805,600	\$339,400 \$339,400	3.1%	\$11,145,000 \$11 145,000	00 02	0.0%	\$7,853,210
rotal operating		¢,	<i><i><i></i></i></i>	\$000,100	01170	••••••••••	~~	0.070	<i><i><i></i></i></i>
NON-OPE	RATING REVENUE								
4170	Hydrant Sales	\$50,000	\$50,000	\$0	0.0%	\$50,000	\$0	0.0%	\$40,121
4180	Late Penalty	\$60,000	\$60,000	\$0	0.0%	\$60,000	\$0	0.0%	\$37,088
4230	Service Connections	\$10,000	\$10,000	\$0	0.0%	\$10,000	\$0	0.0%	\$7,999
4920	Interest Earned	\$6,174	\$6,174	\$0	0.0%	\$6,174	\$0	0.0%	\$5,943
4930	Property Taxes	\$725,000	\$700,000	\$25,000	3.6%	\$725,000	\$0	0.0%	\$510,111
4950	Miscellaneous	\$37,000	\$37,000	\$0	0.0%	\$25,000	\$12,000	48.0%	\$14,606
4955	Cell Site Lease Income	\$165,000	\$154,000	\$11,000	7.1%	\$154,000	\$11,000	7.1%	\$103,937
4965	ERAF Refund	\$325,000	\$250,000	\$75,000	30.0%	\$366,651	-\$41,651	-11.4%	\$366,651
Total Non-Oper	ating Revenue	\$1,378,174	\$1,267,174	\$111,000	8.8%	\$1,396,825	-\$18,651	-1.3%	\$1,086,456
	150	\$10 500 171	* 40.070.774	* 450 400	0 70/	* 4 0 5 4 4 005	\$10.051	0.4%	* 0 000 0 7 0
IOIAL REVEN	JES	\$12,523,174	\$12,072,774	\$450,400	3.7%	\$12,541,825	-\$18,651	-0.1%	\$8,939,672
OPERA	TING EXPENSES								
5130	Water Purchased	\$1,826,618	\$2,106,991	-\$280,373	-13.3%	\$1,850,000	-\$23,382	-1.3%	\$1,301,837
5000	Electrical Exp. Nunes								
5250	WTP	\$42,697	\$40,280	\$2,417	6.0%	\$40,280	\$2,417	6.0%	\$24,799
5231									
5251	Electrical Expenses, CSP	\$337,080	\$318,000	\$19,080	6.0%	\$318,000	\$19,080	6.0%	\$233,574
5232	Electrical	\$26,966	\$25,440	\$1,526	6.0%	\$25,440	\$1,526	6.0%	\$15,390
5233	Elec Exp/Pilarcitos Cyn	\$34,248	\$32,309	\$1,939	6.0%	\$32,309	\$1,939	6.0%	\$19,829
5234	Electrical Exp., Denn	\$130,000	\$92,220	\$37,780	41.0%	\$120,000	\$10,000	8.3%	\$59,983
5242	CSP - Operation	\$10,700	\$10,500	\$200	1.9%	\$10,500	\$200	1.9%	\$6,679
5243	CSP - Maintenance	\$37,000	\$37,000	\$0	0.0%	\$37,000	\$U	0.0%	\$6,154
5246	Nunes WTP Oper	\$77,830	\$72,000	\$5,850 \$7,250	8.1%	\$72,000	\$5,85U	8.1%	\$31,807 \$70,547
5247		\$115,250 ¢45.050	\$122,500 \$24,500	-\$7,230 \$10,550	-0.9%	\$122,500	-\$7,230 \$50	-5.9%	\$70,047 \$20,790
5240	Dopp W/TP Maint	\$43,030 \$101,850	\$34,500 \$60,000	\$10,550	50.0% 60.8%	\$45,000	ውር \$1 850	0.1%	\$32,709 \$61,563
5250		\$101,850 \$71,450	\$53,000	\$18,450	34.8%	\$100,000	\$1,030 \$12,450	21.3%	\$30 800
5260	Maintenance Expenses	\$291 700	\$291,700	ψ10,430 \$0	0.0%	\$291 700	\$0	0.0%	\$184 552
5261	Maintenance Wells	\$40,000	\$40,000	\$0	0.0%	\$40,000	\$0	0.0%	\$0
5263	Uniforms	\$12,500	\$10,000	\$2 500	0.070	\$10,000	\$2 500	25.0%	\$4 764
	Studies/Surveys/Consulti	<i><i><i>q</i>.12,300</i></i>	\$10,000	<i></i> ,000		<i></i>	φ <u></u> 2,000	20.070	ψ i,i 04
5318	ng	\$160.000	\$160.000	\$0	0.0%	\$160.000	\$0	0.0%	\$52.445
5321	Water Resources	\$25,200	\$37,000	-\$11,800	-31.9%	\$24,000	\$1,200	5.0%	\$9,242
5322	Community Outreach	\$54,700	\$54,700	\$0	0.0%	\$54,700	\$0	0.0%	\$19,550
5381	Legal	\$100,000	\$110,000	-\$10,000	-9.1%	\$100,000	\$0	0.0%	\$30,306
5382	Engineering	\$60,000	\$100,000	-\$40,000	-40.0%	\$60,000	\$0	0.0%	\$24,655
<u>5</u> 383	Financial Services	\$20,000	\$20,000	\$0	0.0%	\$20,000	\$0	0.0%	\$13,938
5384	Computer Services	\$163,600	\$144,800	\$18,800	13.0%	\$144,800	\$18,800	13.0%	\$79,319
5410	Salaries, Admin.	\$1,128,688	\$1,150,980	-\$22,291	-1.9%	\$950,000	\$178,688	18.8%	\$573,922

