

# **Agenda**

## **Sacramento Suburban Water District**

### **Regular Board Meeting**

3701 Marconi Avenue, Suite 100  
Sacramento, California 95821

Monday, December 19, 2016  
6:30 p.m.

Where appropriate or deemed necessary, the Board may take action on any item listed on the agenda, including items listed as information items. Public documents relating to any open session item listed on this agenda that are distributed to all or a majority of the members of the Board of Directors less than 72 hours before the meeting are available for public inspection in the customer service area of the District's Administrative Office at the address listed above.

The public may address the Board concerning an agenda item either before or during the Board's consideration of that agenda item. Persons who wish to comment on either agenda or non-agenda items should fill out a Comment Card and give it to the General Manager. The President will call for comments at the appropriate time. Comments will be subject to reasonable time limits (3 minutes).

In compliance with the Americans with Disabilities Act, if you have a disability, and you need a disability-related modification or accommodation to participate in this meeting, then please contact Sacramento Suburban Water District Human Resources at 679.3972. Requests must be made as early as possible, and at least one full business day before the start of the meeting.

#### **Swearing in Newly Elected Directors**

The District Secretary will swear in the newly elected directors.

#### **Call to Order**

#### **Roll Call**

#### **Election of District Officers**

1. Election of District Officers

#### **Announcements**

#### **Public Comment**

This is the opportunity for the public to comment on non-agenda items within the Board's jurisdiction. Comments are limited to 3 minutes.

#### **Consent Items**

The Board will be asked to approve all Consent Items at one time without discussion. Consent Items are expected to be routine and non-controversial. If any Board member, staff or interested person requests that an item be removed from the Consent Items, it will be considered with the action items.

2. Minutes of the November 21, 2016 Special Board Meeting  
*Recommendation: Approve subject minutes.*
3. Minutes of the November 21, 2016 Regular Board Meeting  
*Recommendation: Approve subject minutes.*
4. Minutes of the December 5, 2016 Special Board Meeting  
*Recommendation: Approve subject minutes.*
5. Minutes of the December 12, 2016 Special Board Meeting  
*Recommendation: Approve subject minutes.*
6. Resolution No. 16-26 in Recognition of Dave Jones  
*Recommendation: Adopt subject resolution.*
7. Resolution No. 16-27 in Recognition of Shauna Laurence  
*Recommendation: Adopt subject resolution.*
8. Employee Recognition and Retention Expense Policy (PL – HR 005)  
*Recommendation: Adopt subject policy.*
9. Return to Work Policy (PL – HR 007)  
*Recommendation: Adopt subject policy.*
10. Surplus Vehicles #13, 26, 32 and 33  
*Consider approving surplus vehicles.*

**Items for Discussion and Action**

11. Resolution No. 16-28 Honoring Frederick A. Gayle as Board Member  
*Recommendation: Adopt subject resolution.*
12. Well 32A Landscape Transition Project Update  
*Presentation by Eco Landscape.*
13. Committee and Liaison Appointments for 2017  
*The Board President will consider committee and liaison appointments for 2017.*
14. General Manager's Out of State Travel Requests  
*Consider approving out of state travel requests.*
15. Director Compensation and Travel Reimbursement Policy and Reporting  
*Receive written staff report and direct staff as appropriate.*

16. Parkland Estates Paving Partnership Agreement with the County of Sacramento  
*Receive written staff report and direct staff as appropriate.*
17. State Water Resources Control Board Draft Executive Order Implementation Proposal  
*Receive written staff report and direct staff as appropriate.*

**Information Items**

18. District Activity Report
  - a. Water Operations and Exceptions Report
  - b. Water Conservation and Regional Water Efficiency Program Report
  - c. Customer Service Report
  - d. Community Outreach Report
19. Engineering Report
  - a. Major Capital Improvement Projects
  - b. County and City Projects/Coordination
  - c. McClellan Business Park
  - d. Groundwater Quality Projects
  - e. Developer Projects
  - f. Planning Studies
  - g. Other
20. Financial Report
  - a. Financial Statements – November 2016
  - b. Investments Outstanding and Activity – November 2016
  - c. Cash Expenditures – November 2016
  - d. Credit Card Expenditures – November 2016

- e. Directors Compensation and Expense Accounting – Through November 2016
  - f. Market Report Yields – January 2010 through November 2016
  - g. District Reserve Balances – November 2016
  - h. Information Required by Bond Agreement
- 21. 2016 Leak Detection Project
  - 22. ACWA/JPIA President's Special Recognition Awards
  - 23. Legislative and Regulatory Update
  - 24. General Manager's Report
    - a. McClellan Park Improvement Issues Update
    - b. Water Transfers – Bureau of Reclamation Update
    - c. Long Term Warren Act Contract Update
    - d. County of Sacramento Proposed Paving Requirements
    - e. City of Sacramento – Wholesale Water Rates
    - f. Walnut Corporation Yard Improvements
  - 25. Upcoming Policy Review
    - a. Drug and Alcohol Program Policy – (PL – HR 010)
  - 26. Upcoming Water Industry Events

**Committee Reports**

- 27. a. Facilities and Operations Committee (Director Locke)  
Notes from the December 9, 2016 meeting.
- b. Finance and Audit Committee (Director Thomas)  
No report.
- c. Government Affairs Committee (Director Locke)  
No report.

- d. Ad Hoc Water Banking and Transfer Committee (Director Wichert)  
No report.

**Director's Reports (Per AB 1234, Directors will report on their meeting activities)**

- 28. a. Regional Water Authority (Director Thomas)  
No report.

Regional Water Authority Executive Committee (General Manager Roscoe)  
Agenda from the December 7, 2016 Meeting.

- b. Sacramento Groundwater Authority (Director Schild)  
Agenda from the December 8, 2016 Meeting.

- c. Water Forum Successor Effort (General Manager Roscoe)  
Agenda from the December 15, 2016 Meeting.

Carryover Storage Working Group Meetings  
No report.

Water Forum Dry Year Conference Meeting  
No report.

Water Caucus Meeting  
Agenda from the December 14, 2016 Meeting

- d. Other Reports

**Miscellaneous Correspondence and General Information**

- 29. Correspondence received by the District

- 30. General Information

**Director's Comments/Staff Statements and Requests**

The Board and District staff may ask questions for clarification, and make brief announcements and comments, and Board members may request staff to report back on a matter, or direct staff to place a matter on a subsequent agenda.

**Closed Session (Closed Session Items are not opened to the public)**

- 31. Public Employee Performance Evaluation Involving the General Manager Under Government Code Section 54954.5(e) and 54957

**Adjournment**

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**Upcoming Meetings**

Monday, January 23, 2017 at 6:00 p.m., Financial Corporation Annual Board Meeting  
Monday, January 23, 2017 at 6:30 p.m., Regular Board Meeting

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I certify that the foregoing agenda for the December 19, 2016 meeting of the Sacramento Suburban Water District Board of Directors was posted by December 15, 2016 in a publicly-accessible location at the Sacramento Suburban Water District office, 3701 Marconi Avenue, Suite 100, Sacramento, California, and was freely available to the public.

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Robert S. Roscoe  
General Manager/Secretary  
Sacramento Suburban Water District



## Agenda Item: 20

**Date:** December 7, 2016

**Subject:** Financial Report

**Staff Contact:** Daniel A. Bills, Finance Director

Eight reports are attached for your information. They are:

- Financial Statements – November 2016
- Investments Outstanding and Activity – November 2016
- Cash Expenditures – November 2016
- Credit Card Expenditures – November 2016
- Directors Compensation and Expense Accounting – Through November 2016
- Market Report Yields – January 2010 through November 2016
- District Reserve Balances – November 2016
- Information Required by Bond Agreement

### Financial Statements

#### Balance Sheet:

District cash and cash equivalents increased to \$3.7 million as of November 30, 2016, up from \$3.1 million at year-end. Cash held in the District's bank accounts (\$2.7 million as of November 30) is held in accordance with state and federal regulations, which state that cash held in the District's bank accounts above the FDIC insured limits must be fully collateralized with government securities that are equal to or greater than 110% of the District's cash balance in the bank at any time.

Investments decreased since year-end by \$1.7 million to a total of \$35.5 million, reflecting a planned reduction of reserves, net of unrealized market value losses and the reinvestment of interest received.

Capital assets grew \$16.3 million to \$445.2 million as of November 30, 2016, reflecting expenditures on distribution main replacement projects, well replacement projects, and meter retrofits. Capital assets are primarily funded by monthly remuneration from customers through "capital facilities charges," developer contributions, as well as grant funds, when available, and District reserves when necessary.

Net position stands at \$235.6 million as of November 30, 2016, compared to \$225.7 million at year-end for an increase of \$9.9 million.

Income Statement:

The net position increase of \$9.9 million in 2016, when compared to \$10.3 million for the same year-to-date period in 2015, shows:

1. Water Consumption Sales increased by \$1.4 million (16%) compared to the same period in 2015 due primarily to increased water deliveries as 27,847 acre-feet of water was delivered in 2016 compared to 26,006 acre-feet in 2015 for an increase of 7 percent. In addition to the increased income from water consumptions sales was a 4.0 percent rate increase that took effect at the beginning of 2016.
2. Capital Facility Charges increased by \$0.8 million in line with the 4.0 percent rate increase referred to above.
3. Operating expenses increased by \$2.2 million due primarily to the purchase of surface water in the North Service Area at a cost of \$2.2 million as surface water is available to the District this year. Partially offsetting the increased cost from purchasing surface water is a decrease of \$0.5 in groundwater pumping costs.
4. Facility Development Charges decreased by \$0.3 million compared to the same period a year ago as a large project in 2015 did not recur in 2016.
5. Increased developer contributions of \$0.2 million compared to the same period a year ago is attributable to the donations of water system infrastructure assets from many different developer sponsored projects.

Amended Budgets:

The District's operating and maintenance expenditures through November 2016 are less than the amended budget by \$0.6 million. This positive variance is due to reasons cited in #3 above plus position vacancies as many positions have been left open or turned over during the year.

Operating capital project expenditures in November were \$0.1 million, bringing expenditures to-date to \$0.6 million, with an additional \$0.2 million encumbered. The total amended budget for the year is \$1.0 million.

The District's amended capital improvement project (CIP) budget for 2016 is \$18.8 million. To date, \$14.9 million has been spent, while \$3.0 million is encumbered. Expenditures continue to be primarily in distribution system replacements, well improvements/replacements and meter retrofit projects.



#### Debt – November 2016

This report shows District activity in repaying its long-term debt obligations. Scheduled 2016 principal payments of \$3.9 million were made in October along with \$1.1 million in semi-annual interest. Total principal outstanding as of November 30, 2016 is now \$85.6 million.

#### Investments Outstanding and Activity – November 2016

Reserve funds are invested in diverse investments that consist of corporate notes, Federal Agency bonds and discount notes, Supra-National Agency Bonds, U.S. Treasury bonds, notes and bills, collaterized mortgage obligations, commercial paper, municipal bonds, negotiable certificates of deposit, Asset-Backed Securities and LAIF (Local Agency Investment Fund). The District's investments are under the day-to-day management of PFM Asset Management, LLC (PFM). PFM manages the portfolio in compliance with the District's Investment Policy and provides monthly and quarterly reporting, analysis and proposes strategies for the District. The market portfolio is currently earning a rate of 1.36% per annum, while LAIF is earning 0.63% per annum. District staff monitors investment assets quarterly and reviews/approves the effective duration of the District's portfolio against its benchmark index on a quarterly basis as well.

During the month, the District purchased an US Treasury Note for \$0.4 million (par). The District sold one Agency Notes for \$0.6 million (par). The District received principal paydowns on three Federal Agency Collateralized Mortgage Obligations of \$15,495 (par) and two Asset-Backed Security Obligations for \$27,307 (par). The District sold an Agency Security for \$0.4 million (par). See "Investment Activity" section in the attached report for further details.

All investments are invested and accounted for in accordance with the District Investment Policy (PL - FIN 003) and Government Code.

#### Cash Expenditures – November 2016

During the month of November, the District made cash payments totaling \$3.5 million. The primary expenditures were – \$1.6 million for capital improvement projects, \$0.1 million for capital improvement and operating inventory and supplies, \$0.8 million for water costs including surface water costs, pumping and chemical costs, \$0.1 million for District water system maintenance and repairs, \$0.1 million for debt service, and \$0.5 million for payroll, pension and health benefits.

#### Purchasing Card Expenditures – November 2016

Per the District's Purchasing Card Policy (PL – FIN 006), a monthly report detailing each purchasing card transaction by cardholder is provided.

During the month, the District spent \$9,804 for various purchases on the six District purchasing cards. Details by vendor and purpose are included in this report.

#### Directors Compensation and Expense Accounting – November 2016

Director meetings attended during the month of November and expenses are attached in accordance with the District's Directors' Compensation and Expense Reimbursement Policy (PL – BOD 003) and Government Code Section 53065.5. Directors who have not reported their

meeting attendance to District staff are not included in this report and are expected to make an oral report at the Board meeting.

#### Market Report Yields – January 2010 through November 2016

The first page in this report shows current market rate data. The overall yield curve was increased compared to the prior month and prior year. The yield on 30-year Treasury Bonds increased 43 basis points compared to the prior month to 3.04% while short-term rate increased 9 bps to 0.49%. The slope of the curve continues to remain steep in the 2 to 5 year range. Compared to one year ago, the 30-year Treasury bond yield was 2.97% while the short-term rate was at 0.23%. The Federal Reserve Target Rate increased by 25 basis points to 50 basis points compared to 25 basis points one year ago.

The second page in this section shows the holdings of the District's investment portfolio by maturity as a percentage of the total portfolio. The District's portfolio is compared to the Bank of America/Merrill Lynch UST Zero-to-5 year index (the District's benchmark index) for purposes of broadly illustrating the District's investment strategy in terms of its duration.

The final page shows the monthly (unannualized) returns of the District's portfolio relative to its benchmark index, as well as the annualized returns of the portfolio at month-end. This final page is an attempt to evaluate the District's portfolio strategy on a rate-return basis (as opposed to a total return or a risk basis) relative to the market.

#### District Reserve Fund Balances

The District's Reserve Policy, PL – Fin 004, requires the District to maintain a certain level of cash and investments on hand at any one time, as determined by the Board annually. Balances as of November 30, 2016 are \$42,740,064 compared to \$43,839,120 at December 31, 2015.

#### Information Required by Bond Agreement

Per Article 5.2 (b) of the 2009A COP Reimbursement Agreement with Sumitomo Mitsui Banking Corporation, year-to-date net revenues available for the payment of debt service costs and an estimate of debt service payments for the upcoming six months are provided.

**Financial Statements  
November 30, 2016**

**Sacramento Suburban Water District  
Balance Sheet**

As Of

	Month End 11/30/2016	Year End 12/31/15
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$3,660,386.80	\$3,107,756.76
Restricted Cash and cash equivalents	162.80	16,646.54
Accounts receivable, net of allowance for uncollectible accounts	2,247,125.96	2,303,487.73
Interest receivable	112,108.30	119,499.25
Restricted Interest receivable	5,888.44	10,807.97
Grants receivables	136,650.64	238,325.47
Other receivables		637,224.83
Inventory	526,455.80	484,946.83
Prepaid expenses and other assets	665,327.79	339,374.05
<b>TOTAL CURRENT ASSETS</b>	<b>7,354,106.53</b>	<b>7,258,069.43</b>
<b>NONCURRENT ASSETS</b>		
Investments	35,544,126.14	37,206,112.72
Restricted Investments	3,529,499.73	3,495,980.65
<b>TOTAL NONCURRENT ASSETS</b>	<b>39,073,625.87</b>	<b>40,702,093.37</b>
Property, plant and equipment	445,167,071.19	428,897,522.75
Accumulated depreciation	(159,936,520.73)	(149,076,072.93)
<b>TOTAL CAPITAL ASSETS</b>	<b>285,230,550.46</b>	<b>279,821,449.82</b>
<b>TOTAL ASSETS</b>	<b>331,658,282.86</b>	<b>327,781,612.62</b>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>		
Deferred amount on long-term debt refunding	7,374,807.81	7,964,338.07
Deferred outflow of effective swaps	765,224.00	765,224.00
Pension contribution subsequent to measurement date	414,789.00	546,726.00
<b>TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES</b>	<b>340,213,103.67</b>	<b>337,057,900.69</b>
<b>LIABILITIES</b>		
<b>CURRENT LIABILITIES</b>		
Current portion of long-term debt and capital leases	4,060,000.00	3,945,000.00
Accounts payable	580,837.42	2,341,285.19
Accrued interest	186,977.21	427,131.48
Deferred revenue and other liabilities	686,026.43	666,050.73
Accrued expenses	242,635.86	503,876.74
<b>TOTAL CURRENT LIABILITIES</b>	<b>5,756,476.92</b>	<b>7,883,344.14</b>
<b>NONCURRENT LIABILITIES</b>		
Long-term debt	90,496,081.78	95,148,711.88
Compensated absences	1,034,842.92	1,003,877.70
Net pension liability	5,722,018.00	5,722,018.00
Fair value of interest rate swaps	765,224.00	765,224.00
<b>TOTAL NONCURRENT LIABILITIES</b>	<b>98,018,166.70</b>	<b>102,639,831.58</b>
<b>TOTAL LIABILITIES</b>	<b>103,774,643.62</b>	<b>110,523,175.72</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>		
Employee pensions	798,534.00	798,534.00
<b>NET POSITION</b>		
Invested in capital assets, net of related debt	188,692,076.01	188,692,076.01
Restricted	3,523,435.16	3,523,435.16
Unrestricted	43,424,414.88	33,520,679.80
<b>TOTAL NET POSITION</b>	<b>235,639,926.05</b>	<b>225,736,190.97</b>
<b>TOTAL LIABILITIES, DEFERRED INFLOWS AND NET POSITION</b>	<b>340,213,103.67</b>	<b>337,057,900.69</b>

**Sacramento Suburban Water District  
Income Statement**

*Period Ended*

	<u>Month</u> <u>11/30/2016</u>	<u>Year-To-Date</u> <u>11/30/2016</u>	<u>Month</u> <u>11/30/2015</u>	<u>Year-To-Date</u> <u>11/30/2015</u>
<b>OPERATING REVENUES</b>				
Water consumption sales	\$774,335.64	\$10,438,514.65	\$690,324.31	\$8,993,479.13
Water service charge	516,289.99	5,776,438.82	512,022.78	5,793,381.44
Capital facilities charge	1,883,910.29	20,411,087.72	1,806,368.19	19,569,664.54
Wheeling water charge	785.84	167,032.42	488.88	6,050.82
Other charges for services	73,559.52	885,917.16	86,281.75	908,097.83
<b>TOTAL OPERATING REVENUES</b>	<b>3,248,881.28</b>	<b>37,678,990.77</b>	<b>3,095,485.91</b>	<b>35,270,673.76</b>
<b>OPERATING EXPENSES</b>				
Source of supply	202,039.55	2,178,456.35	4,228.75	48,381.47
Pumping	274,984.10	3,433,625.39	338,956.11	3,937,306.77
Transmission and distribution	249,636.94	3,001,049.02	186,744.52	2,450,844.02
Water conservation	27,293.71	492,204.83	116,408.80	623,072.30
Customer accounts	54,593.07	991,853.49	83,835.96	1,041,125.86
Administrative and general	465,321.47	5,600,868.05	490,542.01	5,411,195.14
<b>TOTAL OPERATING EXPENSES</b>	<b>1,273,868.84</b>	<b>15,698,057.13</b>	<b>1,220,716.15</b>	<b>13,511,925.56</b>
Operating income before depreciation	1,975,012.44	21,980,933.64	1,874,769.76	21,758,748.20
Depreciation and amortization	(975,496.63)	(10,860,447.80)	(875,798.17)	(10,324,532.87)
<b>OPERATING INCOME</b>	<b>999,515.81</b>	<b>11,120,485.84</b>	<b>998,971.59</b>	<b>11,434,215.33</b>
<b>NON-OPERATING REV. (EXP.)</b>				
Rental income	19,990.61	239,639.24	26,089.40	233,036.42
Interest and investment income	(237,765.27)	514,798.23	(48,936.62)	512,555.95
Interest expense	(292,557.03)	(3,269,447.03)	(291,342.88)	(3,330,611.78)
Other non-operating revenues	131.70	11,198.47	211.07	36,303.44
Grant revenue pass-through to sub recipients		763,754.28	255,063.00	369,443.00
Other non-operating expenses		(13.67)		(97.89)
Sub recipient grant expenses		(763,754.28)	(369,443.00)	(369,443.00)
Gain(loss) on disposal of capital assets				6,251.53
<b>NON-OPERATING REV. (EXP.)</b>	<b>(510,199.99)</b>	<b>(2,503,824.76)</b>	<b>(428,359.03)</b>	<b>(2,542,562.33)</b>
<b>NET INCOME (LOSS) BEFORE CAPITAL</b>	<b>489,315.82</b>	<b>8,616,661.08</b>	<b>570,612.56</b>	<b>8,891,653.00</b>
<b>CAPITAL CONTRIBUTIONS</b>				
Facility development charges	14,789.00	264,209.00		534,756.00
Developer contributions		773,540.00	163,995.00	590,494.99
Federal, state and local capital grants	99,500.00	249,325.00	74,817.00	245,988.61
<b>TOTAL CAPITAL CONTRIBUTIONS</b>	<b>114,289.00</b>	<b>1,287,074.00</b>	<b>238,812.00</b>	<b>1,371,239.60</b>
<b>CHANGE IN NET POSITION</b>	<b>603,604.82</b>	<b>9,903,735.08</b>	<b>809,424.56</b>	<b>10,262,892.60</b>
Net position at beginning of period	235,036,321.23	225,736,190.97	229,775,393.62	219,339,557.77
<b>NET POSITION AT END OF PERIOD</b>	<b><u>235,639,926.05</u></b>	<b><u>235,639,926.05</u></b>	<b><u>230,584,818.18</u></b>	<b><u>229,602,450.37</u></b>

**Sacramento Suburban Water District**  
**Operations and Maintenance Budget**  
*Period Ended*

	<i>Month Of November</i>			<i>2016 YTD</i>		
	<u>Actual</u>	<u>Budget</u>	<u>Variance</u>	<u>Actual</u>	<u>Budget</u>	<u>Variance</u>
<b>BUDGETED OPERATING EXPENSES</b>						
Board of Directors	\$2,614.43	\$2,788.71	\$174.28	\$36,692.53	\$43,879.81	\$7,187.28
Administrative	144,374.03	188,053.95	43,679.92	1,789,059.33	1,879,340.45	90,281.12
Finance	76,813.59	78,257.47	1,443.88	910,008.51	946,632.17	36,623.66
Customer Services	54,593.07	102,262.88	47,669.81	991,853.49	1,094,891.68	103,038.19
Field Operations	29,377.32	34,067.85	4,690.53	369,922.58	370,746.35	823.77
Production	477,023.65	445,439.23	(31,584.42)	5,612,081.74	5,612,201.53	119.79
Distribution	136,512.80	206,178.65	69,665.85	1,796,675.49	1,875,165.15	78,489.66
Field Services	113,124.14	124,761.28	11,637.14	1,203,474.53	1,205,969.08	2,494.55
Maintenance	43,353.31	51,829.27	8,475.96	556,819.37	570,121.53	13,302.16
Water Conservation	27,293.71	48,494.32	21,200.61	492,204.83	535,933.86	43,729.03
Engineering	81,259.53	94,129.42	12,869.89	826,453.12	922,928.62	96,475.50
GIS/CAD	25,324.13	28,433.59	3,109.46	301,700.07	319,269.49	17,569.42
Human Resources	14,020.07	11,831.32	(2,188.75)	161,588.74	210,317.52	48,728.78
MIS	48,185.06	58,250.61	10,065.55	649,522.80	725,642.71	76,119.91
<b>TOTAL OPERATING EXPENSES</b>	<u><u>1,273,868.84</u></u>	<u><u>1,474,778.55</u></u>	<u><u>200,909.71</u></u>	<u><u>15,698,057.13</u></u>	<u><u>16,313,039.95</u></u>	<u><u>614,982.82</u></u>