Operations & Maintenance Budget - FY 2018-2019

	07-Mar-18	Proposed Budget FY 18/19	Approved FY 17/18	FY18/19 Budget Vs. FY 17/18 Budget	FY18/19 Budget Vs. FY 17/18 Budget	Proj Year End	FY 18/19 Budget Vs. FY 17/18 Actual	FY 18/19 Budget Vs. FY 17/18 Actual	YTD Actual FY 17/18 as of February 28. 2018
Account Number	Description		Budget	\$ Change	% Change	FY 17/18	\$ Change	% Change	
5411	Salaries - Field	\$1,366,174	\$1,266,081	\$100,092	7.9%	\$1,340,000	\$26,174	2.0%	\$876,332
5420	Payroll Taxes	\$175,279	\$170,555	\$4,724	2.8%	\$170,555	\$4,724	2.8%	\$102,743
5435	Employee Medical Insurance	\$444,246	\$447,056	-\$2,809	-0.6%	\$425,000	\$19,246	4.5%	\$260,367
5436	Retiree Medical Insurance	\$50,659	\$47,215	\$3,444	7.3%	\$47,215	\$3,444	7.3%	\$26,580
5440	Employee Retirement	\$595,537	\$544,380	\$51,158	9.4%	\$544,380	\$51,157	9.4%	\$336,119
5445	SIP 401a Plan	\$35,000	\$35,000	\$0	0.0%	\$35,000	\$0	0.0%	\$0
5510	Motor Vehicle Exp.	\$60,000	\$50,700	\$9,300	18.3%	\$60,000	\$0	0.0%	\$48,755
5620	Office & Billing Expenses	\$261,600	\$225,500	\$36,100	16.0%	\$225,500	\$36,100	16.0%	\$150,527
5625	Meetings/Training/Semin ars	\$26,000	\$24,000	\$2,000	8.3%	\$24,000	\$2,000	8.3%	\$16,562
5630	Insurance	\$129,000	\$120,000	\$9,000	7.5%	\$126,000	\$3,000	2.4%	\$85,582
5687	Memberships & Subscriptions	\$75,970	\$75,350	\$620	0.8%	\$75,350	\$620	0.8%	\$54,149
5688	Election Expense	\$25,000	\$0	\$25,000		\$0	\$25,000		\$0
5689	Union Expenses	\$6,000	\$6,000	\$0	0.0%	\$6,000	\$0	0.0%	\$0
5700	County Fees	\$20,000	\$20,000	\$0	0.0%	\$20,000	\$0	0.0%	\$12,856
5705	State Fees	\$36,500	\$24,000	\$12,500	52.1%	\$36,000	\$500	1.4%	\$26,620
Total Operating	Expenses	\$8,220,111	\$8,179,756	\$40,356	0.5%	\$7,822,229	\$397,882	5.1%	\$4,902,704
CAPIT	AL ACCOUNTS								
5712	Existing Bonds - 2006B	\$486,383	\$486,776	-\$393	-0.1%	\$486,776	-\$393	-0.1%	\$362,515
5715	Existing Bond-CIEDB 11- 099	\$336,126	\$336,269	-\$143	0.0%	\$336,269	-\$143	0.0%	\$336,269
5716	CIEDB 16-111	\$324,235	\$324,652	-\$417		\$324,652	-\$417		\$324,652
Total Capital Ac	counts	\$1,146,744	\$1,147,697	-\$953	<mark>-0.1</mark> %	\$1,147,697	-\$953	-0.1%	\$1,023,436
TOTAL REVENU	E LESS TOTAL EXPENSE	\$3,156,319	\$2,745,322	\$410,997	15.0%	\$3,571,899	-\$415,580	-11.6%	\$3,013,532

5713 Cont. to CIP & Reserves \$3,156,319

* Estimated at 580 MG (increase from 560 MG in FY2017/18 budget)

Does not reflect any rate adjustment.

COASTSIDE COUNTY WATER DISTRICT

CIP Projects FY 18/19 to FY 27/28

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																					FY 1	.8/19 to FY
Project #	# Project Name	Comments		FY18/19		FY 19/20	F	FY 20/21	FY 2	21/22	FY 2	2/23	FY	23/24	FY 24/25	FY 25/2	26	FY26/27		FY27/28	27	/28 Total
Equipm	ent Purchase & Replacement												-									
	SCADA/Telemetry/Electric Controls Replacement (Backup																					
06-03	Communications @ Cahill, PRV controls)		\$	50,000	\$	50,000	\$	50,000	\$	50,000	\$	50,000	\$	50,000	\$ 50,000	\$ 50	,000 !	\$ 50,000) \$	50,000	\$	500,000
08-10	Backhoe				\$	200,000															\$	200,000
15-04	Vactor Truck/Trailer												\$	500,000							\$	500,000
		New FY18-19. Valve truck will replace the																				
19-XX	Valve truck	years ago.					Ś	225.000													Ś	225.000
99-02	Vehicle Replacement	Increase budget by \$10K per year	Ś	100.000	Ś	40.000	\$	40.000	Ś	40.000	Ś	40.000	Ś	40.000	\$ 40.000	Ś 40	.000	\$ 40.000) \$	40.000	Ś	460.000
			T		ŢŦ		Ŧ		7	,	Ŧ	,	т	,	+	7	<u>/ 1</u>	,	т	,	т	
	Equipment Purchase & Replacement Totals		\$	150,000	\$	290,000	\$	315,000	\$	90,000	\$	90,000	\$	590,000	\$ 90,000	\$ 90	,000	\$ 90,000	\$	90,000	\$	1,885,000
Facilitie	es & Maintenance																					
08-08	PRV Valves Replacement Project		\$	30,000	\$	30,000	\$	30,000	\$	30,000											\$	120,000
09-09	Fire Hydrant Replacement	Increase from \$40K to \$140K per year	\$	140,000	\$	140,000	\$	140,000	\$:	140,000	\$ 1	140,000	\$	140,000	\$ 40,000	\$ 40	,000	\$ 40,000) \$	40,000	\$	1,000,000
15-03	District Administration/Operations Center															\$ 3,000	,000	. ,			\$	3,000,000
16-07	Sample Station Replacement Project	Increase from \$20K to \$30K	\$	30,000																	\$	30,000
				;																		·
47.45		Moved from FY17/18 to FY18/19 (restoration	~	400.000																	~	100.000
17-15	Pilarcitos Canyon Emergency Road Repairs	work from Feb 2017 storms)	Ş	100,000	-								-						_		Ş	100,000
18-13	Denniston WTP and Tank Road Repairs and Paving	New	Ş	100,000	ć	20.000	ć	20.000	ć	20.000	ć	20.000	ć	20.000	¢ 20.000	ć 20		* 20.000		20.000	Ş	100,000
99-01	Meter Change Program	Ongoing replacement of larger meters	\$	20,000	Ş	20,000	Ş	20,000	Ş	20,000	Ş	20,000	Ş	20,000	\$ 20,000	\$ 20	,000	\$ 20,000	ı Ş	20,000	Ş	200,000
	Facilities and Maintenance Totals		Ś	420.000	Ś	190.000	Ś	190.000	\$ 3	190.000	\$ 1	160.000	Ś	160.000	\$ 60.000	\$ 3.060	.000	ś 60.000	Ś	60.000	Ś	4.550.000
			•	-,			•	• •	•	• •	•		•						•		•	,,
Pipeline	e Proiects																					
06-02	Highway 1 South Pipeline Replacement Project	increase from \$500K to \$750K	Ś	750.000																	Ś	750.000
			Ŷ																		Ŷ	
		increase from \$600K to \$700K - need SFPUC																				
07-03	Pilarcitos Canyon Pipeline Replacement	approval; moved from FY18/19 to FY19/20			\$	700,000															\$	700,000
07-04	Bell Moon Pipeline Replacement Project	move up from FY23/24 and FY24/25	Ş	60,000	Ş	250,000															Ş	310,000
13-02	Replace 8 Inch Pipeline Under Creek at Pilarcitos Ave	Add \$50K for design	Ş	50,000					Ş 4	400,000											Ş	450,000
14-01	Replace 12" Welded Steel Line on Hwy 92 with 8"	Add \$100K for design	\$	100,000									\$ 1	1,000,000	\$ 1,000,000	\$ 1,000	,000,				\$	3,100,000
		Increased project by \$1M in FY23/24 - due to																				
14-27	Grandview 2 Inch Replacement	expanded scope; design in FY18/19	\$	50,000									\$ 1	L,450,000							\$	1,500,000
14-28	Replace 2 Inch Hilltop Market to Spanishtown												\$	240,000							\$	240,000
14-29	Replace 2 Inch GS Purissima Way	Move out from FY19/20 to FY20/21					\$	125,000													\$	125,000
14-30	Replace Miscellaneous 2 Inch GS El Granada	Move up from FY19/20 to FY18/19	\$	60,000																	\$	60,000
		Increase from \$225K to \$450K; moved out		· · · · ·																		
4 4 2 4	Fruiting diameters, Declars Allow Creditional Access to Coloradore	from FY 19/20 to FY20/21 - add design in FY	~	60.000			~	450.000													~	540.000
14-31	Ferdinand Avenue - Replace 4" WS Ferdinand Ave. to Columbus	18/19	Ş	60,000			Ş	450,000													Ş	510,000
		Add \$350K for PRVs - FY18/19 and FY19/20																				
		will allow us to decrease pressure/extend life;																				
		pushed out main replacement to FY26/27 and																				
14-32	Casa Del Mar - Replace Cast Iron Mains	FY27/28 and increaase by \$1M			Ş	350,000												\$ 1,500,000) Ş	1,500,000	Ş	3,350,000
14-33	Miramar Cast Iron Pipeline Replacement	Increase FY24/25 from \$500K to \$1M													\$ 1,000,000	\$ 1,000	,000,				\$	2,000,000
16-09	Slipline 10 Inch Pipeline in Magellan at Hwy 1	Move our from FY18/19 to FY20/21					\$	100,000													\$	100,000
18-01	Pine Willow Oak - 2400 feet	increase FY21/22 from \$500K to \$1M							Ş 1,0	000,000							$ \longrightarrow $				\$	1,000,000
19-XX	Grand Blvd Pipeline/PRV Loop						\$	250,000									\square					
		Added line item to cover unscheduled CIP that																				
NN-00	Unscheduled CIP	replacements in Yrs 6-10	\$	100.000	Ś	100.000	\$	100.000	\$	100,000	\$ 1	100,000	\$	100,000	\$ 100.000	\$ 100	.000	\$ 100.000	Ś	100.000	\$	1,000.000
				,	1.	,		,		,		.,		,			<u> </u>		Ť	,0		,,
	Pipeline Projects Totals		\$	1,230,000	\$	1,400,000	\$	1,025,000	\$ 1,!	500,000	\$ 1	100,000	\$ 2	2,790,000	\$ 2,100,000	\$ 2,100	,000	\$ 1,600,000	\$	1,600,000	\$ 2	15,195,000