SACRAMENTO SUBURBAN WATER DISTRICT  
OPERATING CAPITAL AMENDED BUDGET  
11/30/2016

Project Number	Project Name	Original Budget	Budget Amendments	Amended Budget	Current Month Expenditures	Expenditures Year-To-Date	Committed Year-To-Date	Remaining Balance
SF16-344	2015 URBAN MASTER PLAN	\$42,000.00		\$42,000.00		\$ 20,992.87		\$ 21,007.13
SF16-345	UPDATE WATER SYS MASTER PLAN	\$73,000.00	\$61,000.00 <sup>1</sup>	\$134,000.00 <sup>1</sup>		64,137.29		69,862.71
SF16-371	OFFICE FURNITURE SUITE 200	\$5,000.00		\$5,000.00	-	567.47		4,432.53
SF16-372	OFFICE FURNITURE WALNUT	\$10,000.00		\$10,000.00	-	8,842.62		1,157.38
SF16-373	BOARD ROOM WALL MAPS	\$5,000.00		\$5,000.00	-	-	5,000.00	-
SF16-374	NEW VEHICLE-FIELD SERVICE DEPT	\$45,000.00		\$45,000.00	-	5,266.90	3,067.19	219.00
SF16-375	VEH REPL/ RIGHT SIZE TRUCK#32	\$124,000.00	\$10,000.00 <sup>2</sup>	\$134,000.00 <sup>2</sup>		-	133,282.00	718.00
SF16-376	VEH REPL-TRUCK# 26	\$33,500.00		\$33,500.00	-	28,716.89		4,783.11
SF16-377	VEH REPL/RIGHT SIZE -TRUCK# 13	\$33,500.00		\$33,500.00	-	32,651.49		848.51
SF16-378	ASPHALT REPAIR/REPL-WELL SITES	\$35,500.00		\$35,500.00	-	35,035.07		464.93
SF16-379	PROD METERS REPL/MAGMETERS	\$15,000.00		\$15,000.00	-	3,920.00		(357.89)
SF16-380	NOMAD 360/AREA SPOTET LIGHT	\$4,000.00		\$4,000.00	-	3,658.18		341.82
SF16-381	METER VAULT LID RETROFIT	\$10,500.00		\$10,500.00	-	-		10,500.00
SF16-382	WATER CONSERV -MASTER PLAN	\$45,000.00	(\$45,000.00) <sup>2</sup>	\$0.00 <sup>2</sup>		-		-
SF16-383	REMODEL CUSTOMER SERV AREA	\$35,000.00	\$30,000.00 <sup>2</sup>	\$65,000.00 <sup>2</sup>		43,386.44	21,792.87	(179.31)
SF16-384	REPL EXT/GARAGE LIGHTING-LED	\$20,000.00	(\$3,000.00) <sup>3</sup>	\$17,000.00 <sup>3</sup>		14,486.47	1,648.53	865.00
SF16-385	INSTL 5 CAMERAS @ WALNUT	\$20,000.00	\$3,000.00 <sup>3</sup>	\$23,000.00 <sup>3</sup>		20,443.60	1,144.40	1,412.00
SF16-386	REPL CAMERAS @ MARCONI	\$6,000.00		\$6,000.00	-	-		6,000.00
SF16-387	HVAC/ROOF/BUILD REPAIRS	\$30,000.00		\$30,000.00	-	7,984.64	-	3,675.14
SF16-388	BUILD & STRUCTURES MAINTENANCE	\$95,000.00	\$5,000.00 <sup>2</sup>	\$100,000.00 <sup>2</sup>	22,500.00	94,020.00	4,680.00	1,300.00
SF16-389	HARDWARE REFESH	\$170,000.00	(\$65,000.00) <sup>1</sup>	\$105,000.00 <sup>1</sup>	6,121.54	82,372.07	4,189.36	18,438.57
SF16-390	SOFTWARE ENHANCEMENTS/MODULES	\$115,000.00		\$115,000.00	-	14,490.84	41,136.16	38,653.00
SF16-391	TRIMBLE HANHELD COMPUTR-FIELD	\$6,000.00		\$6,000.00	-	4,650.00		1,350.00
SF16-392	WEB SITE UPGRAGE	\$35,000.00	(\$35,000.00) <sup>1</sup>	\$0.00 <sup>1</sup>		-		-
SF16-393	GPS ASSET LOCATION PROJECT	\$75,000.00	(\$75,000.00) <sup>1</sup>	\$0.00 <sup>1</sup>		-		-
		<b>\$ 1,088,000.00</b>	<b>\$ (114,000.00)</b>	<b>\$ 974,000.00</b>	<b>\$ 60,283.92</b>	<b>\$ 572,567.86</b>	<b>\$ 215,940.51</b>	<b>\$ 185,491.63</b>

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**Sacramento Suburban Water District  
Capital Improvement Project Amended Budget  
11/30/2016**

Project No.	Project Name	Original Budget	Amended Budget	Current Month Expenditures	Expenditures Year-To-Date	Committed Year-To-Date	Remaining Balance	
SC16-007	GROUNDWTR MONITORING/MODELING	\$50,000.00	\$200,000.00 <sup>1</sup>	\$250,000.00 <sup>1</sup>	\$ 242,221.29	\$ 2,489.42	\$ 5,289.29	
SC16-009	WELL REHAB/PUMP ST IMPROVEMENT	\$890,000.00	\$841,560.00 <sup>2,3,4</sup>	\$1,731,560.00 <sup>2,3,4</sup>	\$227,055.88	1,069,935.98	529,978.70	131,645.32
SC16-010	SCADA RTU/COMMUN IMPROVEMENT	\$200,000.00	(\$88,000.00) <sup>3</sup>	\$112,000.00 <sup>3</sup>	1,585.00	78,932.81	13,487.50	19,579.69
SC16-011	WELLHEAD TREATMENT/CHEM FEED	\$370,000.00	(\$100,000.00) <sup>3</sup>	\$270,000.00 <sup>3</sup>	19,696.50	91,028.73	87,647.84	91,323.43
SC16-012	WELL REPLACEMENTS	\$2,600,000.00	\$420,000.00 <sup>4</sup>	\$3,020,000.00 <sup>4</sup>	10,160.95	2,569,346.24	382,470.92	68,182.84
SC16-013	ELEC ARC FLASH MOD @ WELL SITES	\$330,000.00		\$330,000.00	9,254.00	157,056.76	63,496.00	109,447.24
SC16-018	DISTRIBUTION MAIN REPLACEMENTS	\$8,420,000.00	\$173,500.00 <sup>2,6</sup>	\$8,593,500.00 <sup>2,6</sup>	745,549.76	6,948,515.27	1,608,674.13	36,310.60
SC16-019	DIST MAIN IMPRV/EXT/INTERTIES	\$775,000.00	\$26,500.00 <sup>6</sup>	\$801,500.00 <sup>6</sup>	301,610.02	778,310.02	7,095.25	16,094.73
SC16-022	LOWERING/RAISING VALVE BOXES	\$150,000.00	(\$24,000.00) <sup>2,3</sup>	\$126,000.00 <sup>2,3</sup>	-	106,667.01	14,860.00	4,472.99
SC16-024	METER RETROFIT PROGRAM	\$1,900,000.00	(\$63,300.00) <sup>3</sup>	\$1,836,700.00 <sup>3</sup>	270,382.00	1,797,204.35	39,450.00	45.65
SC16-024A	VOLUNTARY METER RETROFIT PROGRAM	\$75,000.00		\$75,000.00	-	27,872.65	4,185.00	42,942.35
SC16-027	DISTRIB MAJOR REPAIRS	\$350,000.00		\$350,000.00	-	256,771.55	11,424.00	81,804.45
SC16-028	DISTRIB SYSTEM IMPRV	\$375,000.00	(\$375,000.00) <sup>5</sup>	\$0.00 <sup>5</sup>	-	-	-	-
SC16-034	RESERVIOR/TANK IMPROVMENT	\$200,000.00		\$200,000.00	6,655.00	43,414.54	131,985.00	24,600.46
SC16-034A	CORROSION CONTRL/TRANSMISSION MAINT	\$450,000.00	(\$300,000.00) <sup>2</sup>	\$150,000.00 <sup>2</sup>	-	6,225.00	1,945.00	141,830.00
SC16-035	PROFESSIONAL/SPECIAL PROJ	\$100,000.00	(\$10,560.00) <sup>3</sup>	\$89,440.00 <sup>3</sup>	6,000.00	60,291.70	21,848.47	7,299.83
SC16-038	LARGE WTR METER >3" REPL	\$140,000.00		\$140,000.00	13,700.00	108,651.17	22,980.00	8,368.83
SC16-039	FIRE HYDRANT REPL/REHAB/ADD	\$200,000.00	(\$200,000.00) <sup>5</sup>	\$0.00 <sup>5</sup>	-	-	-	-
SC16-040	ENGINE GENERATOR COMPLIANCE	\$75,000.00	(\$20,700.00) <sup>3</sup>	\$54,300.00 <sup>3</sup>		53,091.93	1,205.00	3.07
SC16-042	METER REPLACE/REPAIR - WMP	\$558,000.00		\$558,000.00	69,000.00	505,523.63	30,880.00	21,596.37
SC16-044	CAPITAL IMPRV CTP(SJWD AGREEMENT)	\$7,000.00		\$7,000.00	-	-		7,000.00
SC16-045	ENTERPRISE INTERTIE IMPROVEMENT	\$180,000.00	(\$79,000.00) <sup>1</sup>	\$101,000.00 <sup>1</sup>	11,560.00	11,560.00	42,943.00	46,497.00
<b>Totals SSWD</b>		<b>\$ 18,395,000.00</b>	<b>\$ 401,000.00</b>	<b>\$ 18,796,000.00</b>	<b>\$ 1,692,209.11</b>	<b>\$ 14,912,620.63</b>	<b>\$ 3,019,045.23</b>	<b>\$ 864,334.14</b>



**Sacramento Suburban Water District  
Debt  
11/30/2016**

**Current Month**

	Series 2009A COP	Series 2009B COP	Series 2012A	Total
Beginning Balance	\$ 42,000,000	\$ 24,095,000	\$ 19,520,000	\$ 85,615,000
Additions:				-
Reductions: Payment	-	-	-	-
Ending Balance	<u>\$ 42,000,000</u>	<u>\$ 24,095,000</u>	<u>\$ 19,520,000</u>	<u>\$ 85,615,000</u>

**Year-To-Date**

	Series 2009A COP	Series 2009B COP	Series 2012A	Total
Beginning Balance	\$ 42,000,000	\$ 26,045,000	\$ 21,515,000	\$ 89,560,000
Additions:				-
Reductions: Payment	-	(1,950,000)	(1,995,000)	(3,945,000)
Ending Balance	<u>\$ 42,000,000</u>	<u>\$ 24,095,000</u>	<u>\$ 19,520,000</u>	<u>\$ 85,615,000</u>

**Investments Outstanding and Activity  
November 2016**

SACRAMENTO SUBURBAN WATER DISTRICT  
INVESTMENTS OUTSTANDING - OPERATING FUND

Detail of Securities Held:

MONTH END: November 30, 2016

SECURITY TYPE	CUSIP	DESCRIPTION	PAR	COUPON	MATURITY DATE	S&P RATING	TRADE DATE	SETTLE DATE	ORIGINAL COST	YTM AT COST	ACCRUED INTEREST	MARK - TO-MARKET	MARKET VALUE	
SUPRA-NATIONAL AGENCY BOND														
	458182DX7	INTER-AMERICAN DEVELOPMENT BANK	PFM	525,000.00	1.000	5/13/2019	AAA	4/5/2016	4/12/2016	525,425.00	1.10	262.50	(5,179.12)	518,245.88
									525,000.00	1.10	262.50	-5,179.12	518,245.88	
CORPORATE NOTE														
	166764AA8	CHERVON CORP (CALLABLE) GOBAL NOTES	PFM	150,000.00	1.104	12/5/2017	AA-	11/29/2012	12/5/2012	150,811.50	0.99	809.60	(1,090.50)	149,721.00
	166764AA8	CHERVON CORP (CALLABLE) GOBAL NOTES	PFM	220,000.00	1.104	12/5/2017	AA-	11/28/2012	12/5/2012	220,000.00	1.10	1,187.41	(409.20)	219,590.80
	084670BH0	BERKSHIRE HATHAWAY GLOBAL NOTE (EX-CALL)	PFM	525,000.00	1.550	2/9/2018	AA	1/29/2013	2/11/2013	524,270.25	1.58	2,531.67	1,987.13	526,257.38
	30251GAL6	EXXON MOBIL CORP NOTES	PFM	800,000.00	1.305	3/6/2018	AA+	3/4/2015	3/6/2015	800,000.00	1.31	2,465.00	(546.40)	799,453.60
	36962G6W9	GENERAL ELEC DAP CORP GLOBAL NOTES	PFM	500,000.00	1.625	4/2/2018	AA+	4/10/2013	4/15/2013	501,285.00	1.57	1,331.60	274.50	501,559.50
	037835AJ9	APPLE INC GLOBAL NOTES	PFM	475,000.00	1.000	5/3/2018	AA+	4/30/2013	5/3/2013	473,247.25	1.08	369.44	(422.75)	472,824.50
	06406HDB2	BANK OF NEW YORK MELLON CORP	PFM	400,000.00	1.600	5/3/2018	A	5/22/2015	5/29/2015	399,964.00	1.60	160.00	789.60	400,753.60
	166764AE0	CHERVON CORP GOBAL NOTES	PFM	680,000.00	1.718	6/24/2018	AA-	6/17/2013	6/24/2013	680,000.00	1.72	5,094.82	1,986.28	681,986.28
	17275RAR3	CISCO SYSTEM INC GLOBAL NOTES	PFM	375,000.00	2.125	3/1/2019	AA-	8/29/2014	9/4/2014	378,562.50	1.90	1,992.19	(17.25)	378,545.25
	38141GV78	GOLMAN SACHS GRP INC CORP INT (CALLABLE)	PFM	50,000.00	2.000	4/25/2019	BBB+	4/20/2016	4/25/2016	49,861.00	2.10	100.00	(2.80)	49,858.20
	38141GV78	GOLMAN SACHS GRP INC CORP INT (CALLABLE)	PFM	325,000.00	2.000	4/25/2019	BBB+	4/21/2016	4/26/2016	324,792.00	2.02	650.00	(713.70)	324,078.30
	172967KS9	CITI INC CORP NOTES	PFM	145,000.00	2.050	6/7/2019	BBB+	6/2/2016	6/9/2016	144,924.60	2.07	1,420.19	(241.42)	144,683.18
	02665VAH4	AMERICAN HONDA FINANCE GLOBAL NOTES	PFM	800,000.00	2.250	8/15/2019	A+	9/4/2014	9/9/2014	798,520.00	2.29	5,300.00	10,929.60	809,449.60
	12189TBC7	BURLINGTON NRTH CORP	PFM	200,000.00	4.700	10/1/2019	A	6/5/2016	6/8/2016	220,788.00	1.48	1,566.67	(5,501.20)	215,478.80
	46625HKA7	JPMORGAN CHASE & CO (CALLABLE)	PFM	500,000.00	2.250	1/23/2020	A-	10/1/2015	10/6/2015	496,400.00	2.43	4,000.00	2,049.50	498,449.50
	94974BGF1	WELLS FARGO & COMPANY	PFM	400,000.00	2.150	1/30/2020	A	2/2/2015	2/5/2015	402,796.00	2.00	2,890.56	(5,375.20)	397,420.80
	89236TCF0	TOYOTA MOTOR CORP NOTES	PFM	250,000.00	2.150	3/15/2020	AA-	3/23/2015	3/27/2015	252,220.00	1.96	1,179.51	(2,697.25)	249,522.75
	46625HLV8	JPMORGAN CHASE & CO CORP NT (CALLABLE)	PFM	300,000.00	2.000	3/15/2020	A-	9/1/2015	9/4/2015	301,491.00	2.64	3,620.83	1,237.20	302,728.20
	94974BGM6	WELLS FARGO & COMPANY NOTES	PFM	375,000.00	2.600	7/22/2020	A	9/1/2012	9/4/2015	377,103.75	2.48	3,493.75	(247.50)	376,856.25
	06406FAA1	BANK OF NEW YORK MELLON CORP	PFM	375,000.00	2.500	4/15/2021	A	5/16/2016	5/16/2016	383,617.50	2.00	1,197.92	(8,587.87)	375,029.63
	0258MOEB1	AMERICAN EXPRESS CREDIT CORP NOTES	PFM	225,000.00	2.250	5/5/2021	A-	5/25/2016	5/31/2016	224,478.00	2.30	365.63	(1,791.67)	222,686.33
	05531FAV5	BRANCH BANKING & TRUST CORP NOTE	PFM	200,000.00	2.050	5/10/2021	A-	5/10/2016	5/16/2016	199,868.00	2.06	239.17	(3,413.60)	196,454.40
	857477AV5	STATE STREET CORP NOTES	PFM	110,000.00	1.950	5/19/2021	A	5/19/2016	5/24/2016	109,532.50	2.04	71.50	(1,690.04)	107,842.46
									8,380,000.00	1.84	42,037.46	(13,294.54)	8,401,230.31	
FED AGENCY BOND/NOTE														
	3130A8PK3	FHLB NOTE	PFM	690,000.00	0.625	8/7/2018	AA+	8/11/2016	8/11/2016	687,405.60	0.82	1,365.63	(3,532.11)	683,873.49
	3135GOYT4	FANNIE MAE GOLBAL NOTES	PFM	260,000.00	1.625	11/27/2018	AA+	10/22/2014	10/23/2014	262,470.00	1.39	46.94	(165.88)	262,304.12
	3135GOYT4	FANNIE MAE GOLBAL NOTES	PFM	650,000.00	1.625	11/27/2018	AA+	6/16/2014	6/19/2014	650,019.50	1.62	117.36	5,740.80	655,760.30
	3135GOJ53	FNMA BENCHMARK NOTE	PFM	555,000.00	1.000	2/26/2019	AA+	2/19/2016	2/23/2016	553,690.20	1.08	1,464.58	(1,463.53)	552,226.67
	3135G0N33	FNMA BENCHMARK NOTE	PFM	880,000.00	0.875	8/2/2019	AA+	7/29/2016	8/2/2016	878,521.60	0.93	2,545.28	(10,496.64)	868,024.96
	3137A8Y72	FHLB GLOBAL NOTE	PFM	500,000.00	0.875	8/5/2019	AA+	8/5/2016	8/4/2016	499,040.00	0.94	1,421.88	(5,803.50)	493,236.50
	3135G0P49	FNMA NOTE	PFM	950,000.00	1.000	8/28/2019	AA+	8/31/2016	9/2/2016	948,518.00	1.05	2,348.61	(9,118.10)	939,399.90
	3137A8OS5	FHLB GLOBAL NOTE	PFM	975,000.00	1.125	7/14/2021	AA+	7/14/2016	7/15/2016	969,071.03	1.25	4,174.22	(25,183.28)	943,887.75
	3135G0N82	FNMA NOTES	PFM	130,000.00	1.125	8/17/2021	AA+	8/17/2016	8/19/2016	129,555.27	1.32	460.42	(3,398.20)	126,157.07
	3135G0N82	FNMA NOTES	PFM	420,000.00	1.125	8/17/2021	AA+	8/17/2016	8/19/2016	418,299.00	1.33	1,487.50	(10,714.62)	407,584.38
									6,010,000.00	1.14	15,432.42	(64,135.06)	5,932,455.14	
MUNICIPAL BOND/NOTE														
	13017HAD8	CA EARTHQUAKE-AUTH TXBL REV BONDS	PFM	215,000.00	1.824	7/1/2017	NR	10/29/2014	11/6/2014	215,000.00	1.82	1,634.00	690.15	215,690.15
	91412GSZ9	UNIV OF CAL TXBL REV BONDS	PFM	695,000.00	2.054	5/15/2018	AA	9/26/2013	10/2/2013	695,000.00	2.05	634.46	6,366.20	701,366.20
	20772JZJK1	CT ST TXBL GO BONDS	PFM	230,000.00	1.974	3/15/2019	AA-	3/16/2015	3/25/2015	230,646.30	1.90	958.49	1,340.90	231,987.20
									1,140,000.00	1.98	3,226.95	8,397.25	1,149,043.55	
FEDERAL AGENCY COLLATERALIZED MORTGAGE OBLIGATION														
	3136ANJY4	FNMA SERIES 2015-M17 ASQ2	PFM	185,000.00	1.550	4/1/2018	AA+	4/15/2015	4/30/2015	186,849.33	0.83	238.96	(1,620.69)	185,228.64
	3136AMMC0	FNMA SERIES 2015-M13 FA	PFM	121,542.18	0.652	6/1/2018	AA+	2/12/2015	2/27/2015	121,510.41	0.39	78.68	60.14	121,570.55
	3136AMTM1	FNMA SERIES M4 FA	PFM	110,917.26	0.642	9/1/2018	AA+	3/12/2015	3/31/2015	110,888.84	0.38	77.51	31.87	110,920.71
	3136AOSW1	FNMA SERIES 2015-M15 ASQ2	PFM	170,000.00	1.899	11/1/2019	AA+	11/6/2015	11/30/2015	171,699.98	1.20	268.89	(899.69)	170,800.29
	3136AOD00	FANNIE MAE SERIES 2015-M13 ASQ2	PFM	355,000.00	1.646	9/1/2019	AA+	10/7/2015	10/30/2015	358,554.92	1.08	486.94	(3,471.50)	355,083.43
	3136AP3Z3	FNMA SERIES 2015-M12 F4	PFM	352,641.39	0.772	4/1/2020	AA+	9/10/2015	9/30/2015	352,514.46	0.54	264.72	550.17	353,064.63
									1,295,100.83	0.79	1,415.70	(5,349.70)	1,296,668.25	
CERTIFICATE OF DEPOSIT														
	15606JY99	CANADIAN IMPERIAL BANK NY YCD	PFM	800,000.00	1.010	4/6/2017	A-1	4/6/2015	4/10/2015	800,000.00	1.01	1,234.44	71.20	800,071.20
	21684BXH2	RABOBANK NEDERLAND NV NY CD	PFM	1,000,000.00	1.070	4/21/2017	A-1	4/22/2015	4/27/2015	1,000,000.00	1.07	1,188.89	384.00	1,000,384.00
	05574BRW5	BMO HARRIS BANK NA CD	PFM	800,000.00	1.000	4/24/2017	A-1	10/22/2015	10/23/2015	800,000.00	1.01	9,000.00	912.80	800,912.80

SACRAMENTO SUBURBAN WATER DISTRICT  
INVESTMENTS OUTSTANDING - OPERATING FUND

Detail of Securities Held:

MONTH END: November 30, 2016

SECURITY TYPE	CUSIP	DESCRIPTION	PAR	COUPON	MATURITY DATE	DATE RATING	S&P	TRADE DATE	SETTLE DATE	ORIGINAL COST	YTM AT COST	ACCRUED INTEREST	MARK - TO-MARKET	MARKET VALUE
	65558LFA5	NORDEA BANK FINLAND NY CD	800,000.00	1.150	5/26/2017	5/27/2015	AA-	5/27/2015	5/29/2015	800,000.00	1.15	127.78	472.80	800,472.80
	89113ESN7	NORDEA BANK FINLAND NY CD	825,000.00	1.240	6/16/2017	6/16/2015	AA-	6/16/2015	6/19/2015	825,000.00	1.25	4,660.33	557.70	825,557.70
	86958DH54	SSVENSKA HANDELSBANKEN NY FLT CD	750,000.00	0.832	8/24/2017	11/20/2015	A-1+	11/20/2015	11/24/2015	750,000.00	0.84	198.43	922.50	750,922.50
	06417GAS7	BANK OF NOVA SCOTIA HOUSTON CD	750,000.00	1.560	11/6/2017	11/6/2015	A-1	11/6/2015	11/9/2015	750,000.00	1.55	812.50	810.00	750,810.00
	83050FBG5	SKANDINAVISKA ENSKILDA BANKEN NY CD	750,000.00	1.480	11/16/2017	11/16/2015	A-1	11/16/2015	11/17/2015	750,000.00	1.48	462.50	(1,016.25)	748,983.75
	40428AR41	HSBC BANK USA NA FLOATING CD	750,000.00	0.954	11/17/2017	11/17/2015	A-1+	11/17/2015	11/18/2015	750,000.00	0.97	436.40	1,155.00	751,155.00
	78009NZZ2	ROYAL BANK OF CANADA NY CD	750,000.00	1.700	3/9/2018	3/11/2016	AA-	3/11/2016	3/15/2016	750,000.00	1.69	2,904.17	1,065.00	751,065.00
			7,975,000.00							7,975,000.00	1.19	21,025.44	5,324.75	7,980,324.75
ASSET-BACKED SECURITY														
	43813NAC0	HONDA ABS 2015-2 A3	275,551.99	1.040	2/21/2019	5/13/2015	AAA	5/13/2015	5/20/2015	275,509.69	1.05	79.60	(105.23)	275,404.46
	89237CAD5	TOYOTA ABS 2015-B A3	385,000.00	1.270	5/15/2019	6/10/2015	AAA	6/10/2015	6/17/2015	384,979.17	1.27	217.31	245.94	385,225.11
	14314EAB7	CARMAX ABS 2016-3 A2 (EX-CALLABLE)	325,000.00	1.170	8/15/2019	7/14/2016	AAA	7/14/2016	7/20/2016	324,975.48	1.18	169.00	(175.53)	324,799.95
	654771JAC4	NISSAN AUTO RECEIVABLE OWNER 2015-A	267,774.33	1.050	10/15/2019	4/7/2015	NR	4/7/2015	4/14/2015	267,718.04	1.06	124.96	(211.83)	267,506.21
	34530VAD1	FORDO 2015-B A3	200,000.00	1.160	11/15/2019	5/19/2015	NR	5/19/2015	5/26/2015	199,981.50	1.16	103.11	(11.08)	199,970.42
	6547WAD0	NISSAN ABS 2015-B A3	195,000.00	1.340	3/16/2020	7/15/2015	NR	7/15/2015	7/22/2015	194,984.50	1.34	116.13	185.01	195,169.51
	47788NAC2	JOHN DEERE ABS 2016-B A3	80,000.00	1.250	6/15/2020	7/19/2016	NR	7/19/2016	7/27/2016	79,993.63	1.25	44.44	(248.53)	79,745.10
	02007LAC6	ALLY ABS 2016-3 A3	130,000.00	1.440	3/16/2020	7/15/2015	NR	7/15/2015	7/22/2015	129,987.38	1.44	83.20	177.79	130,165.17
	44930UAD8	HYUNDAI ABS 2016-A A3	70,000.00	1.560	9/15/2020	3/22/2016	AAA	3/22/2016	3/30/2016	69,986.42	1.57	48.53	205.63	70,192.05
	05522RCU0	BANK OF AMER CREDIT CARD TR 2015-A2	280,000.00	1.360	9/15/2020	10/28/2015	AAA	10/28/2015	10/29/2015	280,404.69	1.30	169.24	(194.77)	280,209.92
	34532EAD7	FORD ABS 2016-B A3	85,000.00	1.330	10/15/2020	NR	4/19/2016	4/26/2016	84,991.94	1.33	50.24	(91.08)	84,900.86	
	44891EAC3	HYUNDAI AUTO RECVBL TRUST	195,000.00	1.290	4/15/2021	9/14/2016	AAA	9/14/2016	9/21/2016	194,975.75	1.30	111.80	(1,089.27)	193,884.48
			2,488,326.32							2,488,484.19	1.23	1,317.56	-1,312.95	2,487,171.24
US TSY BOND/NOTE														
	912828M72	US TREASURY NOTES	760,000.00	0.875	11/30/2017	10/19/2016	AA+	10/19/2016	10/24/2016	761,335.94	0.71	18.27	(1,454.50)	759,881.44
	912828A34	US TREASURY NOTES	235,000.00	1.250	11/30/2018	6/2/2014	AA+	6/2/2014	6/3/2014	233,356.84	1.41	8.07	2,202.17	235,569.01
	912828A75	US TREASURY NOTES	175,000.00	1.500	12/31/2018	12/29/2014	AA+	12/29/2014	12/31/2014	174,829.10	1.53	1,098.51	1,442.45	176,271.55
	912828W10	US TREASURY NOTES	405,000.00	1.500	5/31/2019	11/15/2016	AA+	11/15/2016	11/24/2016	409,429.69	1.06	16.69	(2,088.38)	407,341.31
	912828UQ1	US TREASURY NOTES	275,000.00	1.250	9/2/2020	9/5/2015	AA+	9/5/2015	9/3/2015	272,411.13	1.47	873.62	580.00	272,991.13
	912828UQ1	US TREASURY NOTES	275,000.00	1.250	9/2/2020	10/8/2015	AA+	10/8/2015	10/9/2015	274,226.56	1.32	873.62	(1,235.43)	272,991.13
	912828J84	US TREASURY NOTES	100,000.00	1.375	3/31/2020	6/22/2016	AA+	6/22/2016	6/27/2016	101,226.56	1.04	234.20	(1,679.66)	99,546.90
	912828J84	US TREASURY NOTES	140,000.00	1.375	3/31/2020	6/22/2016	AA+	6/22/2016	6/27/2016	141,782.81	1.03	327.88	(2,417.15)	139,365.66
	912828J84	US TREASURY NOTES	309,000.00	1.375	3/31/2020	6/23/2016	AA+	6/23/2016	6/28/2016	312,512.46	1.07	723.69	(4,912.54)	307,599.92
	912828V22	US TREASURY NOTES	650,000.00	2.000	7/31/2020	12/1/2015	AA+	12/1/2015	12/4/2015	662,263.67	1.58	4,345.11	(3,427.57)	658,836.10
	912828V99	US TREASURY NOTES	675,000.00	2.125	8/5/2020	12/28/2015	AA+	12/28/2015	12/30/2015	686,680.66	1.74	3,643.37	0.22	686,680.88
	912828WC0	US TREASURY NOTES	1,000,000.00	1.750	10/31/2020	2/1/2016	AA+	2/1/2016	2/3/2016	1,018,515.63	1.35	1,498.62	(15,546.63)	1,002,969.00
	912828A42	US TREASURY NOTES	250,000.00	2.000	11/30/2020	3/2/2016	AA+	3/2/2016	3/4/2016	257,138.67	1.35	13.74	(4,316.42)	252,822.25
	912828A83	US TREASURY NOTES	625,000.00	2.375	12/31/2020	3/30/2016	AA+	3/30/2016	3/31/2016	656,396.48	1.28	6,211.79	(15,283.35)	641,113.13
	912828B90	US TREASURY NOTES	625,000.00	2.000	2/28/2021	7/6/2016	AA+	7/6/2016	7/8/2016	655,566.41	0.92	3,176.80	(24,340.78)	631,225.63
	912828W66	US TREASURY NOTES	675,000.00	2.000	5/31/2021	9/1/2016	AA+	9/1/2016	9/2/2016	699,257.81	1.22	37.09	(18,720.78)	680,537.03
	912828D72	US TREASURY NOTES	550,000.00	2.000	8/31/2021	10/5/2016	AA+	10/5/2016	10/5/2016	570,646.48	1.21	2,795.58	(17,402.58)	553,243.90
			7,724,000.00							7,887,376.90	1.25	25,898.65	(108,599.93)	7,778,976.97
TOTAL INVESTMENT PORTFOLIO														
			35,537,427.15							35,728,263.39	1.36	110,616.68	-184,139.30	35,544,126.09
CASH EQUIVALENTS														
US TSY MONEY MKT														
	431114505	US TREASURY MONEY MARKET					U.N. BANK			190,679.17	0.00	-	-	190,679.17
	9034005	LOCAL AGENCY INVESTMENT FUND					STATE POO			1,154,500.98	0.63	1,491.62	16.52	1,154,517.50
										37,073,445.54		112,108.30	-184,122.78	36,889,322.76
TOTAL CASH EQUIVALENTS														

**Investment Activity  
November 2016**



**Managed Account Security Transactions & Interest**

For the Month Ending November 30, 2016

**SACRAMENTO SUBURBAN WATER DISTRICT - 76850100**

Transaction Type	Trade	Settle	Security Description	CUSIP	Par	Principal Proceeds	Accrued Interest	Total	Realized G/L Cost	Realized G/L Amort Cost	Sale Method
<b>BUY</b>											
	11/10/16	11/14/16	US TREASURY NOTES DTD 06/02/2014 1.500% 05/31/2019	912828WL0	405,000.00	(409,429.69)	(2,771.93)	(412,201.62)			
<b>Transaction Type Sub-Total</b>					<b>405,000.00</b>	<b>(409,429.69)</b>	<b>(2,771.93)</b>	<b>(412,201.62)</b>			
<b>INTEREST</b>											
	11/01/16	11/01/16	MONEY MARKET FUND	MONEY0002	0.00	0.00	1.34	1.34			
	11/01/16	11/25/16	FNMA SERIES 2015-M3 FA DTD 02/01/2015 0.777% 06/01/2018	3136AMMCO	121,690.06	0.00	78.78	78.78			
	11/01/16	11/25/16	FNMA SERIES 2015-M12 FA DTD 09/01/2015 0.901% 04/01/2020	3136AP3Z3	367,880.01	0.00	276.16	276.16			
	11/01/16	11/25/16	FANNIE MAE SERIES 2015-M13 ASQ2 DTD 10/01/2015 1.646% 09/01/2019	3136AODQ0	355,000.00	0.00	486.94	486.94			
	11/01/16	11/25/16	FNMA SERIES 2015-M7 ASQ2 DTD 04/01/2015 1.550% 04/01/2018	3136ANJY4	185,000.00	0.00	238.96	238.96			
	11/01/16	11/25/16	FNMA SERIES 2015-M15 ASQ2 DTD 11/01/2015 1.898% 01/01/2019	3136AOSW1	170,000.00	0.00	268.89	268.89			
	11/01/16	11/25/16	FNMA SERIES M4 FA DTD 03/01/2015 0.767% 09/01/2018	3136AMTM1	111,025.45	0.00	70.92	70.92			
	11/03/16	11/03/16	APPLE INC GLOBAL NOTES DTD 05/03/2013 1.000% 05/03/2018	037833AJ9	475,000.00	0.00	2,375.00	2,375.00			
	11/05/16	11/05/16	AMERICAN EXPRESS CREDIT CORP NOTES DTD 05/05/2016 2.250% 05/05/2021	0258M0EB1	225,000.00	0.00	2,531.25	2,531.25			
	11/06/16	11/06/16	BANK OF NOVA SCOTIA HOUSTON YCD DTD 11/09/2015 1.560% 11/06/2017	06417GAS7	750,000.00	0.00	5,850.00	5,850.00			
	11/10/16	11/10/16	BRANCH BANKING & TRUST CORP NOTE DTD 05/10/2016 2.050% 05/10/2021	05531FAV5	200,000.00	0.00	2,050.00	2,050.00			
	11/13/16	11/13/16	INTER-AMERICAN DEVELOPMENT BANK DTD 04/12/2016 1.000% 05/13/2019	458182DX7	525,000.00	0.00	3,076.50	3,076.50			
	11/15/16	11/15/16	CARMAX ABS 2016-3 A2 DTD 07/20/2016 1.170% 08/15/2019	14314EAB7	325,000.00	0.00	316.88	316.88			
	11/15/16	11/15/16	TOYOTA ABS 2015-B A3 DTD 06/17/2015 1.270% 05/15/2019	89237CAD3	385,000.00	0.00	407.46	407.46			





**Managed Account Security Transactions & Interest**

For the Month Ending **November 30, 2016**

**SACRAMENTO SUBURBAN WATER DISTRICT - 76850100**

Transaction Type	Trade	Settle	Security Description	CUSIP	Par	Principal Proceeds	Accrued Interest	Total	Realized G/L Cost	Realized G/L Amort Cost	Sale Method
<b>INTEREST</b>											
	11/15/16	11/15/16	UNIV OF CAL TXBL REV BONDS DTD 10/02/2013 2.054% 05/15/2018	91412GSZ9	695,000.00	0.00	7,137.65	7,137.65			
	11/15/16	11/15/16	HYUNDAI ABS 2016-A A3 DTD 03/30/2016 1.560% 09/15/2020	44930UAD8	70,000.00	0.00	91.00	91.00			
	11/15/16	11/15/16	BANK OF AMER CREDIT CARD TR 2015-A2 DTD 04/29/2015 1.360% 09/15/2020	05522RCU0	280,000.00	0.00	317.33	317.33			
	11/15/16	11/15/16	NISSAN ABS 2015-B A3 DTD 07/22/2015 1.340% 03/15/2020	65475WAD0	195,000.00	0.00	217.75	217.75			
	11/15/16	11/15/16	FORD ABS 2015-B A3 DTD 05/26/2015 1.160% 11/15/2019	34530VAD1	200,000.00	0.00	193.33	193.33			
	11/15/16	11/15/16	HYUNDAI AUTO RECEIVABLES TRUST DTD 09/21/2016 1.290% 04/15/2021	44891EAC3	195,000.00	0.00	209.63	209.63			
	11/15/16	11/15/16	FORD ABS 2016-B A3 DTD 04/26/2016 1.330% 10/15/2020	34532EAD7	85,000.00	0.00	94.21	94.21			
	11/15/16	11/15/16	NISSAN ABS 2015-A A3 DTD 04/14/2015 1.050% 10/15/2019	65477UAC4	285,633.02	0.00	249.93	249.93			
	11/15/16	11/15/16	ALLY ABS 2016-3 A3 DTD 05/31/2016 1.440% 08/15/2020	02007LAC6	130,000.00	0.00	156.00	156.00			
	11/15/16	11/15/16	JOHN DEERE ABS 2016-B A3 DTD 07/27/2016 1.250% 06/15/2020	47788NAC2	80,000.00	0.00	83.33	83.33			
	11/16/16	11/16/16	SKANDINAVISKA ENSKILDA BANKEN NY CD DTD 11/17/2015 1.480% 11/16/2017	83050FBG5	750,000.00	0.00	11,254.17	11,254.17			
	11/17/16	11/17/16	HSBC BANK USA NA FLOATING CERT DEPOS DTD 11/18/2015 1.496% 11/17/2017	40428AR41	750,000.00	0.00	2,672.04	2,672.04			
	11/19/16	11/19/16	STATE STREET CORP NOTES DTD 05/19/2016 1.950% 05/19/2021	857477AV5	110,000.00	0.00	1,072.50	1,072.50			
	11/21/16	11/21/16	HONDA ABS 2015-2 A3 DTD 05/20/2015 1.040% 02/21/2019	43813NAC0	285,000.00	0.00	247.00	247.00			
	11/22/16	11/22/16	BANK OF NEW YORK MELLON CORP (CALLABLE) DTD 05/29/2015 1.600% 05/22/2018	06406HDB2	400,000.00	0.00	3,200.00	3,200.00			





**Managed Account Security Transactions & Interest**

For the Month Ending **November 30, 2016**

**SACRAMENTO SUBURBAN WATER DISTRICT - 76850100**

Transaction Type	Trade	Settle	Security Description	CUSIP	Par	Principal Proceeds	Accrued Interest	Total	Realized G/L Cost	Realized G/L Amort Cost	Sale Method
<b>INTEREST</b>											
	11/25/16	11/25/16	SVENSKA HANDELSBANKEN NY FLT CERT DEPOS DTD 11/24/2015 1.375% 08/24/2017	86958DH54	750,000.00	0.00	2,471.17	2,471.17			
	11/26/16	11/26/16	NORDEA BANK FINLAND NY CD DTD 05/29/2015 1.150% 05/26/2017	65558LFA5	8,000,000.00	0.00	4,753.33	4,753.33			
	11/27/16	11/27/16	FANNIE MAE GLOBAL NOTES DTD 10/01/2013 1.625% 11/27/2018	3135G0YT4	650,000.00	0.00	5,281.25	5,281.25			
	11/27/16	11/27/16	FANNIE MAE GLOBAL NOTES DTD 10/01/2013 1.625% 11/27/2018	3135G0YT4	260,000.00	0.00	2,112.50	2,112.50			
	11/30/16	11/30/16	US TREASURY NOTES DTD 06/02/2014 2.000% 05/31/2021	912828WN6	675,000.00	0.00	6,750.00	6,750.00			
	11/30/16	11/30/16	US TREASURY NOTES DTD 11/30/2015 0.875% 11/30/2017	912828M72	760,000.00	0.00	3,325.00	3,325.00			
	11/30/16	11/30/16	US TREASURY NOTES DTD 06/02/2014 1.500% 05/31/2019	912828WLO	405,000.00	0.00	3,037.50	3,037.50			
	11/30/16	11/30/16	US TREASURY NOTES DTD 12/02/2013 1.250% 11/30/2018	912828A34	235,000.00	0.00	1,468.75	1,468.75			
	11/30/16	11/30/16	US TREASURY NOTE DTD 12/02/2013 2.000% 11/30/2020	912828A42	250,000.00	0.00	2,500.00	2,500.00			
<b>Transaction Type Sub-Total</b>					<b>20,691,228.54</b>	<b>0.00</b>	<b>76,924.45</b>	<b>76,924.45</b>			
<b>PAYDOWNS</b>											
	11/01/16	11/25/16	FNMA SERIES M4 FA DTD 03/01/2015 0.767% 09/01/2018	3136AMTM1	108.19	108.19	0.00	108.19	0.03	0.00	
	11/01/16	11/25/16	FNMA SERIES 2015-M12 FA DTD 09/01/2015 0.901% 04/01/2020	3136AP3Z3	15,238.62	15,238.62	0.00	15,238.62	5.49	0.00	
	11/01/16	11/25/16	FNMA SERIES 2015-M3 FA DTD 02/01/2015 0.777% 06/01/2018	3136AMMCO	147.88	147.88	0.00	147.88	0.04	0.00	
	11/15/16	11/15/16	NISSAN ABS 2015-A A3 DTD 04/14/2015 1.050% 10/15/2019	65477UAC4	17,858.69	17,858.69	0.00	17,858.69	3.75	0.00	
	11/21/16	11/21/16	HONDA ABS 2015-2 A3 DTD 05/20/2015 1.040% 02/21/2019	43813NACO	9,448.01	9,448.01	0.00	9,448.01	1.45	0.00	
<b>Transaction Type Sub-Total</b>					<b>42,801.39</b>	<b>42,801.39</b>	<b>0.00</b>	<b>42,801.39</b>	<b>10.76</b>	<b>0.00</b>	







### Managed Account Security Transactions & Interest

For the Month Ending **November 30, 2016**

SACRAMENTO SUBURBAN WATER DISTRICT - 76850100

Transaction Type		Security Description	CUSIP	Par	Principal Proceeds	Accrued Interest	Total	Realized G/L Cost	Realized G/L Amort Cost	Sale Method
Trade	Settle									
<b>SELL</b>										
11/10/16	11/14/16	FREDDIE MAC NOTES DTD 04/16/2012 1.750% 05/30/2019	3137EADG1	400,000.00	406,808.00	3,188.89	409,996.89	2,264.00	4,196.85	SPEC LOT
<b>Transaction Type Sub-Total</b>				<b>400,000.00</b>	<b>406,808.00</b>	<b>3,188.89</b>	<b>409,996.89</b>	<b>2,264.00</b>	<b>4,196.85</b>	
<b>Managed Account Sub-Total</b>					<b>40,179.70</b>	<b>77,341.41</b>	<b>117,521.11</b>	<b>2,274.76</b>	<b>4,196.85</b>	
<b>Total Security Transactions</b>					<b>\$40,179.70</b>	<b>\$77,341.41</b>	<b>\$117,521.11</b>	<b>\$2,274.76</b>	<b>\$4,196.85</b>	

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**Cash Expenditures  
November 2016**

**Sacramento Suburban Water District  
Cash Expenditures  
November-16**

<u>Type</u>	<u>Payee</u>	<u># Inv</u>	<u>Purpose</u>	<u>Amount</u>
<b>CIP EXPENSES</b>				
	Affinity Engineering	7	CIP Project Engineering Services	\$ 44,175.00
	Area West Engineers	2	Engineering & Consulting CIP Services	37,633.75
	Clyde G Steagall, Inc.	1	Park Estates Construction	89,703.88
	Coughran Mechanical	1	Pedestal for Natural Gas Engine	21,899.40
	County of Sacramento Public Works	9	Inspection Fees	13,395.72
	DCM Group	1	Labor Compliance/Rutland	2,048.24
	Domenichelli & Associates	2	Edison Meadows Engineering Services	20,380.00
	Doug Veerkamp Engineering	1	Main Replacement Projects 2016	433,393.22
	ERC Contracting	2	Location Verification Services	18,250.00
	Flowline	2	Meter Installation Project	339,382.00
	GM Construction	1	Drayton Heights Main Replacement	181,358.40
	Loewen Pump Maintenance	2	Well 59A Well Rehabilitation	13,170.00
	Luhdorff & Scalmanini	2	Palm Well N6A/ El Prado Estates Engineering	16,002.85
	North Highlands Park & Rec	1	Property Purchase	6,000.00
	Prodigy Electric	2	Well 59A Electrical	8,160.00
	River City Painting	3	Well Site Painting	25,000.00
	Roadrunner Drilling	1	Retention Release	9,628.50
	S E Ahlstrom Inspection	1	Inspection Services	11,200.00
	Spanda	1	Verner Well Site Repairs	16,717.00
	Tetra Tech	1	Keema Avenue Extension	297,656.96
<b>INVENTORY AND CIP SUPPLIES</b>				
	Corix	1	Inventory/CIP Supplies	550.81
	Ferguson/DBA Groeniger	15	Inventory/CIP Supplies	50,320.14
	Grainger	4	Inventory/CIP Supplies	1,021.75
	HD Supply	2	Inventory/CIP Supplies	777.89
	National Meter and Automation	2	Inventory/CIP Supplies	40,996.22
<b>OPERATING CAPITAL EXPENSES</b>				
	CDWG	2	Servers/Computer Equipment	8,257.92
	Dell Marketing	1	Servers/Computer Equipment	6,121.54
	IBM Marketing	1	Servers/Computer Equipment	2,160.00
<b>WATER COSTS</b>				
	PG&E	3	Gas Service Buildings & P.S.	614.91
	San Juan Water District	2	Purchased Water	642,697.93
	Sierra Chemical	2	Water Quality Services/Chemicals	15,950.06
	SMUD	3	Electrical Utilities	148,445.14
<b>OPERATIONS &amp; MAINTENANCE</b>				
	Abel Ramirez	1	Safety Footwear Reimbursement	230.95
	Accountemps	5	Accounting Temp	5,645.05
	Accretive Solutions	1	PCI Compliance	7,261.22
	ACWA	1	Membership/Dues 2017	21,760.00
	Advanced Integrated Pest Management	4	Pest Control Services	397.50
	Airgas USA LLC	2	Field Supplies	102.17
	All Pro Backflow	5	Backflow Services	3,191.00
	AM Conservation	2	Conservation Materials	4,486.47

Sacramento Suburban Water District  
Cash Expenditures  
November-16

<u>Type</u>	<u>Payee</u>	<u># Inv</u>	<u>Purpose</u>	<u>Amount</u>
<b>OPERATIONS &amp; MAINTENANCE</b>				
	Anamet, Inc	2	Consulting Services - Engineering	6,210.00
	Answernet/Signius	2	Monthly After Hours Answering Services	852.82
	Astral Communications	1	Misc. Tech Supplies	15.00
	AT&T Calnet3	4	Phone Service	5,128.42
	Atlas Disposal	2	Waste Disposal Services	316.83
	Atlas Fence	2	Fence Repairs	6,695.00
	AWWA	1	Standards/Publications	1,458.00
	Backflow Distributors Inc.	4	Backflow Supplies	507.14
	Bar-Hein	1	Equipment Maintenance	129.72
	Bay Alarm	1	Alarm Services	116.55
	Broadridge Mail LLC/DST	9	Customer Billing Services	14,698.91
	Brower Mechanical	3	HVAC Maintenance	1,175.00
	Bryce Consulting	3	HR Services	640.00
	BAK Analytical Laboratory	9	Lab Water Quality Services	297.00
	Bud's Tri County Tree Service	1	Tree Removal	4,735.00
	California Special Districts Association	1	Membership/Dues 2017	6,485.00
	California Chamber of Commerce	1	Membership/Dues 2017	829.00
	Capital Rubber Company	1	Storeroom Supplies	1,035.09
	Capitol Elevator Company	2	Monthly Elevator Inspections	221.00
	Cell Energy	1	Equipment Batteries	450.97
	CINTAS	15	Uniforms and Janitorial Supplies - Walnut	3,720.41
	Citigroup Global Markets	1	Remarketing Fees	13,196.72
	Citrus Heights Saw and Mower	1	Small Equipment Repair	343.44
	City of Sacramento	2	Utilities	25.54
	Clear Vision Window Cleaning	1	Building Maintenance	225.00
	Comcast	1	Cable	27.37
	Compasscom	1	Annual Maint. and License Renewal Cityworks	4,488.00
	Consolidated Communications	1	Telephone Services - Antelope	412.52
	Cotton Shoppe	1	Uniform Supplies	99.98
	County of Sacramento Environmental Mgt	17	Annual Hazardous Permit Renewals	8,443.00
	County of Sac Utilities	4	Monthly Utilities	841.28
	Culligan	1	Water System - Walnut	69.50
	Customer Rebates	7	Rebate Programs	2,260.00
	Customer Refunds	92	Customer Refunds	4,509.45
	D & S Asphalt	1	Hydrant Permit Deposit Refund	2,296.70
	Dan York	2	Misc Mileage and Meeting Expense	388.84
	Databank IMX	1	Onbase Mobile Access Maintenance	6,690.84
	Direct TV	1	Cable - Walnut	5.00
	DST Output	2	Billing Postage	2,546.03
	Eaton Pumps Sales and Service	1	Well 40A Motor Rewound Services	2,325.00
	Emigh Hardware	7	Field Supplies	124.84
	Employee Relations Network	1	HR Services	431.00
	Employment Development	1	Unemployment Claim	310.00
	Erik Flaa	1	Safety Footwear Reimbursement	225.95
	Fleetcrew Maintenance	1	Diesel Equipment Testing	1,639.80
	Fleet Wash	2	Vehicle Maintenance	637.50
	Future Ford	2	Vehicle Maintenance	249.72
	Geospace Technologies	1	Nicor Connectors	2,625.00

Sacramento Suburban Water District  
Cash Expenditures  
November-16

<u>Type</u>	<u>Payee</u>	<u># Inv</u>	<u>Purpose</u>	<u>Amount</u>
<b>OPERATIONS &amp; MAINTENANCE</b>				
	GM Construction	5	System Repairs	34,090.64
	Graybar	2	Production Supplies	257.66
	Greg Bundesen	1	Conference Reimbursement	114.68
	Griffin's Janitorial	1	Janitorial Services	3,408.20
	H2H Properties	2	Lease Space	2,394.00
	Harrington Plastics	1	Water Quality Supplies	4,506.13
	Harrold Ford	5	Vehicle Maintenance	944.56
	Hazard Management Services	1	Lab Fees - Distribution	1,180.00
	Hydrant Permit Deposit Refunds	3	Refunds	6,375.30
	Iron Mountain Offsite Data Protection	1	System Backup Protection Storage	463.64
	Joe Crockett	1	Safety Footwear Reimbursement	192.00
	John F Mahaney Company	1	Field Supplies	600.88
	Joshua Gagnon	1	Safety Footwear Reimbursement	214.95
	Kerry Smith	1	Conference Reimbursement	282.31
	Kyle Jividen	1	Certification Reimbursement	114.92
	Les Schwab Tire Center	2	Vehicle Maintenance	2,254.99
	Lifeguard First Aid	1	First Aid Supplies	154.02
	Michael Phillips Landscape Corp	4	Landscape Maintenance Various Locations	4,280.00
	National Notary Association	1	Annual Insurance	33.00
	New Pig	1	Spill Kits	938.13
	Office Depot	15	Office Supplies	2,228.23
	One Stop Truck Shop	1	Vehicle Maintenance	5,266.90
	Paladin Private Security	1	After Hours Security	460.00
	Panatrack	1	Inventory Supplies	750.00
	PeopleReady	2	Temp Employee Services	3,036.16
	PFM Asset Management LLC	2	Investment Services	4,555.09
	Placer Waterworks	1	Operating Supplies	1,833.65
	R&S Architectural Products	1	New Rollup Door - Antelope	6,374.64
	Ramos Oil Company	1	Pump Site Supplies	1,176.31
	Rawles Engineering	4	District Main/Valve Repairs	22,945.00
	Ray Morgan	2	Printer/Copier Monthly Lease	995.30
	Regional Water Authority	3	Holiday Event, Meeting	473.75
	Rue Equipment Inc.	5	Vehicle Maintenance	488.75
	Ryan Wenker	1	Certification Reimbursement	125.00
	Sacramento Bee	2	Annual Subscription Services	951.19
	Sacramento Suburban Water District	1	Replenish Petty Cash	467.27
	SAWWA	2	Membership/Dues 2017	140.00
	Seton	1	Production Field Signage	233.06
	Shred It	1	Shredding Services	56.96
	Sonitrol	2	Alarm Services	1,494.84
	Sophos Solutions	1	Systems Maintenance	5,120.00
	State Water Resource	1	SWRCB Fees	24,408.41
	Sutter Medical Foundation	1	Preemployment Physicals	401.00
	TelData	1	Computer Cabling	3,252.84
	Thompson S & S Collision	1	Vehicle Repairs	1,054.84
	Tina Lynn Design	2	Product Design Services	489.99
	Todd Artrip	1	Conference Reimbursement	322.00
	True Point Solutions	1	Report Creation	1,200.00