Pump Stations/Tanks/Wells

06-04	Hazen's Tank Removal	move from FY17/18 to FY18/19	\$ 30,000							\$ 30,000
08-14	Alves Tank Recoating, Interior & Exterior	Assumes design work plus start of project in FY18/19; \$600K added from prior CIP	\$ 600,000	\$ 1,500,000						\$ 2,100,000
19-01	EG Tank #1 Recoating, Interior & Exterior	New	\$ 100,000	\$ 500,000	\$ 80	00,000				\$ 1,400,000
19-XX	Miramar Tank - Chime	new - seismic evaluation in FY18/19	\$ 40,000		\$ 25	50,000				\$ 290,000

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CIP Projects FY 18/19 to FY 27/28

Project #	Project Name	Comments	F	Y18/19	F	Y 19/20	FY 20/21	F١	(21/22	FY 22/23	FY 23/24	FY 24/25
08-16	Cahill Tank Exterior Recoat	increased from \$75K to \$200K			\$	200,000						
		moved - design work in FY18/19 with										
09-18	Pilarcitos Well Field Improvements	implementation in FY19/20			Ş	150,000						
11-02	CSPS Stainless Steel Inlet Valves										\$ 100,000	
11-05	Half Moon Bay Tank #2 Interior & Exterior Recoat	FY 19/20 and FY20/21 - added design and seismic evaluation \$50K each year; moved tank rehab out from FY20/21 to FY21/22 and increased costs for \$400K to \$750K			\$	50,000	\$ 50,000	\$	750,000			
11-06	Half Moon Bay Tank #3 Interior & Exterior Recoat	FY 19/20 and FY20/21 - added design and seismic evalulation \$50K each year; increased costs of tank rehab for \$400K to \$1M			\$	50,000	\$ 50,000			\$ 1,000,000		
16-08	Denniston Well Field Improvements	Moved from FY18/19 to FY23/24; Increased fromm \$100K to \$150K									\$ 150,000	
18-04	CSP Fire System	Moved from FY18/19 to FY23/24;									\$ 40,000	
18-05	Denniston Tank THM Residual Control	move from FY17/18 to FY18/19	\$	80,000								
<mark>18-06</mark>	CSP (3) Butterfly Valves	increased from \$45K to \$80K	\$	80,000								
19-XX	Tanks - THM Control	New	\$	120,000								
_												

Pump Stations/Tanks/Wells Totals

\$ 1,050,000 \$ 2,450,000 \$ 1,150,000 \$ 750,000 \$ 1,000,000 \$ 290,000 \$

Water Supply Development

12-12	San Vicente Diversion and Pipeline	moved \$100K up from FY19/20 to FY18/19	\$ 100,000	\$ 200,000	\$ 1,000,000	\$ 1,000,000				
13-04	Denniston Reservoir Restoration	move from FY19/20 to FY20/21			\$ 1,000,000					
17-12	Recycled Water Project Development	move from FY17/18 to FY18/19	\$ 100,000							
	Water Supply Development Totals		\$ 200,000	\$ 200,000	\$ 2,000,000	\$ 1,000,000	\$ -	ş	\$ -	\$ -

5 year change Recap Delay Hwy 92 8 inch

Delay Vactor Truck

Fire hydrants

Valve Truck (New to CIP)

Grand Blvd - PRV loop

Delay Casa del Mar Pipeline Replacement

Offset by addition of PRVs in Casa del Mar

Pipeline Replacement-Hwy 1 South

Pipeline Replacement-Bell Moon

Pipeline Replacement-Ferdinand

Pipeline Replacement-Pine Willow

Water Treatment Plants

08-07	Nunes Filter Valve Replacement	\$500K to get work all completed at once; Cost increase includes hiring a contractor to replace the valves (vs. CCWD staff) due to safety issues.	\$	500,000															\$	500,000
13-05	Denniston WTP Emergency Power	Move up from FY23/24 to FY19/20; design work in FY19/19	\$	50,000	\$	400,000													\$	450,000
17-01	Nunes Water Treatment Plant Treated Water Meter	removed																	\$	-
17-04	Denniston Dam Spillway Repairs	work will be done in FY17/18																	\$	-
<u>18-11</u>	Nunes Bulk Caustic Tank	moved from FY17/18 to FY19/20			\$	40,000													\$	40,000
	Water Treatment Plants Totals		\$	550,000	\$	440,000 \$	-	\$	- :	\$	- \$	- \$	-	\$-	\$	-	\$	-	\$	990,000
	GRAND TOTAL		\$	3,600,000	\$	4,970,000 \$	4,680,000	\$	3,530,000	\$ 1,3	350,000 \$	3,830,000 \$	2,250,000	\$ 5,250,00	0\$	1,750,000	\$ 1	L,750,000	\$ 32	2,710,000
		MEMO - Prior CIP Difference	\$ \$	3,598,000 2,000	\$ \$	2,238,000 \$ 2,732,000 \$	2,628,000 2,052,000	\$ \$	4,148,000 \$ (618,000) \$	\$ \$ (:	3,128,000 \$ (1,778,000) \$	2,483,000 \$ 1,347,000 \$	1,683,000 567,000	\$	00\$ 00\$	1,683,000 <u>67,000</u>			\$	30,180,000

	\$ 3,598,000	\$ 2,238,000	\$	2,628,000	\$	4,148,000	\$ 3,128,000
	\$ 2,000	\$ 2,732,000	\$	2,052,000	\$	(618,000)	\$ (1,778,000,
	\$ 2,390,000		5 ye	ar average	\$	3,626,000	
1	\$ (2,900,000)						
	\$ (2,000,000)		5 yea	r change Recap	(cont	'd)	
	\$ 350,000		Alves	Tank Refurbish	ment		\$ 600,000
	\$ (500,000)		EG Ta	ink #1 Refurbish	ment	(New to CIP)	\$ 1,400,000
	\$ 200,000		Mirar	nar Tank Chime	(New	to CIP)	\$ 290,000
	\$ 500,000		нмв	Tank #2			\$ 430,000
	\$ 250,000		нмв	Tank #3			\$ 680,000
	\$ 310,000		Nune	s Filter Valve Re	place	ment	\$ 275,000
	\$ 285,000		Denn	iston Emergenc	y Pow	er	\$ 450,000
	\$ 500,000		Unsc	heduled CIP pla	cehol	der added	\$ 500,000
	\$ 250,000		Othe	r (< \$200,000 pr	ojects)	\$ 520,000
							\$ 2,390,000

			FY	18/19 to FY
FY 25/26	FY26/27	FY27/28	2	7/28 Total
			\$	200,000
			Ś	150.000
			\$	100,000
			\$	850,000
			\$	1,100,000
			\$	150,000
			\$	40,000
			\$	80,000
			\$	80,000
			\$	120,000
\$-	\$-	\$-	\$	6,690,000
			\$	2,300,000
			\$	1,000,000
			\$	100,000
\$-	\$ -	\$ -	\$	3,400,000
	1	-		
			\$	500,000
			1	

-

0	\$ 4,683,000	\$ 1,683,000	\$ 30,180,000
0	\$ 567,000	\$ 67,000	

То:	Coastside County Water District Board of Directors
From:	Mary Rogren, Assistant General Manager
Agenda:	March 13, 2018
Report Date:	March 9, 2018
Subject:	Assistant General Manager's Report

Recommendation: none

Background:

- AMI (Advanced Metering Infrastructure) Installation: PMI will complete AMI/meter installations by the end of March, 2018. To date, 6,111 of the District's meters (7,500) are hooked up to the Aclara AMI system. During February, the District began reviewing data in our AMI system, and District staff alerted 30+ customers who appeared to have very sizeable leaks (from 10 to 100+ gallons/hour.) To date, customer feedback has been very positive about our alerts, despite hearing the bad news of a leak. Over the upcoming months, District staff will be finetuning its processes/practices of notifying customers about abnormal water usage including rolling out a customer web portal later in the year.
- Letter from State Senator, Jerry Hill: Jerry Hill recently sent a letter congratulating the District, its Board of Directors, and staff on our receipt of the Special District Leadership Foundation (SDLF) District Transparency Certificate of Excellence award "for our outstanding efforts to promote transparency and good governance." (See Attachment 1.)
- SFPUC Memo from Steven Ritchie <u>Updated</u> Water Supply Availability Estimate: On March 6, Steven Ritchie sent out the attached memo to the SFPUC Wholesale Customers. Mr. Ritchie notes that "despite a very productive storm system to start the month of March, the water year's precipitation is still running below normal . . . However, the SFPUC still does not anticipate needing to request demand reductions for the retail and wholesale service areas." (See Attachment 2.)

Attachment 1

California State Senate

SENATOR JERRY HILL THIRTEENTH SENATE DISTRICT COMMITTEES BUSINESS, PROFESSIONS & ECONOMIC DEVELOPMENT CHAIR APPROPRIATIONS ENERGY, UTILITIES & COMMUNICATIONS ENVIRONMENTAL QUALITY

GOVERNMENTAL ORGANIZATION

CAPITOL OFFICE STATE CAPITOL SACRAMENTO, CA 95814 TEL (916) 651-4013 FAX (916) 651-4913

DISTRICT OFFICE 1528 S. EL CAMINO REAL SUITE 303 SAN MATEO, CA 94402 TEL (650) 212-3313 FAX (650) 212-3320

WWW.SENATE.CA.GOV/HILL SENATOR.HILL@SENATE.CA.GOV

February 17, 2018

David Dickson General Manager Coastside County Water District 766 Main Street Half Moon Bay, CA 94019

Re: SDLF District Transparency Certificate of Excellence

Dear Mr. Dickson:

Congratulations to the Coastside County Water District, its board of directors and staff on your receipt of recognition from the Special District Leadership Foundation (SDLF) for outstanding efforts to promote transparency and good governance.

United States Supreme Court Justice Louis Dembitz Brandeis famously stated that "sunlight is the best disinfectant." The Coastside County Water District's effort to promote transparency and open government has been a ray of sunshine; a model of best practices that all should follow.

Your commitment to ethics training, open and public meetings, and the timely filing of financial and compensation reports is to be commended. The District's maintenance of a website that provides readily available board agendas, past minutes, current district budget information and the most recent financial audit is exemplary.

These achievements, along with the Coastside County Water District's continuing commitment to and support of community-based programs, are deserving of the important recognition bestowed by the SDLF.