Sacramento Suburban Water District  
Cash Expenditures  
November-16

<u>Type</u>	<u>Payee</u>	<u># Inv</u>	<u>Purpose</u>	<u>Amount</u>
<b>OPERATIONS &amp; MAINTENANCE</b>				
	United Parcel Service	1	Shipping	24.13
	US Bank Corporate Payment Systems	1	Calcard	9,803.79
	Vantiv Integrated Systems	1	Payment Systems	440.88
	Verizon Wireless	2	Cell Service	11,492.16
	Vicki Sprague	1	Conference Reimbursement & Safety Shoe Reimb	605.00
	Vision Technology Solutions LLC	1	Web Site Monthly Fees	243.10
	Voyager Fleet Systems	1	Fuel	6,042.14
	Waste Management	3	Garbage Service	442.30
	Water Education Foundation	1	Annual Membership/Dues	35.00
	Waterwise Consulting	1	Waterwise Audits	700.00
	Wienhoff Drug Testing	1	Drug Testing Services	835.00
<b>DEBT SERVICE EXPENSES</b>				
	Union Bank NA	1	COP Payments	9,445.79
	Wells Fargo Swap	1	COP Payments	71,762.42
	Sumitomo Mitsui Banking Corp.	1	COP Payments	21,135.24
<b>LEGAL &amp; AUDIT</b>				
	Bartkiewicz, Kronick & Shanahan	1	Legal	21,008.32
<b>PAYROLL , PENSION &amp; BENEFITS</b>				
	ADP	2	November Payroll	363,673.99
	ACWA/JPIA Insurance/EAP	1	Employee Assistance Program	141.00
	ADP	2	Payroll Processing Fees	1,899.98
	AFLAC	1	Supplemental Insurance	815.88
	Ameritas/Vision	1	Vision Insurance	1,701.72
	CIGNA - Dental Insurance	1	Dental Insurance	11,065.00
	CIGNA Healthcare	1	Life/LTD	3,408.93
	PERS Health	1	PERS Health Insurance	85,389.90
	PERS Long Term Care	1	Long Term Care - Di Pietro	2,657.04
	PERS Pension	3	November Contributions	66,218.01
<b>BANK CHARGES</b>				
	Brinks	2	Courier Fees	545.57
	Westamerica Card Processing Fees	1	Monthly Card Processing Fee	4,693.28
	Wells Fargo Statement & Notices	1	Monthly Statement	7,991.61
<b>EMPLOYEE RETENTION/MORALE FUND</b>				
<b>Total Cash Expenditures</b>				\$ 3,534,616.84

**Credit Card Expenditures  
November 2016**

Sacramento Suburban Water District  
 US Bank Purchasing Card Program  
 CalCard Expenditures  
 November-16

Type	Vendor	Purpose	Cost	
<b>CIP/OCB Expenses</b>				
<b>OPERATIONS &amp; MAINTENANCE</b>				
	Pep Boys	Vehicle Supplies	27.38	12-54004
	Amazon.com	Cell Phone Case	18.42	12-53503
	Universal Mercantile	Badge Holder Clips	164.70	12-52101
	Pep Boys	Vehicle Supplies	44.25	12-54005
	Pep Boys	Vehicle Supplies	(1.08)	12-54005
	Jim Dobbas Inc	Weight Trailers	36.00	12-54003
	Target	Uniform Supplies	7.77	12-52101
	Southwest	Direct Flight Change Fee	91.99	01-55001
	Office Depot	Office Supplies	247.04	04-52108
	ACWA	Region 4 Walking Tour	40.00	02-55002
	Sheraton Grand Hotel	ACWA Spring Conference Acommodations	605.19	02-55001
	Sheraton Grand Hotel	ACWA Spring Conference Acommodations	31.78	02-55001
	Taget	Stopwatch	9.71	06-52101
	Safety Center	Employee Training	125.00	07-51406
	South Point Hotel	Watersmart Conference Acommodations	100.80	13-55001
	Fred Pryor Seminars	Employee Training	179.00	07-51407
	Lowes	Storeroom Supplies	192.59	05-52101
	The Home Depot	Mulch	7.93	07-52101
	Four Points by Sheraton	Badger Conference Acommodations	350.04	08-55001
	The Home Depot	Lumber	11.83	07-52101
	Smart & Final	Kitchen Supplies	197.46	05-52108
	Harbor Freight Tools	Misc Supplies	51.70	05-52101
	O'Reilly Auto Parts	Vehicle Supplies	7.96	05-52101
	O'Reilly Auto Parts	Vehicle Supplies	19.64	06-52101
	Fred Pryor Seminars	Employee Training	49.00	13-51407
	Fred Pryor Seminars	Employee Training	99.00	13-51407
	Ballistic	Phone Case Sample	49.99	18-52101
	Flashpoint Studios	Messages On Hold	79.00	04-54506
	Government Finance	Employee Training	135.00	03-51406
	Cellular Outfitter	Phone Case Sample	43.60	18-52101
	Dell Inc	Maintenance Support	385.72	18-54509
	Amazon.com	Presentation Pointer	14.99	18-52101
	Global Knowledge	Employee Training	3,257.42	18-51406
	Global Knowledge	Employee Training	2,365.08	16-51406
	Mini Turtle	Phone Case Sample	8.99	18-52101
	Raley's	Evaluation Training	29.87	17-56000
	Hannibals Catering	Evaluation Training	202.19	17-56000
	Sheraton Grand Hotel	CSDA Conference Acommodations	412.53	17-55001
<b>Employee Morale Fund</b>				
	Gala Gifts	Cards	4.31	02-51403
	Humbolt State University	Donation in Memory	100.00	02-51403
			<u>9,803.79</u>	



**Directors Compensation and Expense Accounting –  
Through November 2016**



Sacramento Suburban Water District  
Board of Directors Meetings Attended (1)  
Pay Rate per Diem is \$100.00  
November 2016

Director Locke:  
(Meetings Attended Reported Verbally)

Director Schild:  
11/01/2016 SSWD Finance & Audit Committee Meeting  
11/10/2016 Regional Water Authority Meeting  
11/21/2016 SSWD Board Meeting Closed Session

Director Wichert:  
(Meetings Attended Reported Verbally)

Director Gayle:  
11/21/2016 SSWD Regular Board Meeting

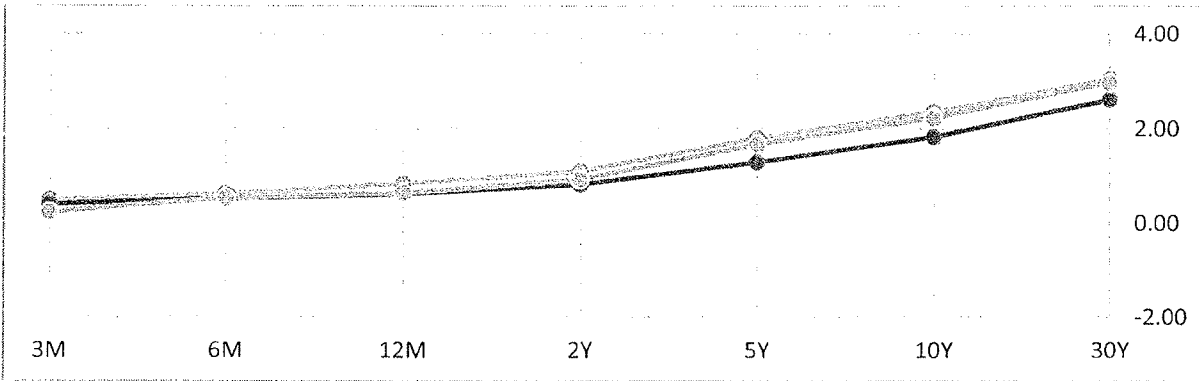
Director Thomas:  
11/09/2016 San Juan Water Board Meeting  
11/14/2016 Meeting with Dan York  
11/16/2016 Aero Jet CAG  
11/18/2016 Meeting with Dan/Rob

(1) Meetings attended during the current month as reported by individual directors.  
This report meets the reporting requirements of Government Code section 53065.5. This information will be included with the agenda materials for each regular monthly Board of Directors meeting.

**Market Report Yields -  
January 2010 through November 2016**

**Sacramento Suburban Water District**  
**United States Treasury and Federal Reserve Yields/Rates**  
**As of: December 7, 2016**  
**(Source: Bloomberg Market Data)**

## US Treasury Yields



NAME	COUPON	PRICE	YIELD	1 MONTH	1 YEAR	TIME (EST)
3 Month	0.00	0.44	0.49%	+9	+26	12:33 PM
6 Month	0.00	0.59	0.62%	+10	+9	12:33 PM
12 Month	0.00	0.77	0.83%	+22	+19	12:33 PM
2 Year	1.00	99.80	1.10%	+28	+17	12:34 PM
5 Year	1.75	99.74	1.80%	+51	+13	12:34 PM
10 Year	2.00	96.89	2.35%	+52	+12	12:33 PM
30 Year	2.88	96.86	3.04%	+43	+7	12:34 PM

Change shown in basis points

## Federal Reserve Rates

Rate	Current	1 Year Prior	Rate	Current	1 Year Prior
Fed Funds Rate	0.41	0.13	Fed Reserve Target	0.50	0.25
Prime Rate	3.50	3.25			

**Sacramento Suburban Water District**  
**District Maturities Compared to Average Market Maturities**  
**(Market is Merrill-Lynch 0-5 Year U.S. Treasury Index)**

<u>11/30/2016</u>	<u>SSWD Holdings</u>	<u>ML 0-5 Year UST Index</u>
Under 6 Months	0.0%	13.9%
6 - 12 Months	9.6%	11.7%
1 - 2 Years	13.5%	23.8%
2 - 3 Years	21.0%	20.3%
3 - 4 Years	22.8%	15.5%
4 - 5 Years	18.2%	14.8%
5 Years and Over	15.0%	0.0%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>

**Sacramento Suburban Water District**  
**District Monthly Yield and Return Compared to Average Market**  
**(Market is Merrill-Lynch 0-5 Year U.S. Treasury Index)**

	Unannualized Monthly Returns		Yield to Maturity at Cost SSWD Operating Fund
	SSWD	ML 0-5 Year UST Index	
1/31/2010	0.65%	0.87%	2.41%
2/28/2010	0.27%	0.25%	2.41%
3/31/2010	-0.24%	-0.38%	2.45%
4/30/2010	0.45%	0.38%	2.36%
5/31/2010	0.47%	0.63%	2.18%
6/30/2010	0.67%	0.67%	2.17%
7/31/2010	0.51%	0.49%	2.09%
8/31/2010	0.32%	0.39%	2.06%
9/30/2010	0.24%	0.22%	1.96%
10/31/2010	0.38%	0.31%	1.95%
11/30/2010	-0.35%	-0.33%	1.84%
12/31/2010	-0.49%	-0.52%	1.84%
1/31/2011	0.22%	0.27%	1.85%
2/28/2011	-0.08%	-0.18%	1.82%
3/31/2011	-0.01%	-0.05%	1.79%
4/30/2011	0.68%	0.59%	1.79%
5/31/2011	0.47%	0.57%	1.73%
6/30/2011	-0.01%	0.03%	1.69%
7/31/2011	0.52%	0.59%	1.57%
8/31/2011	0.43%	0.62%	1.43%
9/30/2011	-0.12%	-0.11%	1.41%
10/31/2011	0.14%	0.09%	1.40%
11/30/2011	0.01%	0.12%	1.30%
12/31/2011	0.19%	0.13%	1.29%
1/31/2012	0.48%	0.25%	1.28%
2/29/2012	0.07%	-0.24%	1.19%
3/31/2012	-0.09%	-0.16%	1.19%
4/30/2012	0.26%	0.39%	1.19%
5/31/2012	0.03%	0.16%	1.18%
6/30/2012	0.06%	-0.07%	1.18%
7/31/2012	0.38%	0.33%	1.18%
8/31/2012	0.10%	0.04%	1.09%
9/30/2012	0.06%	0.01%	1.09%
10/31/2012	-0.02%	-0.10%	1.08%
11/30/2012	0.19%	0.18%	0.98%
12/31/2012	-0.03%	-0.03%	0.91%
1/31/2013	-0.03%	-0.10%	0.90%
2/28/2013	0.20%	0.19%	0.87%
3/31/2013	0.05%	0.04%	0.86%
4/30/2013	0.21%	0.19%	0.81%
5/31/2013	-0.34%	-0.41%	0.79%
6/30/2013	-0.42%	-0.32%	0.80%
7/31/2013	0.25%	0.19%	0.80%
8/31/2013	-0.30%	-0.22%	0.81%
9/30/2013	0.36%	0.41%	0.83%
10/31/2013	0.22%	0.19%	0.87%
11/30/2013	0.15%	0.09%	0.89%
12/31/2013	-0.27%	-0.37%	0.88%
1/31/2014	0.41%	0.34%	0.88%
2/28/2014	0.18%	0.12%	0.88%
3/31/2014	-0.21%	-0.24%	0.87%
4/30/2014	0.25%	0.20%	0.89%
5/31/2014	0.29%	0.32%	0.90%
6/30/2014	-0.02%	-0.08%	0.92%
7/31/2014	-0.11%	-0.17%	0.95%
8/31/2014	0.23%	0.28%	0.98%
9/30/2014	-0.14%	-0.14%	0.97%
10/31/2014	0.32%	0.39%	0.97%
11/30/2014	0.24%	0.25%	0.98%
12/31/2014	-0.19%	-0.27%	1.02%
1/31/2015	0.71%	0.81%	1.03%
2/28/2015	-0.21%	-0.40%	1.06%
3/31/2015	0.28%	0.34%	1.10%
4/30/2015	0.09%	0.03%	1.10%
5/31/2015	0.06%	0.08%	1.12%
6/30/2015	-0.13%	-0.07%	1.14%
7/31/2015	0.17%	0.15%	1.15%
8/31/2015	-0.05%	-0.01%	1.15%
9/30/2015	0.38%	0.43%	1.18%
10/31/2015	0.02%	-0.18%	1.28%
11/30/2015	-0.12%	-0.24%	1.28%
12/31/2015	-0.23%	-0.11%	1.32%
1/31/2016	0.68%	0.86%	1.32%
2/29/2016	0.14%	0.20%	1.35%
3/31/2016	0.44%	0.20%	1.35%
4/30/2016	0.08%	0.01%	1.36%
5/31/2016	-0.04%	-0.12%	1.38%
6/30/2016	0.69%	0.78%	1.38%
7/31/2016	0.05%	-0.03%	1.38%
8/31/2016	-0.17%	-0.24%	1.38%
9/30/2016	0.12%	0.14%	1.38%
10/31/2016	-0.10%	-0.14%	1.37%
11/30/2016	-0.64%	-0.72%	1.36%

**District Reserve Balances  
November 30, 2016**



**Sacramento Suburban Water District  
Reserve Fund Balance**

	<u>November 30, 2016</u>	<u>December 31, 2015</u>
Debt Service Reserve	\$ 3,535,551	\$ 3,523,427
Facilities Reimbursement	-	21,873
Emergency/Contingency	10,387,000	10,758,000
Operating	6,490,750	6,468,857
Rate Stabilization	5,630,000	5,870,000
Interest Rate Risk	-	-
Grant	1,068,000	654,000
Capital Asset	15,628,763	16,542,963
<b>TOTAL</b>	<b>\$ 42,740,064</b>	<b>\$ 43,839,120</b>

**Cash and Investments  
Per District Balance Sheet  
(Provided for Reconciliation Purposes)**

	<u>November 30, 2016</u>	<u>December 31, 2015</u>
Cash and cash equivalents	\$ 3,660,387	\$ 3,109,581
Investments	35,544,126	37,206,113
Restricted assets	3,535,551	3,523,427
<b>TOTAL</b>	<b>\$ 42,740,064</b>	<b>\$ 43,839,120</b>

## **Information Required by Bond Agreement**

Sacramento Suburban Water District  
6 - Months Debt Service Schedule  
11/30/2016

Month	Total SSWD Debt Service				Debt Service
	Principal	Interest Adjustable/Fixed/Swap	Facility Fee	Remarketing	
Dec-16	-	96,488.31	47,250.00	13,125.00	156,863.31
Jan-17	-	96,488.31	-	-	96,488.31
Feb-17	-	96,488.31	-	-	96,488.31
Mar-17	-	96,488.31	47,250.00	13,125.00	156,863.31
Apr-17	-	96,488.31	-	-	96,488.31
May-17	-	96,488.31	-	-	96,488.31

Month	Series 2012A Fixed Rate Bonds (\$23,440,000.00)				Debt Service
	Principal	Interest - Fixed 4.25%			
Dec-16	\$ -	\$ -	\$ -	\$ -	\$ -
Jan-17	-	-	-	-	-
Feb-17	-	-	-	-	-
Mar-17	-	-	-	-	-
Apr-17	-	-	-	-	-
May-17	-	-	-	-	-

Month	Series 2009A Adjustable Rate COPs (\$42,000,000.00)				Debt Service
	Principal	Interest, Adjustable 0.56%	Facility Fee 0.450%	Remarketing 0.125%	
Dec-16	\$ -	\$ 19,600.00	\$ 47,250.00	\$ 13,125.00	\$ 79,975.00
Jan-17	-	19,600.00	-	-	19,600.00
Feb-17	-	19,600.00	-	-	19,600.00
Mar-17	-	19,600.00	47,250.00	13,125.00	79,975.00
Apr-17	-	19,600.00	-	-	19,600.00
May-17	-	19,600.00	-	-	19,600.00

Month	Series 2009B Fixed Rate COPs (\$27,915,000)				Debt Service
	Principal	Interest - Fixed 5.00%			
Dec-16	\$ -	\$ -	\$ -	\$ -	\$ -
Jan-17	-	-	-	-	-
Feb-17	-	-	-	-	-
Mar-17	-	-	-	-	-
Apr-17	-	-	-	-	-
May-17	-	-	-	-	-

Month	2012 SWAP Interest, Net (\$33,000,000.00)				Debt Service
	Principal	Interest, Swap Net (3.283-0.33225-0.18)%			
Dec-16	\$ -	\$ 76,888.31	-	-	\$ 76,888.31
Jan-17	\$ -	\$ 76,888.31	-	-	\$ 76,888.31
Feb-17	\$ -	\$ 76,888.31	-	-	\$ 76,888.31
Mar-17	\$ -	\$ 76,888.31	-	-	\$ 76,888.31
Apr-17	\$ -	\$ 76,888.31	-	-	\$ 76,888.31
May-17	\$ -	\$ 76,888.31	-	-	\$ 76,888.31

**Sacramento Suburban Water District  
Schedule of Net Revenues**

	<i>As Of</i>	<i>Amended Budget</i>
	<i>Actual</i>	<i>Year-To-Date</i>
<b>REVENUES</b>	<u>11/30/2016</u>	<u>11/30/2016</u>
Water sales charges	\$17,267,903.05	\$15,633,087.00
Capital facilities charge	20,411,087.72	20,195,083.00
Facility development charges	264,209.00	458,326.00
Interest and investment income	514,798.23	623,337.00
Rental & other income	250,512.71	275,000.00
<b>TOTAL REVENUES</b>	<u><b>38,708,510.71</b></u>	<u><b>37,184,833.00</b></u>
<b>EXPENSES</b>		
Source of supply	2,178,456.35	2,164,351.63
Pumping	3,433,625.39	3,421,849.90
Transmission and distribution	3,001,049.02	3,107,134.23
Water conservation	492,204.83	535,933.86
Customer accounts	991,853.49	1,094,891.68
Administrative and general	5,600,881.72	5,988,878.65
<b>TOTAL EXPENSES</b>	<u><b>15,698,070.80</b></u>	<u><b>16,313,039.95</b></u>
 <b>NET REVENUE</b>	 <u><u><b>23,010,439.91</b></u></u>	 <u><u><b>20,871,793.05</b></u></u>



## Agenda Item: 21

**Date:** December 7, 2016

**Subject:** 2016 Leak Detection Project

**Staff Contact:** Greg Bundesen, Water Conservation Supervisor

### Discussion

In September 2016 Sacramento Suburban Water District (District) entered into an Agreement with Water Systems Optimization for its 2016 Leak Detection Project (Project). The Project was conducted in November and consisted of 61 miles (8.8% of total District distribution mains) of acoustic leak detection on various types of District distribution water mains and service lines. No significant leaks were discovered by WSO during the Project. WSO did find one small leak on the District's side of a customer service line that was repaired within 24 hours. The cause of the leak was discovered to be a defective meter gasket that was leaking at a rate of 0.25 gallons per minute (0.131 million gallons per year). WSO also noted nine (9) leaks on customer service lines past the District's point of connection. The affected customers were all notified of the situation and offered assistance in identifying the cause of the leak via a Water-Wise House Call. The District will be conducting its 2017 Leak Detection Project in March 2017 to coincide with the Environmental Protection Agencies WaterSense Fix-A-Leak Week Campaign. See Exhibit 1 for WSO's Finding and Recommendation report for the Project.

Water Systems Optimization, Inc.  
290 Division St. Suite 311  
San Francisco, CA 94103



# Sacramento Suburban Water District

*WATER DISTRIBUTION SYSTEM  
LEAK DETECTION SURVEY*

*Findings & Recommendations*

November 2016

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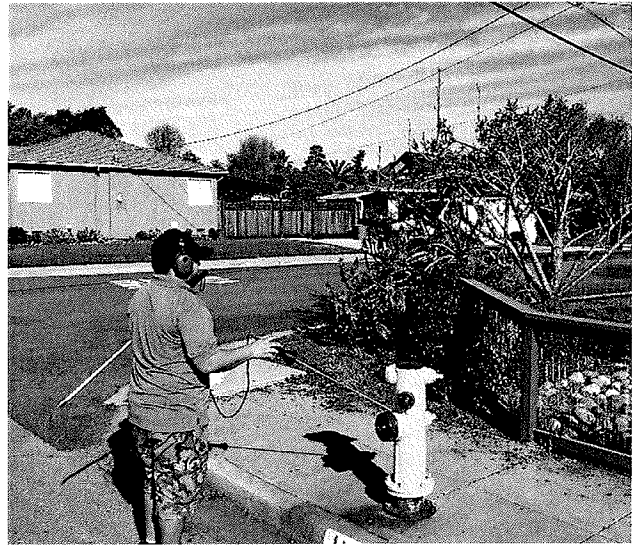
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## 1 EXECUTIVE SUMMARY

WSO performed **comprehensive leak detection for Sacramento Suburban Water District (SSWD)**. The survey consisted of **61 miles of mains**, or 8.8% of the total miles of mains in SSWD's service area, between 11/01/2016 and 11/14/2016. District staff investigated leaks identified by WSO for verification purposes before repair efforts. The findings documented in this report are based on the final determinations of leakage resulting from these joint verification efforts. Figure 1 on the following page shows a map of the leak detection survey and the leaks found categorized by type.



### 1.1 Findings

1. WSO identified one District-side leak. This leak was located within the meter pit and has an estimated flow rate of 0.25 gallons per minute (GPM). This equates to approximately 131,000 Gallons per year.
2. Nine Customer-side service leaks were located. Average customer leak rate, based off of AMI data, was estimated to be 0.26 GPM. This equates to approximately 1.23 million gallons (MG) per year.
3. A total of ten leaks (District side and customer side) were identified during the 61-mile comprehensive leak detection survey performed by WSO. This equates to a leak detection frequency of 16 leaks per 100 miles of main surveyed – three times the rate of the previous leak detection survey.
4. In order to undertake a reliable cost benefit analysis, it would require a significant larger area to be surveyed using WSO's detailed survey methodology where every service connection is sounded. The cost benefit analysis provided in section 6 should be seen as preliminary.