Well done! And best wishes for continued success.

Warm regards,

Jerry Hill, Senator, 13th District Attachment 2



525 Golden Gate Avenue, 13th Floor San Francisco, CA 94102 T 415.554.3155 F 415.554.3161 TTY 415.554.3488

TO:	SFPUC Wholesale Customers	
FROM:	Steven R. Ritchie, Assistant General Manager, Water	
DATE:	March 6, 2018	
RE:	Updated Water Supply Availability Estimate	

This memo provides an updated estimate of water availability for Water Year 2018. Despite a very productive storm system to start the month of March, the water year's precipitation is still running below normal in the local and Hetch Hetchy watersheds. However, the SFPUC still does not anticipate needing to request demand reductions for the retail and wholesale service areas.

The February precipitation totals for Hetch Hetchy were 0.96 inches for a month that normally sees about 5 inches of precipitation. By contrast, the March 1st-3rd storm produced 5.43 inches of precipitation at Hetch Hetchy which is nearly the median total for the entire month of March. This storm also delivered a significant increase in the snowpack. It is estimated that this storm's snow accumulation in the Hetch Hetchy watershed provided the equivalent of 150,000 acre-feet of inflow to Hetch Hetchy reservoir. This storm system provides the confidence that Hetch Hetchy reservoir will fill this year. However, because February was such a dry month, the water supply forecast continues to indicate about a 25% chance that the entire water system will refill, including Water Bank, following spring runoff.

The plots below provide precipitation at Hetch Hetchy and snowpack in the watershed.



Hetch Hetchy Precipitation as of March 5, 2018

Mark Farrell Mayor

> Ike Kwon President

Vince Courtney Vice President

Ann Moller Caen Commissioner

Francesca Vietor Commissioner

> Anson Moran · Commissioner

Harlan L. Kelly, Jr. General Manager



Services of the San Francisco Public Utilities Commission

OUR MISSION: To provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.





While the local precipitation totals remain below normal for this water year as well, the early March storm provided a boost for the local system but did not make up for the dry February. For the 7-station index, (based on precipitation gages at Calaveras Dam, Mt. Hamilton, San Antonio, Alameda East, Lower Crystal Springs, San Andreas, and Pilarcitos,) the precipitation total year-to-date is 13.21 inches, which is about 55% of the average year-to-date.

As we noted in February, although precipitation and snowpack are lagging, system storage remains high for this time of year and demands continue to be at or below pre-drought levels. At this point, we do not anticipate requiring water reductions.

The SFPUC will send a final estimate of water supply availability around April 15, 2018.

cc.: Nicole Sandkulla, CEO/General Manager, BAWSCA

MONTHLY REPORT

То:	David Dickson, General Manager
From:	James Derbin, Superintendent of Operations
Agenda:	March 13, 2018
Report Date:	March 7, 2018

Monthly Highlights

- Aclara Data Collector Units installed on the Hwy 92 corridor and at Alves to improve AMI coverage
- Staff submitted additional requested information to the State Water Resources Control Board, Division of Drinking Water as a follow up to a permit amendment request to raise influent turbidity limit from 50 NTU to 100 for Denniston WTP
- Calcon has finished the upgrades of the Nunes WTP flocculator drives
- New handheld radios arrived for emergency response preparation

Source of Supply

Pilarcitos wells with Denniston and Crystal Springs Reservoirs as the sources of supply in January. Combined flow from the Pilarcitos wells is currently ~310 gpm.

Projects

Automatic Meter Infrastructure

As of 3/7/18, PMI has installed a total of 4981 new meters. 300 more to go!

Downtown 2" Main Replacement Project

Andreini Brothers has installed ~ 660' of 6'' ductile iron main at San Benito, Mill and Kelly Streets. Contractor will be connecting services and a tie in before they move to Johnston Street.

То:	Board of Directors
From:	Cathleen Brennan, Water Resources Analyst
Agenda:	March 13, 2018
Report Date:	March 7, 2018
Subject:	Water Resources Informational Report
Attachment:	Executive Summary of Water Loss Technical Assistance Program (TAP) Final Report.

March 2018 Snow Survey Results



California Department of Water Resources

Despite the recent late-winter storms that brought much-needed snow to the Sierra Nevada, the snow water equivalent (SWE) is 9.4 inches, which is 39 percent of normal for early March. This is a slight improvement over February's snow survey results.

Final Report on Water Loss Technical Assistance

District staff participated in CA-NV AWWA's TAP to submit a level 1 validated water audit to the state to comply with SB555. Almost 400 other water suppliers also participated in the assistance program. CA-NV AWWA released a final report on the program this week. Attached is an executive summary describing the program results.

The table below compares the District's water audit performance indicators with other California Urban Water Retailers for the 2017 water audit submittals.

Summary of Key Performance Indicators for California Urban Water Retailers							
Performance Indicators	Median	Mean	Min	Max	Coastside CWD		
Apparent Losses per Service Connection per Day (gal)	8.6	11.9	1.2	193.0	4.24		
Real Losses per Service Connection per Day (gal)	31.0	38.2	11.15	172.4	16.49		
Infrastructure Leakage Index (ILI)	1.9	2.4	1.0	10.7	1.0		
Data Validity Score	60	60	37	89	55		
Non-Revenue Water as a Percent of Total Operating Cost	3.9	4.8	0.4	68.2	3.6		
2017 Water Audits Results (N=279) for Audits that Passed Filters for Outlying Results.							