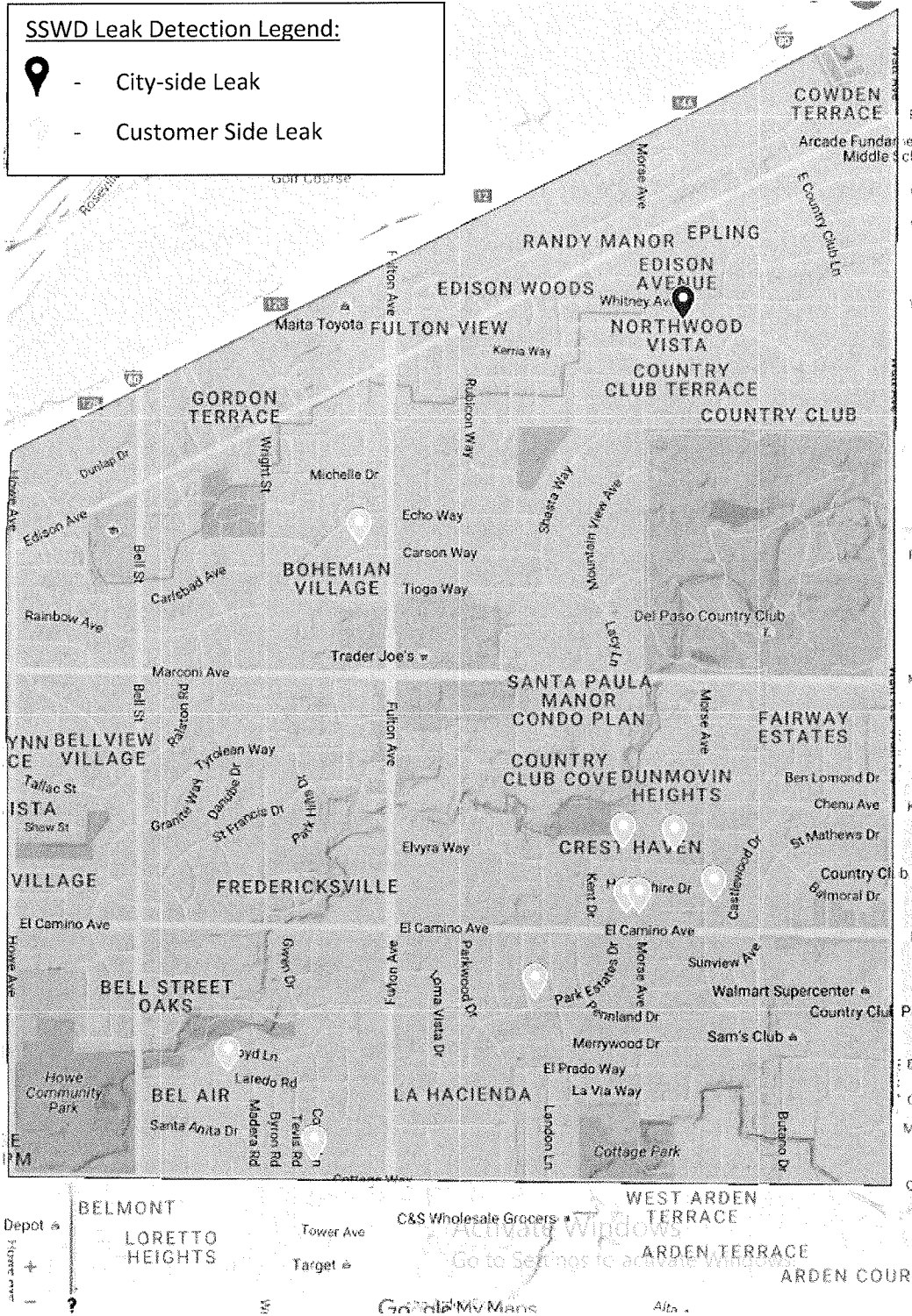


Figure 1: Survey and Leak Locations

## 2 BACKGROUND

WSO completed a comprehensive leak detection survey of Sacramento Suburban Water District (SSWD) distribution system. **WSO surveyed a total of 61 miles of mains**, between 11/01/2016 and 11/14/2016. The area surveyed was chosen by SSWD based on current leak detection schedule. Overall, the 61 miles surveyed represents 8.7% of the distribution system.

The acoustic leak detection survey is one of the most common leak detection methodologies: most simply, the process amplifies noise at various touchpoints throughout the system's infrastructure such that surveyors can identify unsurfacing leaks. Notably, there are two survey methods vary significantly in the level of detail that they provide.<sup>1</sup>

- **General Survey** - This survey method is often referred to as a "valve and hydrant survey" in the United States. The method involves listening exclusively to fire hydrants and valves on distribution system mains in order to detect leak sounds. Service connections are not sounded. Fire hydrants are often found at more or less constant distances in order to provide good coverage of most areas. In this survey mode, geophones and leak noise correlators are usually only used for pinpointing a leak. This time-saving leak detection approach does not sound all points of possible connection: as such, service connection leaks often go undetected, especially if the area consists mainly of non-metallic pipe.
- **Comprehensive Survey** - This survey method listens to all available fittings on the mains *and* service connections. Geophones are used to sound above the mains in case contact points are far apart from each other. Once a leak sound is detected, geophones and leak noise correlators can be used for pinpointing the leak. Even though this leak detection method is more time-consuming than a general survey, it is the most effective way to identify all detectable leaks in the system, including service connection leaks.



WSO's leak detection work throughout North America and research conducted for the Water Research Foundation (formerly the American Water Works Association Research Foundation) has clearly highlighted that **a comprehensive survey is necessary to detect all unreported hidden leaks in a distribution network.**<sup>2</sup>

The leak detection survey was conducted using a Fluid Conservation System (FCS) L-Mic sonic leak detection probe and a FCS ACCUCOR 3000 digital leak noise correlator. WSO made direct contact with

<sup>1</sup> Water Loss Control, Second Edition; Thornton, Sturm & Kunkel, 2008.

<sup>2</sup> Leakage Management Technologies, AWWA Research Foundation, 2007. p 60.

all accessible distribution system appurtenances in the areas surveyed, including customer meters, fire hydrants, blow-off valves and backflow preventers.

### 3 LEAK DETECTION FINDINGS PROCESS

Upon hearing a potential leak, District staff investigated the leak locations for verification purposes. The findings documented in this report are based on the final determinations resulting from these joint verification efforts. Figure 2 shows the workflow for leak detection, confirmation by the District and ultimately, leak repair for this effort.

All detected leaks were documented and leak locations were recorded using a standard leak report to guide the repair efforts. These leak reports were then provided SSWD staff for coordinating repair.

### SSWD: Leak Detection Survey Process

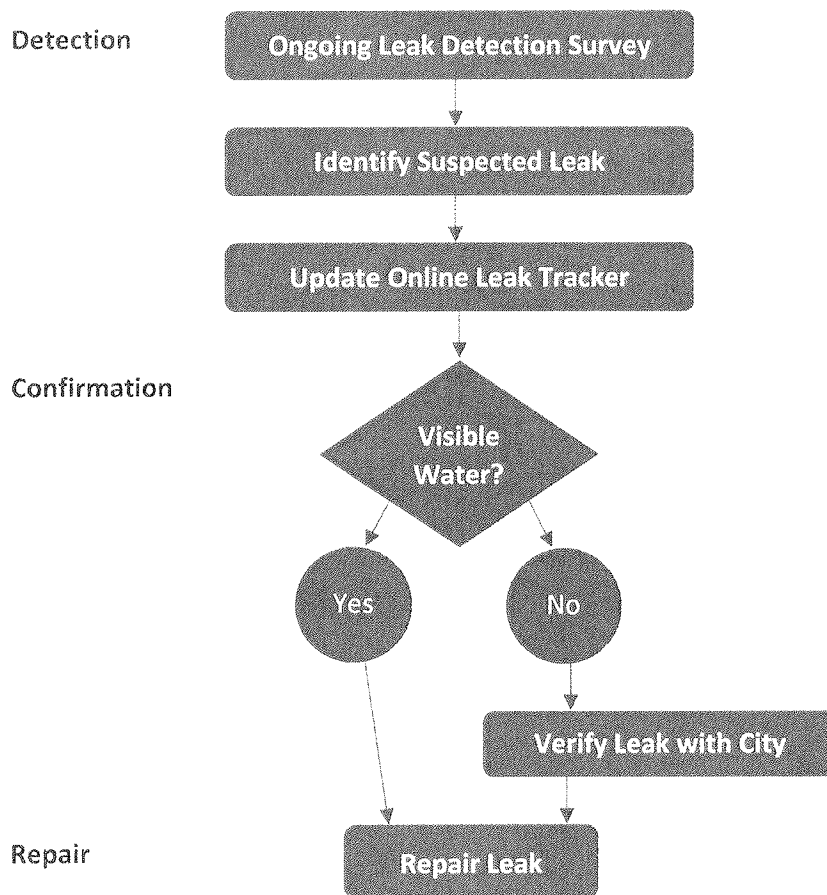


Figure 2: Workflow: Leak Detection, Confirmation, and Repair.

#### 4 LEAK FLOW RATES

Leak flow rates were estimated for all detected leaks based on either the visible appearance of the leaks or the intensity of the noise produced by non-visible leaks for distribution side leaks.

Customer side leakage rates were estimated using AMI data from suspected leak locations. Using this data, an average customer leakage rate was calculated to be 15.7 gallons per connection per hour or 0.26 gallons per minute (GPM).

#### 5 LEAKS IDENTIFIED

WSO identified **one District-side leak** (occurring within a meter box). This leak, which is detailed in Table 1, is estimated to generate **0.25 gallons per minute** (“GPM”) in leakage (Real Losses). The absence of main breaks, and the very low number of meter/service leaks found, suggests that the distribution system has relatively low levels of real losses.

Leak Type	Count	Cumulative Estimated Flow (GPM)	Volume Recovered per Year (MG)
Meter	1	0.25	0.131

Table 1: District-Side Leaks

An additional **nine Customer-side leaks** were identified. Each service connection leak is estimated to be leaking at 0.26 GPM, which corresponds to a cumulative leakage rate of 2.34 GPM. While customer leaks are not considered Real Losses within the AWWA water audit methodology—since such leaks would presumably be metered and billed for—they represent an additional form of water savings realized through the leak detection effort. These leaks are outlined in Table 2 below.

Customer Side Leaks		
Count	Estimated Flow (GPM)	Volume Recovered per Year (MG)
9	2.34	1.23

Table 2: Customer-Side Leaks

## 6 ANALYSIS

### 6.1 Leak Detection Frequency Analysis

WSO performed a comprehensive leak detection survey on 61 miles of SSWD's mains. During this survey one District-side leak and nine Customer-side leaks were identified and confirmed with District staff. This equates to approximately 16 leaks per 100 miles of mains surveyed. Table 3 compares WSO leak detection frequency to SSWD's previous 2015 leak detection survey. Results suggest that WSO's comprehensive survey increases the ability to locate leaks, especially on service connections and customer side leaks.

Survey	Miles Surveyed	Leaks Detected	# of leaks per 100 miles
Previous SSWD Leak Detection	204.5	10	4.9
WSO Leak Detection	61	10	16.4

Table 3: Comparison of Leak Detection Surveys

### 6.2 Volumetric Savings

SSWD can expect to **annually recover a best estimate of 0.131 MG per year of real losses through repairing the District-side leak detected by WSO**, as presented in Table 4. An additional 1.23 MG of savings is realized through proactive discovery of customer-side leaks.

Calculation	Category	Best Estimate
A	Recoverable Leakage (GPM)	0.25
$B = (A * 60 * 24 * 365) / 10^6$	Recoverable Leakage (MG per year)	<b>0.131</b>

Table 4: Volumetric Savings of District Side Leaks

### 6.3 Financial Savings & Cost-Effectiveness

#### 6.3.1 Marginal Cost of Water

Ongoing leakage carries a direct financial cost to SSWD, namely the cost to provide water—not to mention the costs that are more difficult to quantify such as future breaks of greater magnitude. The variable cost of water is estimated in this report as the cost to produce water, valued at \$279/MG (based on SSWD's 2015 AWWA water audit).

**As described in Table 5 the best estimate of 0.131 MG in annual recoverable District-side leakage translates to \$37 in annual savings**, assuming the costs of water noted previously and that leak flow rates remain constant. Assuming flow rates remain constant is a conservative assumption, given that leak flow rates typically increase over time. It is important to note that the savings below reflect *annual* savings, but without knowing how long the leaks would otherwise run undetected, it is not possible to project for how long annual savings would have continued to accrue.

District Side Leaks: Annual Financial Savings by Leak Type			
Leak Type	Count	Annual Volume Recovered (MG)	Annual Savings*
Meter	1	0.131	\$37

\* Water valued at the variable production cost.

Table 5

Assuming the variable cost of water and leak flow rates remain constant, **the cost of the leak detection survey has a payback time of 519 years as shown in Table 6.** This method of assessing the financial benefit of leak detection is not recommended in SSWD’s case because this method does not consider the financial benefit of avoiding water supply improvement plans by reducing customer consumption (by addressing customer side leaks).

District Side Leaks: Simple Payback Period	
Leak Detection Miles Surveyed	61
Cost of Leak Detection per Mile	\$315
Total Cost of Leak Detection	\$19,215
Annual Savings (At Marginal Cost of Water)	\$37
<b>Simple Payback Time (Years)</b>	<b>519.32</b>

Table 6: Cost-Effectiveness of Leak Detection at Marginal Cost of Water

**6.3.2 Cost to improve Water Supply Reliability**

Another way to evaluate the financial performance of the leak detection survey is to compare it with alternative methods that improve water supply reliability. Water supply reliability can be increased by one of two ways, increasing supply or reducing demand. It is well established that water use efficiency (reduction in demand) is generally the most cost effective option to improve water supply reliability. These costs typically range from \$333 to \$500 per acre foot<sup>3</sup>. Using the most cost effective option (\$333/AF) the financial performance of the leak detection survey can be evaluated. Unlike the marginal cost assessment, recovery of customer side leakage should be evaluated at this rate, since reducing this leakage would reduce demand and improve water supply reliability.

As described in Table 7 the best estimate of 1.36 MG of leakage contained equates to a savings of \$1,391 in improving water supply reliability costs. In other words, if this reduction in volume were achieved through typical *water use efficiency measures* it would come at an estimated cost of \$1,391.

<sup>3</sup> California Water Plan Update. Chapter 3: Urban Water Use Efficiency, 2013. [http://www.water.ca.gov/calendar/materials/vol3\\_urbanwue\\_apr\\_release\\_16033.pdf](http://www.water.ca.gov/calendar/materials/vol3_urbanwue_apr_release_16033.pdf)

<b>District Side Leaks: Annual Financial Savings by Leak Type</b>			
Leak Type	Count	Annual Volume Recovered (MG)	Annual Savings*
District Side Leaks	1	0.13	\$134
Customer Side Leaks	9	1.23	\$1,257
<b>TOTAL</b>	<b>10</b>	<b>1.36</b>	<b>\$1,391</b>

\* Water valued at the lowest estimated cost to improve water supply reliability (\$333/AF or \$1022 / MG).

Table 7

Assuming verification and repair of leaks, and the cost of improving water supply reliability as noted previously, **the cost of the leak detection survey has a payback time of 13.8 years as shown in Table 8.**

<b>District Side Leaks: Simple Payback Period</b>	
Leak Detection Miles Surveyed	61
Cost of Leak Detection per Mile	\$315
Total Cost of Leak Detection	\$19,215
Annual Savings (At Marginal Cost of Water)	\$1,391
<b>Simple Payback Time (Years)</b>	<b>13.8</b>

Table 8: Cost-Effectiveness of Leak Detection at Retail Cost of Water

## 7 CONCLUSION

WSO identified one District-side leak and nine Customer-side leaks during the 61-mile survey of SSWD water distribution system. WSO’s leak detection frequency of 16.4 leaks per 100 miles of mains surveyed is approximately three times SSWD’s previous survey. This suggests WSO’s comprehensive leak detection survey has the ability to locate leaks that are otherwise missed by a general leak detection survey. SSWD can expect to recover a best estimate of 1.36 MG per year by repairing the leaks detected during WSO’s 61-mile leak detection survey.

The financial analysis of the leak detection program (using both marginal and improving water supply reliability costs) suggest a pay-back period greater than 10 years. The financial assessment does not include certain benefits of leak detection surveys such as: reduced potential for contamination, extended life of facilities, reduced potential property damage and water system liability, improved public relations, and increased knowledge about the distribution system and asset management. Furthermore, the survey of 61 miles represents only 8.8% of the entire distribution system. The small sample surveyed might not be representative of the entire distribution system and greater leakage rates may actually be occurring. In order to properly asses what level of leakage is said to be occurring within the distribution system and to make an informed economic decision on leak detection, an in-depth real loss component analysis is suggested.



## Agenda Item: 22

**Date:** December 9, 2016

**Subject:** ACWA/JPIA President's Special Recognition Awards

**Staff Contact:** Jim Arenz, Operations Manager

Property, workers' compensation and liability insurance can be very costly to a public utility if measures are not taken to provide a safe and healthy work place for employees. Sacramento Suburban Water District (District) has made safety a primary goal and continues its commitment to ensure the health and safety of its employees and customers. Each year at its annual Fall Conference the District's insurance carrier, ACWA/JPIA, provides recognition for the hard work and commitment of District staff and Board of Directors in keeping safety at the forefront.

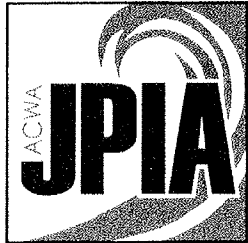
Once again, for the eleventh year in a row, the District has received this recognition. On December 7, 2016, the District received a letter from Andy Sells, CEO of ACWA/JPIA, commending the District for its efforts in reducing claims (see Exhibit 1). On November 28, 2016, in recognition of this effort, ACWA/JPIA approved a President's Special Recognition Award certificate for each of the three programs the District qualified in: Property, Workers' Compensation and Liability (see Exhibit 2).

These awards were presented for achieving low ratios of "Paid Claims and Case Reserves" to "Deposit Premiums" in the Liability Program for the period 10/01/2012 – 09/30/2015, in the Property Program for the period 04/01/2012 – 03/31/2015, and in the Workers' Compensation Program for the period 07/01/2012 – 06/30/2015. A member district must have a loss ratio of 20% or less to receive the President's Special Recognition Award. Loss ratios are calculated by dividing incurred losses by the total premiums in a three year period.

Based on the type and volume of work conducted on a daily basis by member agencies throughout the state, District staff believes these awards are significant and represent the District's continued commitment to the health and safety of its customers and staff.



Exhibit 1



YOUR BEST PROTECTION

Received

DEC 7 2016

SSWD

December 6, 2016

## ACWA JPIA

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Roseville, CA 95661-9082

phone  
916.786.5742  
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direct line  
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fax  
916.774.7040

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**President**  
E.G. "Jerry" Gladbach

**Vice President**  
Tom Cuquet

**Chief Executive Officer**  
Walter "Andy" Sells

**Executive Committee**  
Tom Cuquet  
David Drake  
E.G. "Jerry" Gladbach  
Brent Hastey  
David T. Hodgkin  
W.D. "Bill" Knutson  
Melody A. McDonald  
Charles W. Muse  
J. Bruce Rupp

Rob Roscoe  
Sacramento Suburban Water District  
3701 Marconi Avenue, Ste. 100  
Sacramento, CA 95821-5346

Dear Rob:

Each year at Fall Conference, the JPIA recognizes members that have a Loss Ratio of 20% or less in either of the Liability, Property, or Workers' Compensation programs (loss ratio = total losses / total premiums).

The members with this distinction receive the "**President's Special Recognition Award**" certificate for each Program that they qualify in.

The JPIA is extremely pleased to present Sacramento Suburban Water District with this special recognition and commends the District on the hard work in reducing claims.

Congratulations to you, your staff, Board, and District. Keep up the good work!

The JPIA wishes you the best in 2017.

Sincerely,

A handwritten signature in cursive script that reads "Walter 'Andy' Sells".

Walter "Andy" Sells  
Chief Executive Officer

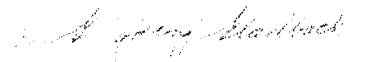
Enclosure: President's Special Recognition Award(s)

# *President's Special Recognition Award*

*The President of the  
ACWA JPIA  
hereby gives Special Recognition to*

## *Sacramento Suburban Water District*

*for achieving a low ratio of "Paid Claims and Case Reserves" to "Deposit Premiums"  
in the Liability Program for the period 10/01/2012 - 09/30/2015  
announced at the Board of Directors' Meeting in Anaheim.*

  
*E. G. "Jerry" Gladbach, President*



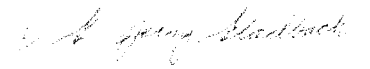
*November 28, 2016*

***President's Special Recognition Award***

*The President of the  
ACWA JPIA  
hereby gives Special Recognition to*

***Sacramento Suburban Water District***

*for achieving a low ratio of "Paid Claims and Case Reserves" to "Deposit Premiums"  
in the Property Program for the period 04/01/2012 - 03/31/2015  
announced at the Board of Directors' Meeting in Anaheim.*

  
E. G. "Jerry" Gladbach, President



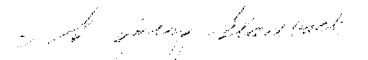
November 28, 2016

# *President's Special Recognition Award*

*The President of the  
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*for achieving a low ratio of "Paid Claims and Case Reserves" to "Deposit Premiums"  
in the Workers' Compensation Program for the period 07/01/2012 - 06/30/2015  
announced at the Board of Directors' Meeting in Anaheim.*

  
*E. G. "Jerry" Gladbach, President*



*November 28, 2016*



## Agenda Item: 23

**Date:** December 12, 2016

**Subject:** Legislative and Regulatory Update

**Staff Contact:** Dan York, Assistant General Manager

### RWA Government Affairs Committee

The State legislature reconvenes January 4, 2017. The last day for bills to be introduced in February 17, 2017. The 2017 Tentative Legislative Calendar is attached to this report as Exhibit 1.

### State

The Senate and Assembly both swore in new members in preparation of 2017. There are nine in the 40-member Senate and 22 in the 80-member Assembly, four of those returning after losing in previous elections, a tremendous amount of turnover. The new class of lawmakers brings other big changes to the Legislature, like a record number of Latinos and the fewest women in nearly three decades. The "moderate caucus" of business-friendly Democrats is also crowing about expanding its ranks, and education groups seeking to shake up teacher union dominance have elected more allies. But the most significant development is that Democrats regained a two-thirds supermajority in both houses of the Legislature. The overwhelming dominance gives them theoretical power to pass taxes, amend political spending laws, move constitutional amendments to the ballot or enact urgency legislation without Republican support.

With national events highlighting the dangers and continued issues of lead in drinking water supplies, the State Water Resources Control Board (SWRCB) has emphasized this effort to make sure the water that comes out of schools' taps is safe from lead. The SWRCB Division of Drinking Water has announced they will be issuing an amended Water System Permit to all community water systems that serve a school the week of December 20, 2016. Pursuant to the amended Water System Permit, all community water systems in California will be required to test the schools in their service area for lead if sampling is requested by the institution's officials. According to the California Department of Education, there are approximately 9,000 K-12 schools in the state, many of those served by the more than 3,000 permitted community water systems.

Under this new permit amendment, school officials can request in writing that their water system sample their school for lead. Once a request has been filed, the community water system has 60

days to make contact with the school to schedule a meeting to develop a sampling plan. Public water systems have a total of 90 days from the time the request is received to finalize the sampling plan and to conduct sampling at the school. Alternatively, a water system may submit a sampling schedule to the Division of Drinking Water if the 90 days cannot be met. Outlets for sampling need to be regularly-used drinking fountains, cafeteria/food preparation areas and reusable water bottle filling stations. When a water system samples a school and the testing comes back equal to or under the Lead Action Level of 15 parts per billion (ppb), no additional sampling is needed. If the initial sampling is above 15 ppb, the water system must notify the school within two school business days of receiving the results. The public water system is responsible for all the costs associated with collecting samples, analysis and reporting the results to the Division of Drinking Water and the school, and is required to meet with the authorized school representative to develop a sampling plan and review the results. However, if outlets or school plumbing systems need to be replaced or upgraded to address lead exceedances, these costs are the responsibility of the school. To help schools with these costs, the State Water Board's Division of Financial Assistance will have funding available. The Division of Drinking Water will be conducting a webinar on December 15, 2016 to discuss and answer questions regarding the amended Water System Permit requirements.

The Department of Water Resources, SWRCB, Public Utilities Commission, Department of Food and Agriculture, and Energy Commission, released a draft plan that seeks to make water conservation a way of life by providing standards for achieving long-term efficient water use. The draft plan implements Governor Jerry Brown's Executive Order B-37-16, which is an order to move the state towards using water more wisely, eliminating water waste, strengthening local drought resilience, and improving agricultural water use efficiency and drought planning. The plan represents a shift from statewide mandates to a set of conservation standards applied based on local circumstances, including population, temperature, leaks, and types of commercial and industrial use. The new plan's fundamental premise is that efficient water use helps all of California better prepare for longer and more severe droughts caused by climate change.

Key water conservation efforts included in the plan include:

- Permanent bans on wasteful practices, such as hosing driveways and excessively watering lawns.
- Technical assistance and financial incentives for water suppliers to implement leak prevention, detection, and repair programs.
- Collecting information about innovative water conservation and water loss detection and control technologies.
- Requiring agricultural water suppliers to quantify water use in their service areas and describe measures to increase water use efficiency.
- Full compliance with water use targets for urban water suppliers by 2025.
- Planning and preparing for continued and future drought and water shortages.

### **Federal**

The federal Water Resources Development Act of 2016 (WRDA) has been folded into a broader compromise bill on water infrastructure that could be taken up before Congress adjourns for

2016. S. 612, also known as the Water Infrastructure Improvements for the Nation Act, would authorize numerous projects in California, including restoration of the Los Angeles River, Lake Tahoe and the Salton Sea. It also would authorize \$558 million for critical projects, including \$515 million for water storage, recycling and reuse, and desalination projects. In addition, it will help local water agencies work with the U.S. Army Corps of Engineers (Corps) on storm water capture projects and groundwater recharge projects, and provides direction to the Corps to engage in environmental infrastructure projects, including water recycling projects. Drought language included in the bill reflects a compromise that will help provide improved water supplies without violating the Endangered Species Act or biological opinions. Staff believes this legislation will help public water agencies provide safe and reliable water.

### **Federal Bills of Interest (114th Congress)**

- a. **HR 5781 California Emergency Drought Relief Act of 2014** - This bill was recently introduced in the House of Representatives following failure of a Senate compromise bill, pushed by Senator Feinstein, to gain sufficient support. Several Republican Congressmen Valadao, Nunes, McCarthy, McClintock, Calvert, and La Malfa were joined by central valley Democrat Costa in sponsoring the bill. HR 5781 passed the House but is not expected to pass the Senate this term. Adding bill language to a must-pass omnibus spending bill is being considered.
- b. **HR 1837 - San Joaquin Valley Water Reliability Act (Nunes)** -To address certain water-related concerns on the San Joaquin River, and for other purposes.
- c. **HR 4345 - Domestic Fuels Protection Act of 2012 (Shimkus)** - A bill to provide liability protection for claims on the design, manufacture, sale, offer for sale, introduction into commerce, or use of certain fuels and fuel additives, and for other purposes.
- d. **HR 6484 - SAFE Levee Act (Garamendi)** - To amend the Calfed Bay-Delta Authorization Act to authorize the secretary of the Interior to provide assistance to non-Federal interests for levee stability improvements located within the Sacramento- San Joaquin Delta related to Bureau of Reclamation Central Valley Project water deliveries, and for other purposes.
- e. **HR 1561 – Weather Research and Forecasting Innovation Act (Lucas)** – Requires the National Oceanic and Atmospheric Administration (NOAA) to prioritize weather research to improve weather data, forecasts and warnings for the protection of life and property and the enhancement of the national economy. This bill has potential to significantly advance funding for studying Atmospheric Rivers which could affect reservoir operations increased flood control and increased water supply.

EXHIBIT 1

**2017 TENTATIVE LEGISLATIVE CALENDAR**

COMPILED BY THE OFFICE OF THE SECRETARY OF THE SENATE  
Revised 11/16/2016

**DEADLINES**

JANUARY						
S	M	T	W	TH	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

- Jan. 1** Statutes take effect (Art. IV, Sec. 8(c)).
- Jan. 4** Legislature **reconvenes** (J.R. 51(a)(1)).
- Jan. 10** Budget must be submitted by Governor (Art. IV, Sec. 12(a)).
- Jan. 16** Martin Luther King, Jr. Day
- Jan. 20** Last day to submit **bill requests** to the Office of Legislative Counsel

FEBRUARY						
S	M	T	W	TH	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

- Feb. 17** Last day for bills to **be introduced** (J.R. 61(a),(1)(J.R. 54(a)).
- Feb. 20** Presidents' Day

MARCH						
S	M	T	W	TH	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

- Mar. 31** Cesar Chavez Day.

APRIL						
S	M	T	W	TH	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

- Apr. 6** **Spring recess** begins upon adjournment of this day's session (J.R. 51(a)(2)).
- Apr. 17** Legislature **reconvenes** from Spring recess (J.R. 51(a)(2)).
- Apr. 28** Last day for **policy committees** to hear and report to **fiscal** Committees **fiscal bills** introduced in their house (J.R. 61(a)(2)).

MAY						
S	M	T	W	TH	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

- May 12** Last day for **policy committees** to hear and report **non-fiscal bills** introduced in their house to Floor (J.R. 61(a)(3))
- May 19** Last day for **policy committees** to meet prior to June 5 (J.R. 61(a)(4)).
- May 26** Last day for **fiscal committees** to hear and report to the Floor bills introduced in their house (J.R. 61(a)(5)).  
Last day for **fiscal committees** to meet prior to June 5 (J.R. 61(a)(6)).
- May 29** Memorial Day.
- May 30-June 2 Floor Session Only.** No committees, other than conference or Rules committees, may meet for any purpose (J.R. 61(a)(7)).

\*Holiday schedule subject to Senate Rules committee approval



**2017 TENTATIVE LEGISLATIVE CALENDAR**

COMPILED BY THE OFFICE OF THE SECRETARY OF THE SENATE  
Revised 11/16/2016

JUNE						
S	M	T	W	TH	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

**June 2** Last day for bills to be passed out of the house of origin (J.R. 61(a)(8)).

**June 5** Committee meetings may resume (J.R. 61(a)(9)).

**June 15** Budget must be passed by **midnight** (Art. IV, Sec. 12(c)(3)).

JULY						
S	M	T	W	TH	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

**July 4** Independence Day observed.

**July 14** Last day for **policy committees** to hear and report fiscal bills to **fiscal** Committees (J.R. 61(a)(10)).

**July 21** Last day for **policy committees** to meet and report bills (J.R. 61(a)(11)). **Summer Recess** begins upon adjournment of session provided Budget Bill has been enacted (J.R. 51(a)(3)).

AUGUST						
S	M	T	W	TH	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

**Aug. 21** **Legislature Reconvenes** (J.R. 51(a)(3)).

SEPTEMBER						
S	M	T	W	TH	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

**Sept. 1** Last day for **fiscal committees** to meet and report bills to Floor (J.R. 61(a)(12)).

**Sept. 4** Labor Day.

**Sept. 8** Last day to **amend** on the floor (J.R. 61(a)(14)).

**Sept. 5-15** **Floor session only.** No committees, other than conference or Rules Committees, may meet for any purpose (J.R. 61(a)(13)).

**Sept. 15** Last day for **each house to pass bills** (J.R. 61(a)(15)). **Interim Study Recess** begins at end of this day's session (J.R. 51(a)(4)).

\*Holiday schedule subject to Senate Rules committee approval

**IMPORTANT DATES OCCURRING DURING INTERIM STUDY RECESS**

**2017**

Oct. 15 Last day for Governor to sign or veto bills passed by the Legislature on or before Sept. 15 and in his possession after Sept. 15 (Art. IV, Sec.10(b)(1)).

**2018**

Jan. 1 Statutes take effect (Art. IV, Sec. 8(c)).  
Jan. 3 Legislature reconvenes (J.R. 51(a)(4)).



## Agenda Item: 24

**Date:** December 9, 2016

**Subject:** General Manager's Report

**Staff Contact:** Robert Roscoe, General Manager

**a. McClellan Park Improvement Issues Update**

As previously reported, on September 7, 1999, Northridge Water District (NWD) executed the Operations Agreement (Agreement) between Sacramento County (County) and NWD for the Conveyance of the McClellan Water Distribution System for ownership, operation, and maintenance of the potable water system. Included in the Agreement was a Capital Improvement Plan (CIP) consisting of ten items that were included in the proposal. In Section 2 of the Agreement, NWD was required to provide "upgrades" to the existing potable water system to bring it up to current standards. The "upgrades" are itemized in the Agreement for a total estimated cost of \$5,062,000. There are three items from the CIP list that have yet to be 100% completed. Staff recommendation is to distinguish who is responsible for system improvements within McClellan Park (MP) and place closure to existing agreement and negotiate a new agreement. On August 3, 2016, the District provided a letter to MP stating its interpretation of the agreement, along with a Legal Opinion generated by District legal counsel. On December 5, 2016, staff received MP's written Legal Opinion. The Legal Opinion received from MP has been forwarded to District legal counsel for review and comments. Staff and legal counsel are in the process of scheduling a meeting to discuss the Opinion Letter prior to setting a meeting with MP and their legal counsel. Staff is planning to bring this to the F&O Committee and the full Board in January or February 2017, depending on scheduling the meeting with MP and MP's response to the District's position.

**b. Water Transfers – Bureau of Reclamation Update**

Reclamation is continuing internal discussions on the potential of a 2017 Groundwater Substitution Water Transfer. As previously reported, under the proposed action, the District would transfer up to 8,000 acre feet (af) of its 2017 Placer County Water Agency (PCWA) contract water entitlement to Reclamation. The District anticipates that it can transfer approximately 8,000 af of its available PCWA supply to Reclamation during July 15, 2017 to September 30, 2017, which is the potential Transfer Period. All Middle Fork Project water delivered by PCWA for transfer by the District under the Proposed Action shall be 'exchanged' by the District's pumping of groundwater from the North American Groundwater Basin to meet its consumptive demands in lieu of taking PCWA water. In addition, Reclamation has indicated interest in the District also conducting a 2017 Water Transfer with its City of Sacramento water contract via a Groundwater Substitution transfer. That particular transfer could consist of approximately 3,000 af. If the water transfer is implemented, the District might receive \$300 per af from Reclamation,

although final costs are yet to be finalized. Reclamation informed the staff that they will begin meeting in January 2017 to discuss specific opportunities for a 2017 Water Transfer. In addition, Regional Water Authority has scheduled a meeting on December 14, 2016 to explore an interest in a regionally-coordinated groundwater substitution transfers. The goal of the meeting is to demonstrate the ability to facilitate a regionally-coordinated transfer of a diverse group of water suppliers. The effort will help reveal some of the issues that would ultimately need to be addressed under a potential future Water Bank in the region.

**c. Long Term Warren Act Contract Update**

Staff met with Bureau of Reclamation (Reclamation) on November 17, 2016 to discuss the status of the District's Long Term Warren Act Contract (LTWAC). Reclamation updated staff on the status of the re-consultation and with US Fish and Wildlife Services (USFWS) and National Marine Fisheries Service (NMFS) Reclamation confirmed that consultation does not prohibit them from signing long-term contracts. Staff reminded Reclamation that our water is not Central Valley Project water. Reclamation informed staff that they will be meeting with Central Valley Operations staff in mid-January 2017 to discuss the District's Environmental Assessment and how to proceed presenting the LTWAC to NMFS and USFWS. The District's current 5-year Warren Act Contract expires February 28, 2018.

**d. County of Sacramento Proposed Paving Requirements**

As previously reported, the County of Sacramento (County) has approximately 5,454 lane miles of roadway. They have identified over \$1.5 billion dollars in the backlog of street and road repairs. Additionally, the County has a fiscal structural deficit which will not pay for ongoing upkeep and repairs to streets and roads. The County has sought legislative assistance and other alternatives to improve road conditions. Currently, the Pavement Management Index for County streets and roads reflects that many of the roads are in marginal or poor status. The County believes many of the deteriorated roads are due to trench cuts, potholes and other disturbances due to underground utilities. Underground utilities need to perform trench cuts in order to access utility lines for inspection, repair and replacement. It is an obligation of the utility to restore the pavement cut to meet City or County standards, which are intended to fully return the useful life of that section of roadway.

The County is proposing new trench cut restoration requirements that greatly increase paving requirements compared to the existing standards. All trench restoration would require pavement overlay that covers a minimum of a lane width, plus shoulder and bike lane, up to the entire roadway in some cases. The thickness and the limits of the overlay are also significantly increased. The proposed requirements were developed without an analysis to quantify actual utility trench impacts, or consider factors such as existing pavement age and PMI.

The proposed paving requirements were initially scheduled to be adopted by the County Supervisors on August 9, 2016. In an effort to communicate with County Department of Transportation (DOT) staff to propose other scenarios that could assist with the paving requirements, local utilities (e.g., water, electric, gas and communications) developed a

Utility Workgroup. The proposed paving requirements have been temporarily postponed. However, the subject topic is planned to be placed on the County Supervisors agenda in February 2017. Currently the Workgroup's legal counsels have drafted a letter, addressed to County Supervisors and County counsel, that is a legal opinion letter disputing the proposed paving requirements. The legal opinion letter is scheduled to be finalized and delivered by end of December 2016.

**e. City of Sacramento – Wholesale Water Rates**

As previously reported, the City is currently negotiating with the environmental caucus to provide for increased opportunities to wholesale water in the region. Currently, the City is prevented from wholesaling water to the District during low "Hodge" flows in the lower American River, but the environmental caucus may be open to removing or amending this restriction through a demonstration that the City would increase diversions off the Sacramento River rather than the American River during lower American River flows. The final outcome may bring forth opportunities to have a more consistent and flexible wholesale agreement between the City and the District. An informal agreement was made to allow the City to conduct a pilot test on how the reporting mechanism for water being utilized from the Sacramento and Fairbairn treatment plants. The pilot test began on November 5, 2016 and concluded on November 21, 2016, of which the District received the 435 af of surface water owed by the City. Staff met with City staff to discuss their Wholesale Rates in October and November 2016. Staff informed the City that if the Wholesale Rates were lowered, it would enable the use of the District's contract water rights in a manner that provides better cost benefit to its customers. The City is willing to continue discussions regarding amending the existing agreement for the purpose of how their water from the treatment plants is delivered to the District, as well as the potential of lowering their Wholesale Rates. A contract amendment would be required as the present contract specifies how costs are to be calculated.

**f. Walnut Corporation Yard Improvements**

Approved in the CY2017 OCB Budget were several improvement projects for the Walnut Corporation Yard facility. One of the proposed projects was the removal and replacement of the ceiling tiles at the Walnut Corporation Yard building. This project was prompted by the discovery of a significant amount of rat droppings, urine, and nesting materials on top of the ceiling tiles throughout much of the building. The offending materials were deposited on the ceiling tiles during a rat infestation that occurred in past years. The infestation was resolved by professional exterminators at which time all known access points were sealed. No new infestations have been discovered by staff or the District's pest control contractor.

The presence of the fecal matter and nesting material was considered a health and safety risk for the staff working at this facility so the project was expedited and included in the CY2016 Budget. As a result, the ceiling tiles throughout the Walnut facility are scheduled to be removed and properly disposed of and the surrounding area thoroughly cleaned by JM Environmental, a hazardous material abatement company. The work will take place after-hours and is expected to take 3 to 4 days to complete. New ceiling tiles will then be installed by B&R Acoustical immediately following the abatement process.



## **Agenda Item: 25**

**Date:** December 2, 2016

**Subject:** Upcoming Policy Review – Drug and Alcohol Program Policy (PL – HR 010)

**Staff Contact:** Lynne Yost, Human Resources Coordinator

The Drug and Alcohol Program Policy (PL – HR 010) was originally adopted by the Board in July 2008 and last reviewed in November 2014.

Staff is recommending changes in Section 200.00 to confirm the General Manager’s authority to take any action deemed appropriate, up to and including termination of employment, when disciplining employees who violate the policy by using, possessing or being under the influence of an illegal or controlled substance, including alcohol and marijuana. Staff confirmed the new law legalizing recreational marijuana does not restrict employers from continuing to maintain drug- and alcohol-free workplaces and policies. Staff contacted ACWA/JPIA to obtain recommended language for updating drug and alcohol policies under the new law, but was informed language is not yet available.

Staff will submit the policy to legal counsel for review and include their comments and recommendations for Board review and consideration at the December meeting. If a Director wishes to have his comments included, please provide those comments to staff by Monday, January 9, 2017.

## Sacramento Suburban Water District

**Drug and Alcohol Program Policy**

Adopted: July 21, 2008

Revised: January XX, 2017~~June 21, 2010~~**100.00 Purpose of the Policy**

The purpose of this policy is to 1) confirm the District's commitment to maintain a drug and alcohol-free workplace, 2) insure the health and safety of all District employees, customers and the general public by authorizing the development and implementation of a Drug and Alcohol Program to identify and discipline employees who abuse alcohol or use controlled substances, and 3) establish guidelines for drug and alcohol testing for non-safety and safety sensitive positions.

**200.00 Policy**

The District has a significant interest in insuring the health and safety of its employees. It has an obligation to insure that its employees do not present a safety risk to the general public. Substance abuse can affect job performance and employee and public safety. Subject to the requirements of the federal Americans with Disabilities Act (ADA), the District will be firm in identifying and disciplining those employees who ~~abuse alcohol or use illegal or controlled substances~~ in violation of the following, up to and including termination of employment:

1. No District employee who is on duty or on standby duty will:
  - a) Use, possess, or be under the influence of illegal or unauthorized drugs or other illegal mind-altering substances; or
  - b) Use or be under the influence of a controlled substance, including alcohol and marijuana ~~any extent that impedes the employee's ability to perform his/her duties safely and effectively.~~
2. No District employee will engage in any duties or activities that, because of drugs taken under a legal prescription, cannot be performed without posing a threat to the health or safety of the employee or others. This includes medications that may impair the employee's ability to operate small or large machinery/equipment or motor vehicles.
3. Employees will be subject to drug and alcohol testing when there is reasonable suspicion that the employee has violated the rules expressed in Section 1 and/or 2 above. ~~In addition, when such an employee has already been found in violation of Section 1 and/or 2 above through any action or medical examination process~~

~~under the District's Drug and Alcohol Program, as a result of substance testing under that program, or by the employee's own admission, the employee will be required to submit to periodic substance testing as a condition of remaining in or returning to District employment.~~

**300.00 Authority and Responsibility**

The Human Resources Coordinator, Operations Manager, Assistant General Manager and General Manager will be responsible for administering this policy. This will include developing and maintaining a Drug and Alcohol Program Manual that will be provided to all current and new employees.

**400.00 Policy Review**

This Policy shall be reviewed at least biennially.



## Agenda Item: 26

**Date:** December 7, 2016

**Subject:** Upcoming Water Industry Events

**Staff Contact:** Heather Hernandez-Fort, Executive Assistant to the General Manager

Below is a list of upcoming water industry events:

### Upcoming Events

1. Sacramento Rate Workshop 2017  
January 11, 2017  
Antelope, CA (Hosted by SSWD)  
<http://bit.ly/2eDSqGI>
2. California Water Law Symposium  
January 21, 2017  
University of San Francisco, McClarren Conference Center  
San Francisco, CA  
[https://mavensnotebook.com/event/california-water-law-symposium-the-bay-delta-understanding-whats-at-stake-for-the-regions-future/?instance\\_id=497](https://mavensnotebook.com/event/california-water-law-symposium-the-bay-delta-understanding-whats-at-stake-for-the-regions-future/?instance_id=497)
3. ACWA Water 101  
February 2-3, 2017  
West Sacramento, CA  
<http://www.acwa.com/events/water-101>
4. ACWA DC 2017 – ACWA’s Annual Washington D.C. Conference  
February 28 – March 2, 2017  
St Regis Hotel in Washington D.C.  
[http://www.acwa.com/events/acwa-dc2016-washington-dc-conference?cm\\_mid=6245117&cm\\_crmid=224f0185-c871-e311-8d83-b4b52f67d656&cm\\_medium=email](http://www.acwa.com/events/acwa-dc2016-washington-dc-conference?cm_mid=6245117&cm_crmid=224f0185-c871-e311-8d83-b4b52f67d656&cm_medium=email)
5. ACWA’s 2017 Legislative Symposium  
March 8, 2017  
Sacramento Convention Center  
<http://www.acwa.com/events/acwa-2017-legislative-symposium>



Upcoming Water Industry Events

December 7, 2016

Page 2 of 2

6. Metro Chamber Cap to Cap  
April 29 – May 3, 2017  
Washington DC  
<https://metrochamber.org/events/capitol-to-capitol/>
  
7. ACWA 2017 Spring Conference  
May 9-12, 2017  
Monterey, CA  
<http://www.acwa.com/events/acwa-2017-spring-conference-exhibition>
  
8. CSDA Special Districts Legislative Days  
May 16-17, 2017  
<http://www.csda.net/conferences/>

**Minutes**

Sacramento Suburban Water District  
**Facilities and Operations Committee**  
 Friday, December 9, 2016

**Call to Order**

Director Locke called the meeting to order at 2:08 p.m.

**Roll Call**

Directors Present: Craig Locke and Neil Schild.  
 Directors Absent: None.  
 Staff Present: General Manager Rob Roscoe, Assistant General Manager Dan York, Amy Bullock, Mitch Dion, John Valdes, Dave Jones and James Arenz.

**Public Present:** William Eubanks, Paul Selski and Melanie Holton.

**Public Comment**

None.

**Announcements**

General Manager Rob Roscoe (GM Roscoe) announced:

- On December 8, 2016 Director Frederick Gayle took his oath with Sacramento Metropolitan Fire District and is no longer a Director with Sacramento Suburban Water District.
- Director Elect Dave Jones is in the audience as a District employee, but will not be participating in the Facilities and Operations Committee meeting as a staff member. The Brown Act applies to Directors Elect.

**Consent Items**

1. **Minutes of the September 30, 2016 Facilities and Operations Committee Meeting**  
 Director Schild moved to approve Item 1; Director Locke seconded. The motion passed by unanimous vote.

AYES:	Schild and Locke.	ABSTAINED:	
NOES:		RECUSED:	
ABSENT:			

**Items for Discussion and Action**

2. **Water System Master Plan Update**  
 Mitch Dion (Mr. Dion) introduced Paul Selski (Mr. Selski) and Melanie Holton (Mrs. Holton) with Brown and Caldwell and they went through the PowerPoint presentation.

GM Roscoe clarified that the Water System Master Plan Update would not be presented at the Regular Board meeting on December 19, 2016 noting that staff was working at the Committee level first so that when it goes in front of the full Board in approximately February 2017; it should be ready for adoption. He also noted that staff distributed this to the Board at this early stage of the draft process because it was requested by Directors at the previous Board meeting.

Director Schild requested clarification on what AMP abbreviation stands for, on slide 2.

Mr. Selski clarified that the abbreviation stands for Asset Management Plan and will make a note to spell that out in the future presentations and slides.

Director Locke inquired if the O&M expenses are broken down by each well or is this stated as the average in the presentation.

Mr. Selski stated that this is an average.

Melanie Holton (Ms. Holton) went through the remainder of the PowerPoint presentation.

Director Schild inquired when the groundwater well management asset plan would be done.

Mr. Dion stated that the last groundwater well management asset plan was done in 2013 and another update would be coming around April of 2017.

Assistant General Manager Dan York (AGM York) stated that the District reviews the groundwater well asset management plan every three to five years.

Director Locke stated that it would be helpful to show the reduction and keep a running total of the shortfall, and the flowchart needs to have more to it.

Director Schild inquired about when staff anticipated the final Master Plan documents to be ready.

Ms. Holton stated that the final Master Plan report will be presented in February of 2017.

Director Locke suggested that staff give the Directors what kind of policy decisions staff is looking for.

GM Roscoe stated that he was not looking for Board members to edit the report and get down in the details of the report. He gave as an example of a policy-level decision in this report the transition from a large number of neighborhood wells to a smaller number of well campuses on larger properties, capable of handling future well head treatment systems should that be required.

Director Schild inquired if McClellan Business Park was left out of this report.

Mr. Dion stated that McClellan Business Park was not included in the report and that if it is not included in the final report come February 2017 then staff will state that.

Mr. Eubanks commented that the General Manager spelled out the plan well; he noted that it was clear and concise and that he understood that the report is still in the draft stages. Mr. Eubanks stated his questions were answered in the presentation.

**3. Parkland Estates Paving Partnership Agreement with the County of Sacramento**

Mr. Dion presented the staff report.

Director Schild inquired how much pavement would be replaced on Eastern Avenue, would it be all or half of Eastern Avenue.

Mr. Dion stated that it would be half a roadway down Eastern Avenue from centerline to the east side.

Director Schild suggested that the public is made aware that this is a county project and that the District is working with the County. Director Schild also suggested that the public be made aware that this is a county project so the public knows where to go if they are interested in inquiring about the project.

GM Roscoe stated that the paving partnership is not necessarily a money saver for the District; however, it could be a risk transfer for the District.

Director Schild moved to take this item to the full Board with recommended approval.

Director Locke, seconded the motion.

**Adjournment**

Director Locke adjourned the meeting at 3:06 p.m.

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Robert S. Roscoe  
General Manager/Secretary  
Sacramento Suburban Water District

# ITEM 28 a.

## REGIONAL WATER AUTHORITY EXECUTIVE COMMITTEE AGENDA

December 7, 2016; 8:30 a.m.  
5620 Birdcage Street, Suite 110  
Citrus Heights, CA 95610  
(916) 967-7692

### AGENDA

The public shall have the opportunity to directly address the Board on any item of interest before or during the Board's consideration of that item. Public comment on items within the jurisdiction of the Board is welcomed, subject to reasonable time limitations for each speaker. Public documents relating to any open session item listed on this agenda that are distributed to all or a majority of the members of the Board of Directors less than 72 hours before the meeting are available for public inspection in the customer service area of the Authority's Administrative Office at the address listed above. In compliance with the Americans with Disabilities Act, if you have a disability and need a disability-related modification or accommodation to participate in this meeting, please contact the Executive Director of the Authority at (916) 967-7692. Requests must be made as early as possible, and at least one full business day before the start of the meeting.