With this data now being submitted to the state, it qualifies as one of the largest audit validation efforts in the country. There is significant uncertainty in the data submitted by water agencies, but as the state attempts to set water loss targets for urban water retailers, there is some benefit for staff to view data from other retailers.

Water Loss Technical Assistance Program Final Report

Prepared by Water Systems Optimization, Inc. Cavanaugh & Associates





Prepared forThe California Nevada Section
of the American Water Works Association



Funded byThe California State Water Resource Control BoardThe Environmental Protection Agency



Project Management Team

Two water loss control firms, Water Systems Optimization, Inc. and Cavanaugh and Associates joined forces to implement the Water Loss Technical Assistance and author this report. Principal Project Management Team members include:

Water Systems Optimization, Inc.

- Kate Gasner
- Reinhard Sturm
- Lucy Andrews
- Kris Williams

Cavanaugh & Associates

- Will Jernigan
- Steve Cavanaugh
- Tory Wagoner
- Drew Blackwell

Acknowledgements

The Project Management Team wishes to acknowledge the team at the California Nevada Section of the American Water Works Association for overseeing the Water Loss Technical Assistance Program. Particularly instrumental to the success of the program were:

Sue Mosburg, Project Manager on behalf of the California Nevada Section

Tim Worley, Executive Director, California Nevada Section

Sita Ramakrishnan, Director of Finance & Admin, California Nevada Section

The Water Loss Technical Assistance Program also benefited from guidance and communication with California's regulatory organizations. Special thanks to the following for their collaboration and responsiveness throughout the program:

Felicia Marcus, Chair, California State Water Resources Control Board

Max Gomberg, Climate and Conservation Manager, California State Water Resources Control Board

Kartiki Naik, Water Resource Control Engineer, California State Water Resources Control Board

Jim Maughan, Assistant Deputy Director, Division of Financial Assistance

Todd Thompson, Senior Engineer, California Department of Water Resources


Water Loss Technical Assistance Program Final Report Executive Summary

Program Goals

Signed into law in October 2015, California Senate Bill 555 (SB555) requires that all urban retail water suppliers annually submit validated level 1 water audit to the Department of Water Resources (DWR). The Water Loss Technical Assistance Program (WL TAP) – funded through the State Water Resources Control Board and part of the CA-NV AWWA's California Water Loss Collaborative – provided training and support for the first round of submission. The WL TAP started by teaching the foundations of water auditing and water loss control best practices, and it culminated in level 1 validation of water audits.

The WL TAP aimed to:

- Level 1 validate water audits for SB555 submission
- Provide a first-rate water audit training program
- Help suppliers discern data improvement opportunities
- Help suppliers identify priorities for better water loss management

Program Structure

To achieve these goals, the WL TAP started with a phase of recruitment and registration, followed by four touch points with participating suppliers. Each phase of the program – or "Wave" – built on the last to establish and reinforce fluency in water audit foundations and ultimately validate each supplier's water audit. Within the wave progression, two tracks accommodated the spread of suppliers' experiences in water auditing: the "New Learner" track for beginners and the "Early Adopter" track for the more experienced provided more customized curriculum.

Registration Outreach Campaign	Wave 1 in-person workshop	Wave 2 remote conference call	Wave 3 in-person workshop	Wave 4 remote conference call	
 Email and phone recruitment campaigns Introductory webcast Stakeholder outreach 	 Reviewed basics of water auditing Introduced goals and process of validation 	 2 hour call to review a recent water audit Practiced validation process, discussing data sources and data validity grade justification 	 Reviewed Wave 2 lessons learned and common water audit improvements Guided supporting documentation preparation 	 2 hour call to review either the Calendar 2016 or Fiscal Year 16-17 water audit Completed a level 1 validation and provided all necessary documentation 	
New Learner Focus:	emphasized AWWA methodology introduction and audit software		reinforced water audit methodology and performance indicator interpretation		
Early Adopter Focus	emphasized data improvement opportunities		introduced water loss control best practices		



Program Results

The WL TAP's reach qualifies it as the biggest audit validation effort in the country to date. The WL TAP trained more than 1,500 water utility employees, hosted 72 workshops, and completed more than 400 Level 1 validated water audits.

For the official validation round in Wave 4, 404 water suppliers participated (including some wholesaler agencies and small systems). Of the 412 potable retail urban water suppliers¹ required to submit a level 1 validated water audit per SB555, 385 successfully participated in the WL TAP. For the first year of a new requirement, **the WL TAP provided the necessary water audit review for 93% of the legislatively mandated suppliers.**

The first year of SB555 validated water audit submissions provides the best snapshot currently available of water loss and utility operations for California Retail Urban Water Suppliers. Table ES 2 summarizes the key performance indicators for the *complete* dataset of level 1 validated audits.

It is not safe to assume each audit's leakage estimation is accurate! The level 1 validation process identifies areas of uncertainty and verifies that the water audit methodology is applied, but it does not guarantee accuracy of the results.