1. **CALL TO ORDER AND ROLL CALL**
2. **PUBLIC COMMENT:** Members of the public who wish to address the committee may do so at this time. Please keep your comments to less than three minutes.
3. **CONSENT CALENDAR**  
Minutes of the October 26, 2016 Executive Committee meeting  
**Action: Approve October 26, 2016 Executive Committee meeting minutes**
4. **RWA 2016 AUDIT REPORT**  
Presentation: Ingrid Shepline, Richardson and Company  
**Action: Recommend RWA Board acceptance of 2016 RWA financial audit report**
5. **2017 RWA BOARD MEETING SCHEDULE**  
**Action: Recommend RWA Board approval of the proposed RWA Board meetings for 2017**
6. **OVERVIEW OF REGIONAL WATER PLANNING EFFORTS INVOLVING RWA**  
Information Presentation: Rob Swartz, Manager of Technical Services
7. **WATER EFFICIENCY DIRECT INSTALL RFQ**  
**Action: Recommend RWA Board approval for selected contractor**
8. **WATER CONSERVATION INCENTIVES RESOLUTION**  
**Action: Recommend RWA Board approval of Resolution No. 2017-01 A Resolution of the Regional Water Authority Regarding Water Conservation Incentives**
9. **RWA JANUARY 12, 2017 BOARD MEETING**  
**Action: Approve Agenda for January 12, 2017 Meeting of the RWA Board of Directors**

**10. EXECUTIVE DIRECTOR'S REPORT**

**11. DIRECTORS' COMMENTS**

**ADJOURNMENT**

**Upcoming meetings:**

**Upcoming Executive Committee Meetings** – January 25, 2017 and February 22, 2017 at 8:30 a.m. at the RWA office

**Next RWA Board of Directors' Meeting** – Thursday, January 12, 2017, at 9:00 a.m. at the RWA office

## ITEM 28 b.

### **SACRAMENTO GROUNDWATER AUTHORITY REGULAR MEETING OF THE BOARD OF DIRECTORS**

**Thursday, December 8, 2016; 9:00 a.m.**

5620 Birdcage Street, Suite 110

Citrus Heights, CA 95610

(916) 967-7692

#### **Agenda**

The Board will discuss all items on this agenda, and may take action on any of those items, including information items and continued items. The Board may also discuss other items that do not appear on this agenda, but will not act on those items unless action is urgent, and a resolution is passed by a two-thirds (2/3) vote declaring that the need for action arose after posting of this agenda.

The public shall have the opportunity to directly address the Board on any item of interest before or during the Board's consideration of that item. Public comment on items within the jurisdiction of the Board is welcomed, subject to reasonable time limitations for each speaker. Public documents relating to any open session item listed on this agenda that are distributed to all or a majority of the members of the Board of Directors less than 72 hours before the meeting are available for public inspection in the customer service area of the Authority's Administrative Office at the address listed above. In compliance with the Americans with Disabilities Act, if you have a disability and need a disability-related modification or accommodation to participate in this meeting, please contact the Executive Director of the Authority at (916) 967-7692. Requests must be made as early as possible, and at least one full business day before the start of the meeting.

**1. CALL TO ORDER AND ROLL CALL**

**2. PUBLIC COMMENT:** Members of the public who wish to address the Board may do so at this time. Please keep your comments to less than three minutes.

**3. CONSENT CALENDAR**

Minutes of the October 13, 2016 meeting

**Action: Approve Consent Calendar item**

**4. 2016 AUDIT REPORT**

Information Presentation, Ingrid Sheipline, Richardson and Company

**Action: Accept 2016 Financial Audit Report**

**5. ELECTION OF 2017 SGA OFFICERS**

Information Update: SGA Nominating Committee update and recommendations

**Action: Elect 2017 SGA Chair and Vice Chair**

**6. SUSTAINABLE GROUNDWATER MANAGEMENT ACT UPDATE**

Information Update: John Woodling, Executive Director

**7. GROUNDWATER MANAGEMENT PROGRAM UPDATE**

Information Update: Rob Swartz, Technical Services Manager

**8. EXECUTIVE DIRECTOR'S REPORT**

**9. DIRECTORS' COMMENTS**

## **ADJOURNMENT**

**Next SGA Board of Director's Meeting** – February 9, 2017, 9:00 a.m., RWA/SGA office, 5620 Birdcage Street, Ste. 110, Citrus Heights



ITEM 28 c.

**WATER FORUM SUCCESSOR EFFORT**

Thursday, December 15, 2016

5:30 PM – 8:30 PM



**NOTE  
LOCATION**

**WATER FORUM**  
1330 21<sup>st</sup> Street, Ste. 103  
Sacramento, CA 95811

**Agenda**

**5:30** **DINNER**

**5:45** **INTRODUCTIONS**

**6:00** **DISCLOSURES/ REPORT BACKS / ANNOUNCEMENTS**

**6:15** **PRESENTATION**

The Valley Foothill Watershed Collaborative  
- Gregg Bates and Christine Flowers

**6:45** **PRESENTATION**

Upland / Lowland Forest Management  
- Elizabeth Bettencourt

**7:30** **UPDATES**

River and Water Supply Conditions – Tom Gohring  
FMS – Tom Gohring  
Habitat Management – Lilly Allen  
Water Supply & River Conditions – Tom Gohring  
Groundwater Facilitation – Tom Gohring

**7:15** **ANNOUNCEMENT**

Re-printed Water Forum Agreement – Tom Gohring

**8:00** **ADJOURN**

**Water Forum office:** located on the corner of 21<sup>st</sup> and N streets in midtown Sacramento. See map for parking information.

**WATER CAUCUS**  
**Wednesday, December 14, 2016**  
**11:30 AM – 1:00 PM**  
**Regional Water Authority**  
**5620 Birdcage St., Citrus Heights**

**Agenda**

1. California Water Fix Hearing Update
2. Flow Management Standard Update
3. Water Quality Control Plan Update/Strategy
4. Regional Reliability Plan Update
5. Water Efficiency Update

## ITEM 29

### DIV 4

**From:** Bill [mailto:@surewest.net]  
**Sent:** Tuesday, November 29, 2016 10:00 AM  
**To:** feedback  
**Subject:** General Comment

I have been on a three day wild goose chase initiated by your General Manager with respect to the handling of the Form 700's for the Sacramento Suburban Water District. I am reliably informed by the staff at the FPPC and staff at the Sacramento County Registrar of Voters that the Form 700's for SSWD are available upon request at your Marconi Ave. offices. I will take up the matter of the misinformation I was given by your General Manager with him. It is not necessary to respond to this e-mail or my two earlier e-mails regarding Form 700's.

Bill

**From:** Dan York  
**Sent:** Monday, November 28, 2016 3:21 PM  
**To:** Bill  
**Cc:** Heather Hernandez  
**Subject:** General Comment

Good Afternoon Bill,

I was waiting to obtain the correct information before responding to your questions regarding Form 700's. I believe the following is accurate:

The Form 700 is now filed electronically to the FPPC, which became mandatory in 2016. Prior to that, hard copies were maintained here at the Marconi office and the original was taken to FPPC. In fact, per the District's Records Retention Policy, we maintained Form 700's for the previous 7 years. We currently have Form 700's here at the Marconi office for the period 2008-15.

You are correct in your earlier email, local jurisdictions below members of a city council or county supervisor are not available to the public from the FPPC website. If a request is made to obtain a copy of a particular Form 700, the Filing Officer for an agency, such as SSWD, shall make a complete, un-redacted copy of any FPPC statement or report, available to any person upon request. In addition, the Form 700 is subject to Government Code Section 81008, **not the Public Records Act**. Government Code Section 81008 mandates that "every report and statement filed pursuant to this title is a public record open for public inspection and reproduction during regular business hours, commencing as soon as practicable, but in any event not later than the second business day following the day on which it was received. No conditions whatsoever shall be imposed upon persons desiring to inspect or reproduce reports and statements filed under this title, nor shall any information or identification be required from these persons. A request for more than one report or statement or report and statement at the same time shall be considered a single request."

It is the responsibility of each Form 700 filer to complete and file them by the April 1<sup>st</sup> deadline of each year. As a courtesy each year, the District reminds each Form 700 filer to file them by the required deadline.

Heather Hernandez is the District's Filing Officer. She has the authority and password to gain access to all SSWD Form 700 filers that are filed with FPPC. If you would like a copy of a Form 700, she is the person you will need to contact.

Dan Bills wanted me to let you know that he informed me the two of you discussed the subject topic earlier this afternoon. I informed Dan that I was in receipt of your emails and that I would be responding.

If you need further clarification on any other Form 700 issues/concerns, please let me know and I will do my best to respond.

Thanks,

Dan York  
Assistant General Manager

**From:** Bill [<mailto:@surewest.net>]  
**Sent:** Monday, November 28, 2016 2:04 PM  
**To:** feedback  
**Subject:** General Comment

To Whom It May Concern:

This is a follow-up to my last e-mail. The information that I was given by your General Manager regarding Form 700's was wrong! Form 700's for Board members and staff of SSWD are not electronically filed with the California Fair Political Practices Commission. The fact that your General Manager is unaware of where they are filed is troubling and leads me to suspect that the Board Members are not following the law. I am now awaiting a return telephone call from the County Registrar of Voters. Form 700's for designated staff are not filed with the FPPC or the Registrar of Voters. Where are the Form 700's for designated staff tucked away?

Bill

## DIV 4

**From:** @yahoo.  
**Sent:** Tuesday, November 22, 2016 12:25 PM  
**To:** feedback  
**Subject:** General Comment

Dear ones,

Happy Thanksgiving!

Thank you so much, Joe, for sending Cody and ?? out this morning to Robertson. One concern is the young man with Cody did not close a gate behind him when they first came into the back yard. I have a dog but had her inside at the time. Next time (and when they left) they used another gate which I had open while waiting for them. Had to leave my bath to ck. gate and go out to close it.

A piece of information for Joe and Cody: I found the solution on-line - the shower handle was not all the way off. Pretty basic but we don't shower so didn't even think of that. Anyway, just a heads up for your guys/gals that if it's just the tub that would be the first line of defence.

God bless you all and thanks again for coming out.

Both young men very courteous and focused.

Sincerely, Carrie



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**General Information**  
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# State Water Board to Require Water Systems to Provide Lead Sampling in Schools

Submitted by Pamela Martineau on Wed, 11/23/2016 - 3:04pm in Water Quality All Water News



The State Water Resources Control Board is expected to notify public water systems in the coming days regarding a new initiative to provide lead sampling to schools.

Specifically, the State Water Board is expected to contact water systems the week of Nov. 28 with information about a statewide program that will require water systems to provide lead sampling services to K-12 schools upon request. The State Water Board also is expected to announce details about a webinar that will provide water systems with details about the initiative.

Additional information will be provided directly to ACWA member agencies as soon as it is available.

As a reminder, ACWA has communications resources for members about lead and drinking water safety on its website here.

For more information contact ACWA State Relations Analyst ADam Borchard at AdamB@acwa.com.

**<http://www.acwa.com/news/water-quality/state-water-board-require-water-systems-provide-lead-sampling-schools>**

# Little Hoover Commission to Study Tree Mortality in 2017

Submitted by Lisa Lien-Mager on Wed, 11/23/2016 - 1:12pm in Regulatory Affairs Water News



The Little Hoover Commission announced plans Nov. 22 to review the state's forest management in response to the tree mortality crisis that has affected claimed 102 million trees and counting in the Sierra Nevada.

The commission will conduct public hearings in 2017 and assess efforts by state agencies to manage the problem and coordinate with federal partners and public, private and nonprofit organizations.

The first hearing is scheduled for Thursday, Jan. 26, at the State Capitol. Subsequent hearings and public meetings will follow, Commission Chair Pedro Nava announced.

"California's forests are in mortal danger," Nava said. "Stands of dead and dying trees are becoming postcard views in Yosemite Valley and throughout entire mountainsides in the Sierra Nevada. It is imperative that state government agencies and their partners effectively manage this damage and prevent further destruction that will rob wildlife and future generations of Californians of their magnificent forest heritage."

The U.S. Department of Agriculture reported in November 2016 that approximately 62 million trees have died statewide on federal, state and private lands this year, up 114% from the 29 million that died in 2015. The tally brings to 102 million the number of trees that have died in California forests during years of drought and bark beetle infestations since 2010.

In October 2015, Governor Brown declared a state of emergency and issued an executive order in response to the crisis. A Tree Mortality Task Force was created to "coordinate emergency protective actions and monitor ongoing conditions to address the tree mortality resulting from four years of unprecedented drought and resulting bark beetle infestations across large regions of the state." As of May 2016, 10 counties and 28 state, eight federal, 10 utility and 23 nongovernmental entities had joined the task force to address the 19 directives in the executive order.

**<http://www.acwa.com/news/regulatory-affairs/little-hoover-commission-study-tree-mortality-issues>**



# State Releases Draft Plan for Long-Term Conservation

Submitted by Pamela Martineau on Wed, 11/30/2016 - 3:26pm in Water Supply Challenges All Water News



A group of state agencies today released a draft plan that seeks to make water conservation a way of life by providing standards for achieving long-term efficient water use.

The draft plan implements Gov. Jerry Brown's Executive Order B-37-16, which is an order to move the state towards using water more wisely, eliminating water waste, strengthening local drought resilience, and improving agricultural water use efficiency and drought planning.

"Californians rose to the challenge during this historic drought and recognized that conservation is critical in the face of an uncertain future. This plan is about harnessing the creativity and innovation that Californians have shown during the driest years in state history and making water conservation a way of life in the years ahead," said California Department of Water Resources Director Mark W. Cowin. "This plan will help make permanent changes to water use so California is better prepared for whatever the future brings."

According to a joint press release issued by the agencies, the plan represents a shift from statewide mandates to a set of conservation standards applied based on local circumstances, including population, temperature, leaks, and types of commercial and industrial use. For example, communities in hotter and drier climate zones will receive irrigation allowances that reflect evaporation levels.

The groups that worked to develop and release the plan are: DWR, the State Water Resources Control Board, the Public Utilities Commission, Department of Food and Agriculture and the Energy Commission.

The new plan's fundamental premise is that efficient water use helps all of California better prepare for longer and more severe droughts caused by climate change, officials said.

According to the press release, the newly released plan builds on the success of mandatory water restrictions during California's severe drought and develops long-term water conservation measures that will ensure all communities have sufficient water supplies. This will involve activities such as ensuring farmers plan and prepare for severe drought and permanently banning wasteful practices like hosing off sidewalks and driveways.

"The last few years provided the wake-up call of all wake-up calls that water is precious and not to be taken for granted," said Felicia Marcus, chair of the State Water Resources Control Board. "Californians rose to the occasion collectively during the drought. We can build on that success and now prepare for a

more unpredictable and disruptive future marked by a changing climate – and do it equitably and cost effectively.”

California is in the fifth year of drought with 75% of the state in severe drought conditions. Meanwhile, a new report from UCLA projects that the Sierra Nevada snowpack — one of California’s largest sources of water supply — is likely to drop 50% by the end of the century due to climate change.

Key water conservation efforts included in today’s plan include:

- Permanent bans on wasteful practices, such as hosing driveways and excessively watering lawns.
- Technical assistance and financial incentives for water suppliers to implement leak prevention, detection, and repair programs.
- Collecting information about innovative water conservation and water loss detection and control technologies.
- Requiring agricultural water suppliers to quantify water use in their service areas and describe measures to increase water use efficiency.
- Full compliance with water use targets for urban water suppliers by 2025.
- Planning and preparing for continued and future drought and water shortages.

Some of the actions described in the draft plan will require working with the Legislature on new and expanded state authority, while others can be implemented under existing authorities. All recommendations aim to achieve the main objectives of the Governor’s Executive Order B-37-16: use water more wisely, eliminate water waste, strengthen local drought resilience, and improve agricultural water use efficiency and drought planning.

In addition to taking action to implement this long-term water conservation plan, state agencies recognize the reality that most of California potentially faces a sixth year of historic drought. Therefore, in January the State Water Board will also consider whether it must extend its existing emergency water conservation regulations, as required by Governor Brown’s recent executive order. The State Water Board has already taken action to maintain mandatory reductions in communities that could not verify they have enough water supplies to withstand three more years of severe drought.

For more information on the development of the draft plan, visit <http://www.water.ca.gov/wateruseefficiency/conservation/>.

The state encourages the public to submit comments on today’s draft plan: “Making Water Conservation a California Way of Life Implementing Executive Order B-37-16”

Comments should be submitted to [wue@water.ca.gov](mailto:wue@water.ca.gov) no later than **Dec. 19, 2016**. Public comments will be posted at: <http://www.water.ca.gov/wateruseefficiency/conservation/comments.cfm>.

**<http://www.acwa.com/news/water-supply-challenges/state-releases-draft-plan-long-term-conservation>**

## Initial 2017 SWP Allocation Set at 20%

Submitted by Teresa McGaffic on Tue, 11/29/2016 - 2:56pm in Water News



The Department of Water Resources today announced an initial 2017 State Water Project allocation of 20%. The department expressed hope that winter storms will bring enough rain and snow for the allocation to increase but warned that drought conditions still exist.

Allocations are stated as a percentage of the total water requests from 29 public water agencies served by the SWP. As the wet season progresses, DWR adjusts the allocation based on precipitation, water storage and water content of the snowpack. Last year's initial allocation of 10% was raised to 60% by the time it was finalized in May.

DWR reports that Lake Oroville, the SWP's principle reservoir, contains 1,492,136 acre-feet as of Nov. 28, which is 70% of its historical average for that date. By comparison, on Nov. 28 of last year, it held only 933,371 AF, according to the California Data Exchange Center.

"October's storms and subsequent rainfall have brightened the picture, but we could still end up in a sixth year of drought," said DWR Director Mark Cowin. "Our unpredictable weather means that we must make conservation a California lifestyle," he advised.

DWR's California Data Exchange Center Web sites show current water conditions at the state's largest reservoirs and weather stations.

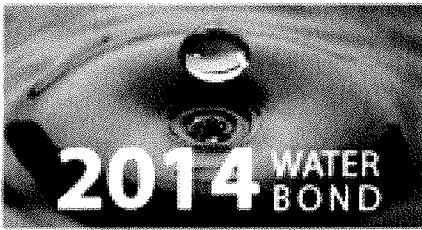
Reservoirs: <http://cdec.water.ca.gov/reservoir.html>

Precipitation: [http://cdec.water.ca.gov/snow\\_rain.html](http://cdec.water.ca.gov/snow_rain.html)

**<http://www.acwa.com/news/water-news/initial-2017-swp-allocation-set-20>**

# CWC Opens Public Comment on Prop. 1 Water Storage Regulations

Submitted by Pamela Martineau on Tue, 11/22/2016 - 10:22am in Infrastructure All Water News



The California Water Commission today opened the public comment period on the update of its draft regulations and other documents related to the Water Storage Investment Program. The comment period runs through 5 p.m. on Dec. 7.

The CWC is responsible for allocating \$2.7 billion in voter-approved bond funds for new water storage projects. Voters overwhelmingly passed Proposition 1 in November 2014 – a \$7.5 billion water bond that includes \$2.7 billion to pay for the public benefits of additional water storage projects. The draft regulations now available for public comment generally describe what is required of project applicants and how the CWC will quantify and compare the public benefits of proposed projects.

Proposition 1 defines public benefits as ecosystem improvements, water quality improvements, flood control benefits, emergency response, and recreational purposes.

The text of the revised draft regulations, related documents, and information about the public comment period can be found on the CWC website.

The nine-member CWC is charged with advising the director of the California Department of Water Resources, approving rules and regulations, and furthering development of state policies that support integrated and sustainable water resources management.

**<http://www.acwa.com/news/infrastructure/cwc-opens-public-comment-prop-1-water-storage-regulations>**

# How Water Use Has Declined With Population Growth

Written by Padma Nagappan on Friday, November 8, 2016 - in Water Deeply

Water use has not gone up as population increased in the last few years, contrary to popular opinion and expectations. How does this impact how urban water managers are planning?



Until 1980, water use went up steadily as population increased, necessitating investments in infrastructure and boosts to capacity. But since then, there has been a dramatic decoupling across the United States, with water use declining even as the population and the economy continued to grow.

The U.S. Geological Survey found that water consumption peaked at 440 billion gallons (1,665 billion liters) per day before dropping in 1980 and then remained steady through the 1980s and 1990s. It rose slightly in 2000, but significantly declined between 2005 and 2010, when it fell to 350 billion gallons (1,325 billion liters) per day. The USGS attributes this decline to better cooling methods that cut water use for thermoelectric power, and water use efficiencies in irrigation for farming, improved standards for many appliances and fixtures and laws requiring low-flow fixtures.

“Back in 1980 toilets used 6 gallons [23 liters] per flush, but now it’s 1.2 gallons [4.5 liters] in California. These standards have allowed our economies to grow while our communities grew too,” says Heather Cooley, director of the Water Program at the Pacific Institute. “Another reason is the passage of the Clean Water Act, which tried to reduce impacts of waste discharge, that drove efficiency improvements in industry.”

But despite the public and industry adopting efficiency practices, most of us continue to think water use will keep increasing as population grows, so water agencies have planned for it.

“Emphasis has been on building more supply to meet increasing demand. But if water use remains stagnant, that might mean we invest in facilities we ultimately don’t need, or pay for supplies we don’t need,” Cooley points out.

## Improve Demand Forecasting

These developments, and the USGS data that showed declines across the board, prompted Cooley and her colleagues to study these trends and put together a community guide for evaluating future urban water demand.

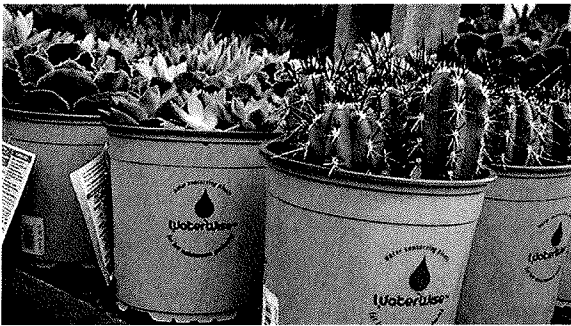
After examining water use data and water agencies' urban water plans, Cooley and her colleagues found that while water use stayed stagnant or declined in some areas, many utilities were projecting increased water use in the future, which shows they're not allowing for efficiency improvements and so they could be overestimating demand, which could increase costs for rate payers for water they may not use.

"So we need to improve demand forecasting approaches," Cooley says. "None of us has a crystal ball, but we can look at trends for the last 20 to 30 years, and use that to calculate water needs, which will help us to develop a much more sustainable water future for California."

Part of that forecasting is planning for climate change and its impact on demand, something that she says many water agencies have yet to incorporate successfully.

For each area, water forecasting can look very different depending on local variables.

#### Water Use Stays Steady in L.A.



A Lowes in San Bruno, California, sells "waterwise" plants to help residents use less water in their gardens. Mandates and incentives to conserve have helped keep water use steady or declining even as population has increased. (Tara Lohan)

The Los Angeles Department of Water and Power (LADWP) has seen the city keep its water demand at about the same level for the last 45 years, despite population going up by 1 million people, thanks to conservation measures, incentives and mandates to cut down on use and rebates to switch to more efficient appliances.

"When actual water demands are lower than our projections, the reasons are not necessarily a reflection of overplanning," says Martin Adams, interim COO of LADWP. "It has more to do with responses coming from the rapidly changing state and local conservation mandates, constantly evolving state legislation on water-efficiency requirements for indoor appliances and outdoor landscape, and impacts and responses to prolonged drought, which we may not be able to forecast."

Like most water agencies, LADWP has an urban water management plan that it updates every five years, and adapts as conditions change. Asked if it will change how it plans for the future given the downward trend in water use, Adams said it will take into consideration all factors that affect demand forecasting, including population growth, economy, price of water, climate change impacts and operational flexibility.

"We believe our planning methodology has and will continue to serve the city well, and we will continue to update our plans regularly to adapt to evolving conditions," Adams says.

## Progressive Measures Lead to Big Drop in San Francisco

Up north in San Francisco, the city's Public Utilities Commission (SFPUC), home to its water, sewer and power departments, has seen water use drop 17 percent for its retail customers between 2005 and 2015, with per capita use falling from 61 gallons per day to 44 gallons per day (230 to 167 liters per day) – at the same time that its population increased by 10 percent.

“These numbers are not an accident,” says Paula Kehoe, director of water resources with SFPUC. “We attribute it to decades of efforts in water conservation and education programs.”

San Francisco also has in place its own ordinances, such as a requirement that if a home is resold, it has to have low-flow fixtures in place before the sale goes through – a rule that ensures older homes (with water guzzling fixtures that might otherwise not get upgraded) also toe the line.

The utility recently completed its 2015 urban water management plan that forecasts for the next 25 years, and it's projecting a slight increase in water demand as a result of increased jobs and population.

“Part of the reason is that we've been doing conservation for over two decades here, so we don't have as much of an ability to conserve as we look to the future,” Kehoe explains. “What's important to note is that our per capita will remain the same from now through 2040.”

But does this increased demand call for increasing capacity?

“No, it calls for continuing conservation, converting the remaining older fixtures, recycling water and diversifying supplies,” she says. “We've also taken other steps to use water as efficiently as possible. We collect and treat all black water in our SFPUC buildings, and use it for toilets, so we've been able to establish a program to get other buildings to do this.”

A 2015 ordinance requires new developments with more than 250,000 square ft (23,000 square meters) to assess gray water that would be produced on site and offset that supply for toilet flushing and irrigation.

## Engaging the Public

Kehoe says the agency has had a progressive outlook, and always engages the public in its long-term planning, since part of the plans involve asking the public to take action and reduce water use – outreach that the Pacific Institute's Cooley says other water agencies need to do.

It has to be a way of life, so public outreach is key to making it happen, says Suzanne Gautier, communications and public outreach manager with SFPUC.

“We have campaigns on newspapers, TV, radio, the Muni and public transit,” Gautier says. “Some of those partnerships have included many of our hotel customers. Water use here is not just a San Francisco conversation, but elsewhere too, so our model can be used by other communities.”

Despite gains made by cities like San Francisco, we still have a long way to go, given the ongoing drought and uncertainties with climate change.

Cooley says that while lower water use shows we've made huge strides in efficiencies, there's always room for improvement and opportunities to look at recycled water, stormwater capture and better management of groundwater, which is severely overdrawn in California.