All Audits - Key Performance Indicators Summary (N = 385)							
	Key Performance Indicator	Median	Mean	Min	Max		
Volumetric	Water Losses per Service Connection per Day (gal)	34.1	42.7	-43.0	507.0		
	Apparent Losses per Service Connection per Day (gal)	8.1	10.9	0.5	193.0		
	Real Losses per Service Connection per Day (gal)	24.9	33.1	-49.5	505.3		
	Real Losses per Service Connection per Day per PSI	0.3	0.5	-0.8	10.1		
	Infrastructure Leakage Index (ILI)	1.4	2.1	-3.6	42.2		
Financial	Annual Cost of Apparent Losses	\$148,968	\$450,012	\$1,824	\$21,609,190		
	Annual Cost of Real Losses	\$152,432	\$520,918	- \$165,244	\$38,936,077		
	Non-Revenue Water as a % of Total Operating Cost	3.4%	4.2%	-0.8%	68.2%		
	Data Validity Score	60	61	36	89		

Table ES 1: Key Performance Indicator Summary for All Audits

¹ Please note that all participants were potable water systems. Though recycled system inclusion was discussed in the rulemaking process, those systems are not subject to the final requirements.

Table ES 2 summarizes the key performance indicators for the 279 audits that pass a set of filters, as described in Section V. The filters applied aim to exclude audits with outlying results.

Filtered Audits - Key Performance Indicators Summary (N = 279)							
	Key Performance Indicator	Median	Mean	Min	Max		
Volumetric	Water Losses per Service Connection per Day (gal)	40.5	48.6	15.5	188.5		
	Apparent Losses per Service Connection per Day (gal)	8.6	11.9	1.2	193.0		
	Real Losses per Service Connection per Day (gal)	31.0	38.2	11.15	172.4		
	Real Losses per Service Connection per Day per PSI	0.4	0.5	0.2	2.5		
	Infrastructure Leakage Index (ILI)	1.9	2.4	1.0	10.7		
Financial	Annual Cost of Apparent Losses	\$ 153,789	\$508,908	\$3 <i>,</i> 423	\$21,609,190		
	Annual Cost of Real Losses	\$ 219,769	\$655,181	\$5,562	\$38,936,077		
	Non-Revenue Water as a % of Total Operating Cost	3.9%	4.8%	0.4%	68.2%		
	Data Validity Score	60	60	37	89		

Table ES 2: Key Performance Indicator Summary for Audits that Passed Filters

Each key performance indicator reported varies widely, serving as an important reminder of the spread of experiences across systems throughout the state. Especially given the diversity of infrastructure and financial parameters, it is critical to assess each supplier's water loss performance in the context of its unique operations and constraints.

In its breadth of audit review, the WL TAP identified common opportunities to improve water loss assessment throughout the state. Though important for the accuracy of water audit results, the following practices are not commonly practiced:

- Testing and calibrating source meters
- Prorating consumption to align sales volumes with the audit period
- Testing customer meters to inform estimates of apparent loss

As utilities look to improve their understanding of water losses, more engagement with instrument inaccuracy and in-depth data review are good places to start.

Next Steps

Audit Validation Program

The WL TAP facilitated the biggest audit data collection effort in California to date. Across the trainings and validation sessions, the WL TAP instilled a new appreciation for the Audit Software tool and piqued interest in the benefits of water loss monitoring and management. To sustain attention and encourage water audit improvement, strengths of the WL TAP will be important to continue:

- **Consistency:** The first year of level 1 validations was unique because the WL TAP offered a streamlined and consistent process for all participants. Going forward, efforts to standardize and maintain clear expectations of level 1 validation across different validation providers will be essential (through checkpoints like the Water Audit Validator certificate program). It will also be critical that the State ensures quality control measures are in place.
- **Transparency:** The Project Management Team (PMT) emphasized the importance of transparency in the water audit process. For a water audit to be insightful and useful, the inputs must be as accurate as the data available allows and the Data Validity Grades (DVG) must reflect data collection and maintenance protocols in practice. The PMT successfully built trust over the course of the program to foster candid, comfortable conversations between the utility staff and the validator. Moving forward, maintaining these levels of transparency will be critical.
- Learning: Participants were especially appreciative that the reporting requirement was so
 well-supported by training. In addition to the final round of audit review, the WL TAP
 offered opportunities for utility employees to refine their water audit expertise, consider
 peers' experiences, and evaluate areas for improvement. Future training sessions would
 encourage continued attention and care to water auditing and water loss control while also
 allowing new staff to get up to speed. Moving forward, it is important that training continue
 for water suppliers in California.

Water Loss Programming Considerations

Now that water audit best practices are being adopted across the state and each utility has stepped up to assess its water loss starting point, practical discussions of where to improve data, how to empower proactive management, and how to cost-effectively reduce water losses can begin. As those discussions start, the WL TAP's experience with the first year of validations reveals some important considerations:

- **Uncertainty Remains:** The first year of level 1 validated data should serve as a starting point. An accurate audit requires constant refinement and ongoing study of data sources describing production, consumption, and meter inaccuracy. Many suppliers are now identifying potential sources of inaccuracy but data source improvement takes time. Ongoing training and technical assistance should include this in its focus.
- **Proactive Opportunities Exist:** In discussions with each supplier across the validation sessions, the PMT inquired about current water loss control activity. All suppliers



described programs of leak repair (responding to known failures) and many have active mains replacement programs. However, a minority of suppliers proactively survey or otherwise manage leakage. Only a quarter of the participating suppliers described any form of proactive leak detection work. Ongoing training and technical assistance should include this in its focus.

• **Context Matters:** Given the diversity of infrastructure and financial parameters across California water suppliers, it is critical to assess each utility's water loss performance in the context of its unique operations and constraints. This is especially important to consider as water loss target setting begins in upcoming years. SB555 outlines that performance benchmarking process will begin in 2019, and the Executive Order B-37-15 framework features water loss as a focus of its water waste reduction measures.