"If you look at our water use compared to Australia or Israel, we are still using a lot more than what they are. We've come a long way, so we should celebrate the success we have had, but we need to keep doing more," Cooley concludes. "The good news is there is a lot of opportunity to improve."

**<https://www.newsdeeply.com/water/articles/2016/11/08/how-water-use-has-declined-with-population-growth>**



# Twin Tunnels: City Warns of Harm to Drinking Water

Submitted by Alex Breitler on November 10, 2016 - 6:18 pm

Gov. Jerry Brown's Delta tunnels could harm the quality of Stockton's drinking water to the extent that water rates would need to be doubled or tripled, a city official testified on Thursday.

That's far from certain and wouldn't happen for decades.

But the tunnels are inching closer to approval, and the state's voluminous reports on the project are lacking in detail, the city says.

"We don't know exactly how these changes will affect Stockton's water supply because that information was not included," Bob Granberg, assistant director of the Municipal Utilities Department, told the State Water Resources Control Board.

"However, based on my knowledge of drinking water treatment plant and wastewater treatment plant operations, it is my opinion that even seemingly small increases in undesirable water quality constituents ... can have adverse impacts," Granberg said.

For nearly a decade, the city has expressed concern how the tunnels might affect Stockton's new Delta drinking water plant, which serves about 182,000 people and at \$220 million was the largest capital improvement project in the city's history.

The plant allowed the largest city in the Delta to drink from the river estuary for the first time, while also reducing the city's reliance on precious groundwater.

But if the tunnels siphon away a share of the Delta's freshwater flow from the Sacramento River, the city's fear is that the quality of the water diverted at the intake on Empire Tract may decline.

Granberg's brief testimony on Thursday came as the state board holds extensive hearings to determine if any water users with legal rights — including Stockton — would be harmed by the operation of the tunnels.

Granberg raised several concerns:

- Higher concentrations of chlorides (salt) could require construction of a reverse osmosis treatment system. That could double or triple rates, he said.
- Another substance of concern, bromide, could require the installation of giant filters and necessitate a 30 percent rate hike, Granberg said. The city's switch to chloramines to disinfect the water earlier this year was intended to be a cheaper alternative to the filters.
- Toxic Microcystis bacteria, the kind of "blue-green algae" that has fouled the downtown waterfront in recent years, may threaten the city's drinking water if the Delta becomes more stagnant.

State reports downplay these concerns. Blue-green algae may indeed become worse in decades to come, but that will be a result of sea level rise and warming temperatures — not the tunnels, the environmental documents say.

As for bromides, the state estimates that the chemical will indeed increase in the Stockton area, but by less than 1 percent — a “minimal” change. Nor are chlorides predicted to be a big problem.

It’s how these conclusions were arrived at, however, that the city questions.

The state uses models to predict complex changes in water quality. And the state has acknowledged that it did not provide any analysis of those models for the area where Stockton draws its water.

The prediction of less than a 1 percent increase in bromide concentrations applies to Buckley Cove, at the west end of March Lane. That’s nearly 10 miles from the intake to the drinking-water plant.

“Have the petitioners provided information regarding impacts on water quality from the (tunnels) at the location of Stockton’s intake?” local attorney John Herrick asked Thursday.

“No, they have not,” Granberg said.

“Have they provided information with regards to areas within a mile of the intake?” Herrick asked.

“No, they have not,” Granberg said.

A state expert testified earlier this fall that water users can use the data from the models to determine on their own what the impacts might be. Questioned by an attorney from the Department of Water Resources, Granberg acknowledged Stockton has done no such independent analysis.

State officials have said repeatedly that the tunnels are needed to stabilize water supplies from the Bay Area to San Diego, and that the tunnels can be operated in a manner that still provides enough fresh water for users within the Delta.

“We are committed to meeting our obligation to protect beneficial uses of water,” DWR Director Mark Cowin said earlier this year at the start of the ongoing hearings, “and we have a proven track record of doing so.”

— Contact reporter Alex Breitler at (209) 546-8295 or [abreitler@recordnet.com](mailto:abreitler@recordnet.com). Follow him at [recordnet.com/breitlerblog](http://recordnet.com/breitlerblog) and on Twitter [@alexbreitler](https://twitter.com/alexbreitler).

**<http://www.recordnet.com/news/20161110/twin-tunnels-city-warns-of-harm-to-drinking-water>**

# Is Sites Reservoir a Savior for the Sacramento Valley – or a Delta Tunnels Project in Disguise?

Submitted by By Ryan Sabalow and Dale Kasler on 11/13/2016 – 4:00 am in The Sacramento Bee

MAXWELL - An hour north of Sacramento, in a ghost town tucked into a remote mountain valley, California is poised to build a massive new reservoir – a water project of a size that hasn't been undertaken since Jerry Brown's first stint as governor in the 1970s.

Sites Reservoir, all \$4.4 billion of it, represents an about-face in a state where drought has become the norm and water users are told to scrimp and save. Promoters of Sites say the reservoir would significantly enhance water supplies for the rice farms of the Sacramento Valley as well as the cities of Southern California. The fact that it would be built just outside tiny Maxwell, in a poor and often-overlooked area of the state, has become a point of fierce regional pride.

"Instead of the water going out to sea, the water will remain here," said state Sen. Jim Nielsen, R-Gerber, during a recent media event at the Sites operations office a few miles east of the reservoir location. "That is a significant policy change."

But Sites is far from a done deal, despite support from the Brown administration.

While the Sacramento Valley's major farm-irrigation districts have pledged to fund much of the project, they're also about to ask the state to pay up to half of the reservoir's cost, via bond money supplied by voter-approved Proposition 1. Because the state is unlikely to approve the request in full, Sites' backers are also courting investment dollars from a dozen water agencies outside the Sacramento Valley, including the powerful Metropolitan Water District of Southern California. For every dollar they contribute, these agencies would be entitled to a share of the water stored in Sites.

That's where it gets trickier. At least some of those agencies might not be as likely to invest in Sites unless the state builds the Delta tunnels, Brown's enormously controversial \$15.5 billion project to smooth the delivery of Northern California water to regions south of the Sacramento-San Joaquin Delta.

Funding for the tunnels is in some doubt, and without them the water agencies south of the Delta have less reason to support Sites. For instance, Metropolitan says it's very reluctant to invest in Sites if it can't be assured it will be able to pull its water out of the reservoir when it wants to and ship it through the Delta.

"Without tunnels to move any water ... it probably doesn't pencil on that alone," said Jeff Kightlinger, Metropolitan's general manager.

Kightlinger's stance raises red flags for activists who are vigilant about Northern California's water. They say Sites is a wolf in sheep's clothing – a benign-looking project that's really a silent partner to the tunnels proposal and would accelerate the delivery of the Sacramento Valley's precious water to the parched regions of the south state.

“Sites Reservoir ... is definitely tied to using and operating the Delta tunnels,” said Barbara Barrigan-Parrilla, executive director of Restore the Delta, probably the fiercest opponent of Brown’s Delta tunnels project. “It will become about selling water.”

As evidence, activists point to a draft financial analysis commissioned by the state that said the tunnels project, officially called California WaterFix, would boost the economic value of Sites by roughly \$1.5 billion. State officials acknowledge that the tunnels would make Sites more attractive.

“With California WaterFix in place, that improves the potential to move water from Sites Reservoir to water users south of the Delta, so therefore, the economic potential of the project is improved,” said Mark Cowin, director of the Department of Water Resources, the state agency leading the charge for Brown’s tunnels plan.

How could Sites be connected to the Delta tunnels? Water must pass through the Delta to move south, and the estuary has become the great bottleneck of California’s vast delivery system. Because of dwindling fish populations and other environmental woes, the giant government pumps in the south Delta often get throttled back when they’re scheduled to deliver water, leaving millions of gallons to wash out to sea.

Brown’s office pitches the tunnels as a way to allow the pumps to run more reliably, while moderating the environmental damage caused by the pumps. With the tunnels in place, south-of-Delta water agencies would have more opportunities to tap into water they’ve stored at Sites. Additional reliability also would allow Sites’ north state investors more windows in which to sell any extra water stored in Sites they don’t need.

Sites’ backers say the reservoir stands on its own – a vital infrastructure project that would deliver considerable benefits for the state’s often strained water network.

“It’s immaterial whether the tunnels are built or not,” said Jim Watson, general manager of the Sites Project Authority, the entity established by valley irrigation districts and county governments.

In addition, the reservoir’s backers say Sites – named for the ruins of a town where the project would be located – would serve Sacramento Valley water interests first and foremost. “We will have first call on the water,” said Lewis Bair of Reclamation District 108, an agricultural water agency about 20 miles south of Maxwell.

With or without the tunnels, a major new reservoir north of the Delta is tempting to water districts all over. Watson said investors, regardless of where they are, can expect to pay \$600 an acre-foot per year for a share of the reservoir. An acre-foot is 326,000 gallons.

These days, desperate south-of-Delta water managers frequently offer \$1,000 or more per acre-foot on the open market, so Sites is seen as a relative bargain.

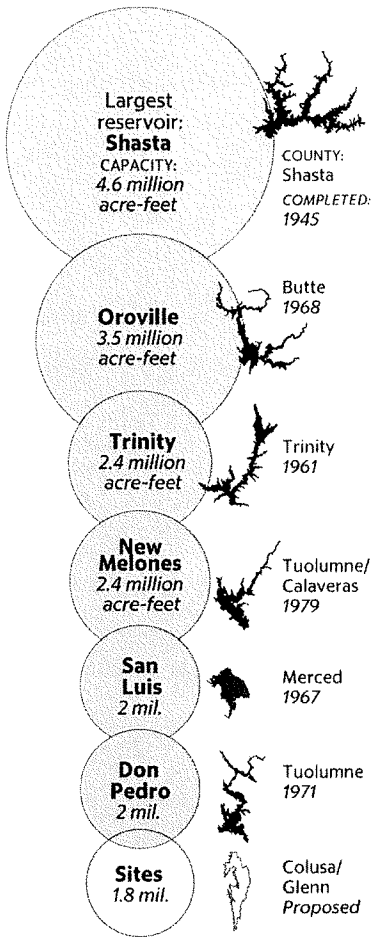
“Sites becomes very attractive even without the tunnels,” said Ara Azhderian, water policy administrator at the San Luis & Delta-Mendota Water Authority, an umbrella agency that delivers water to the Silicon and San Joaquin valleys.

With a capacity of up to 1.8 million acre-feet, Sites would become California’s seventh-largest reservoir. It would be the largest built since New Melones was completed on the Stanislaus River in 1979.

To get state funding, the Sites Project Authority will apply early next year to the California Water Commission, an obscure state agency in charge of allocating Proposition 1 dollars. The decision is likely to come in 2018, and construction wouldn't begin until several years later.

**LARGEST RESERVOIRS**

Sites would become California's seventh largest reservoir.



Sources: California Department of Water Resources, U.S. Bureau of Reclamation

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Watson said it's highly unlikely Sites will get the full \$2.2 billion it's seeking. Proposition 1 set aside \$2.7 billion for water infrastructure projects, and Sites will be competing against proposals such as the \$2.6 billion Temperance Flat dam on the San Joaquin River.

If the state does contribute money to Sites, it would gain control of a good chunk of the reservoir's water supply. That could be used to improve salmon and Delta smelt populations and serve other environmental needs. The amount of water under state control would depend on the size of the state's financial commitment.

Sites' backers say the potential for environmental water makes the project a win-win, a rarity in California water.

“Having that increment of water during these dry years ... wouldn’t that be a blessing for everything – for fish, for birds, for people, for farms, right?” asked David Guy, president of the Northern California Water Association. “Where else do you see that in the state of California? Where else do you see a solution that’s sitting there of this magnitude that can do as much as that?”

Unlike most of California’s major reservoirs, Sites would be an “off-river” project. Instead of damming a river, engineers would run an underground pipeline 14 miles from the Sacramento River to the reservoir’s proposed location: a 14-mile-long mountain valley that straddles Glenn and Colusa counties.

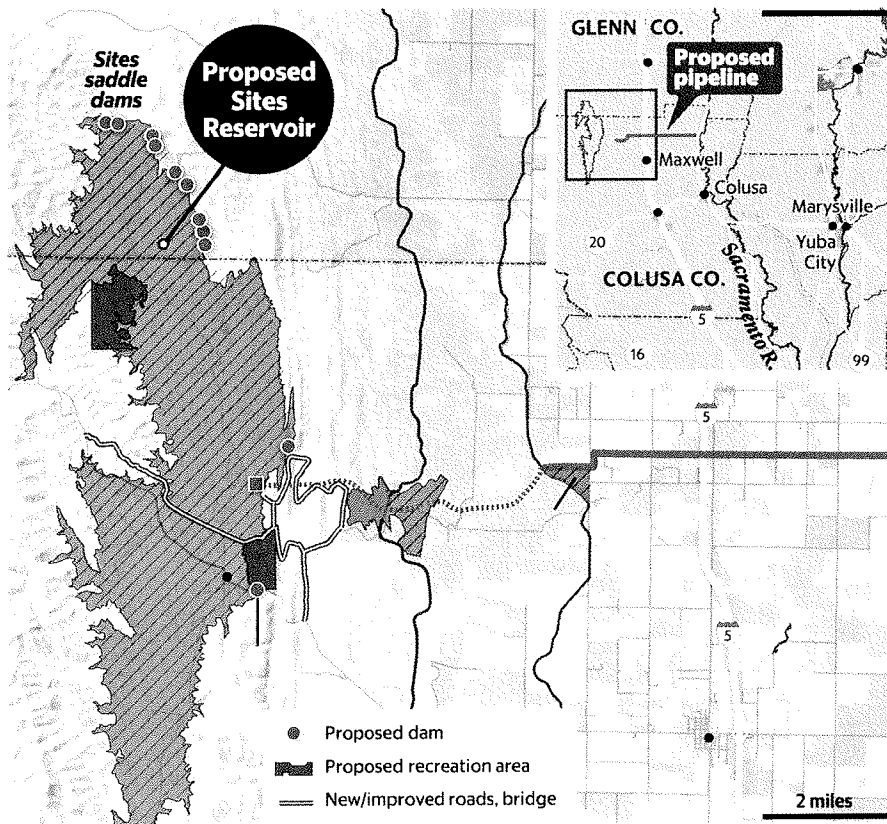
Sites backers say water would be diverted only when the river is roaring with peak flows, which would ensure fish and wildlife aren’t harmed. Watson said the reservoir would probably have about 500,000 acre-feet available in an average year, less than one-third of its capacity.

While environmentalists usually oppose big water projects, some say they would accept Sites if its backers can prove it would be used to help the environment. And some experts say as far as these things go, Sites has a fairly easy case to make.

“It’s a relatively straightforward environmental benefit relative to other kinds of storage projects that are out there,” said Ellen Hanak, a water expert at the Public Policy Institute of California.

### Sites plan

The proposed Sites reservoir west of the town of Maxwell in the Coast Range mountains would flood the Antelope Valley in Colusa and Glenn counties. The reservoir would be filled by using two existing canals and a pipeline that would divert Sacramento River water during high flows from large winter storms.



Sacramento Valley farmers are anxious to see the construction of Sites. While many valley farmers enjoy some of the most senior water rights in California, they say the drought has put their supplies at risk. Environmental problems, such as dwindling salmon populations, frequently interrupt delivery of water they need for rice and other crops, said rice grower Don Bransford, a Sites Authority board member and president of the Glenn-Colusa Irrigation District.

Plus, there's fear in this Republican-dominated and sparsely populated region that the urban Democrats who control California's politics will someday wrest water away from Sacramento Valley farms to serve cities and the environment.

"Our water rights are as strong as anybody in the state ... but the problem is people aren't respecting that as much anymore," said Rep. Doug LaMalfa, a Butte County rice farmer and Republican who represents the area in Congress.

Building the reservoir would mean flooding about 60 ranches and homesteads. Landowners would be compensated for their property. Among them is Mary Wells, a fifth-generation Sacramento Valley farmer. She sits on the Sites board of directors and is one of its most outspoken advocates.

Wells, 71, said she'll be heartbroken to leave the home where she and her recently deceased husband raised a family. But she believes Sites is a necessity if her children and grandchildren are going to be able to keep the family farming tradition going.

"This is really not for me. I hope to see it. But it is really for Generation 6 and Generation 7," she said on a recent weekday, sitting on a weathered wooden fence outside her home. "It's for the better good, and it's for the continuum of the family."

**<http://www.sacbee.com/news/state/california/water-and-drought/article114201138.html>**

## Tunnels Spawn Algae Worries

Submitted by Alex Breitler on Saturday, November 19, 2016 – 1:04 PM on [www.recordnet.com](http://www.recordnet.com)

The governor's proposed Delta tunnels could worsen toxic algae blooms like the one that stunk up Stockton's downtown waterfront this year, according to testimony last week from an expert offered by San Joaquin County.

The testimony was one aspect of a multi-pronged attack by the county and Delta farmers against the \$15 billion project, which is the subject of extensive ongoing hearings in Sacramento.

Environmental scientist Erik Ringelberg said that by diverting water from the Sacramento River above the Delta, the tunnels would reduce the amount of sediment floating down Delta channels which, in turn, would allow sunlight to more easily penetrate the water. Bright sunlight speeds up algae growth.

He also said the diversion could warm water temperatures, which also fosters algae growth, and that the tunnels would reduce flows needed to break up the floating algae colonies.

"It's essentially a triple whammy," Ringelberg said.

To get a permit to build the tunnels, the state must demonstrate that no other legal water users will be harmed. Officials have said they will continue to meet water quality standards, which will protect other water users. Ringelberg, however, argued that the Delta may still have an algae problem even if the standards are met, and said there is a "high likelihood" that other water users will be affected.

"There's no scientific uncertainty about the project's impact on algal formation. There isn't," Ringelberg said.

State environmental reports say that algae blooms may indeed increase in the future, but that will be a function of warmer temperatures and sea level rise due to climate change — not the tunnels

During a cross-examination of Ringelberg, an attorney for the state Department of Water Resources said the agency's experts found the tunnels won't significantly change the velocity of the river flows in a way that fosters algae growth, and that ambient air temperatures are the primary driver of water temperatures in the Delta.

The attorney also said that a certain amount of water would be required to remain in the Sacramento River every month of the year, ensuring water will continue to flow into the Delta.

Separately, an expert hired by central and south Delta farmers testified that the tunnels will make water in the central and south Delta saltier up to 80 percent or 90 percent of the time during dry years, and that water levels on the Sacramento River could drop by nearly 3 feet as far as nine miles away from the tunnels intake, potentially making it harder for diverters to pump water.

And University of the Pacific economist Jeff Michael testified that Delta farm revenue will decline even if the state meets water quality standards as promised. He put a "conservative estimate" at \$12 million per year, a relatively modest hit.



But, Michael added in written testimony, “The impacts of decreased agricultural production go beyond a loss of income to the farmers. It would affect employees, suppliers, tax revenues and ripple through the community.”

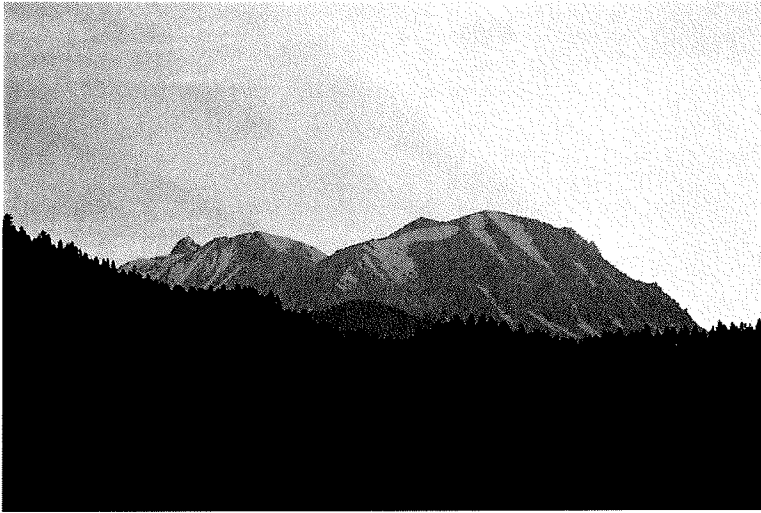
Presented with evidence that San Joaquin County’s agricultural revenue has grown over the past decade while the saltiness of the Delta has varied significantly, Michael said that many factors — including recent record-high prices for some crops — can influence farm revenue.

— Contact reporter Alex Breitler at (209) 546-8295 or [abreitler@recordnet.com](mailto:abreitler@recordnet.com). Follow him at [recordnet.com/breitlerblog](http://recordnet.com/breitlerblog) and on Twitter [@alexbreitler](https://twitter.com/alexbreitler).

**<http://www.recordnet.com/news/20161119/tunnels-spawn-algae-worries>**

# Sierra Snow Cover Could Drop 50 Percent By The End Of The Century Due To Climate Change

Submitted by Sanden Totten on 11/28/2016 - 2:37pm



The all-important Sierra Nevada snowpack could be dramatically cut by the end of the century if greenhouse gas emissions aren't reduced, according to a new analysis from UCLA.

Researcher Alex Hall used a complex computer model to look at what would happen to the Sierra Nevada mountains if these pollutants kept entering our atmosphere at the current rate.

He found that by the end of the century, average temperatures could climb by 7 to 10 degrees Fahrenheit and average land area covered by snow could fall by 50 percent.

Even worse, this reduction in snow would likely fuel more warmth, since as snow melts it exposes land. Since land isn't as reflective as snow, it absorbs more heat and adds more warmth to the area around it.

Hall said it's a feedback loop that spells trouble for the snowpack.

"The climate effects of snow and the amplification of warming associated with the retreat of snow has big implications for water resources as well," he said.

That's because with less snowpack, there's less water trickling down from the mountains in the spring and summer, when cities and towns need it most.

The analysis was done by using powerful climate models focused just on the Sierra Nevada ranges, rather than the entire globe. That allowed Hall's team to get extremely precise predictions for the region.

In particular, this new study forecasts more warming in the mid-elevation areas between 4,000 and 7,000 feet than previous studies.

Hall said there is hope. His team modeled climate changes under a carbon-cutting plan like the one laid out in the Paris climate accord.

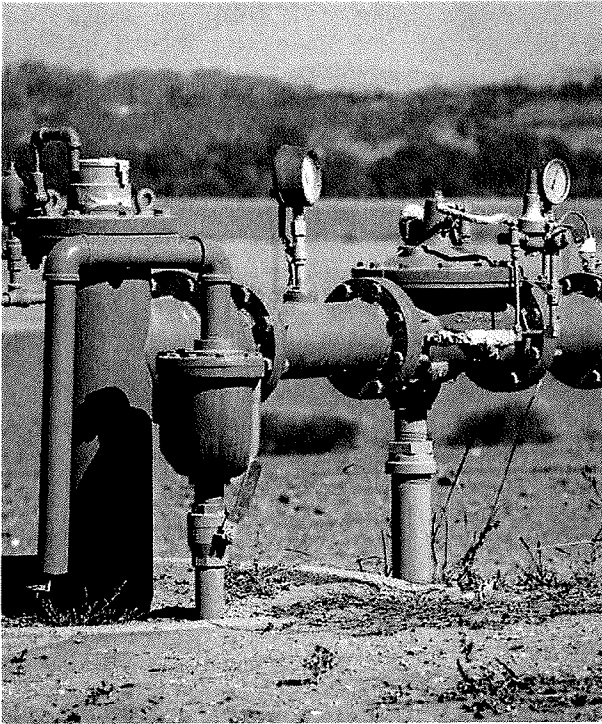
They found that in such a scenario average temperatures would only be 4 to 5 degrees Fahrenheit warmer and the snow-covered areas would be cut by only 20 to 30 percent.

He added that the Earth is "hanging in the balance right now," depending on how leaders around globe chose to move forward on carbon-cutting goals.

**<http://www.scpr.org/news/2016/11/28/66446/sierra-snowpack-could-drop-50-by-the-end-of-the-ce/>**

# Modeling Groundwater: Key Step for Implementing Landmark CA Water Law

Submitted by Devon Ryan on 11/30/2016 – Water in the West - News



Historic legislation intended to reshape how California manages a valuable water source is currently being implemented. However, political and physical complexities – including groundwater basin boundaries that span multiple jurisdictions, complex subsurface geology, and limited information about the resource – present daunting challenges to the 2014 Sustainable Groundwater Management Act (SGMA).

A new report from Stanford’s Water in the West program provides a framework for developing groundwater models under SGMA.

“Groundwater models are an incredibly powerful tool for informing water management when developed appropriately,” said Tara Moran, Sustainable Groundwater Program Lead for Water in the West and author of the report. “They can provide critical information and insight into groundwater management in numerous ways. They can inform and educate stakeholders, improve an agency’s understanding of the groundwater system, identify data gaps, and enable water managers to explore management scenarios.”

Successfully developing groundwater models under SGMA depends on making their development accessible and transparent whenever possible, according to the analysis. The report recommends using consistent datasets provided by the state, open-source model codes, and expert reviewers to ensure model consistency and improve the state’s ability to evaluate models.

The report also stresses the need to develop models of the hydrogeologic system as a whole rather than for individual groundwater basins or subregions within them. Doing so will reduce conflicts over boundary issues, enable cost sharing between agencies and ensure consistency in model assumptions.

“Given the critical role that models will play in informing groundwater management decisions under SGMA, it is important that model development be coordinated between agencies,” said Moran.

The California Department of Water Resources has already used the report’s initial findings to inform the development of best management practices to support implementation of the historic groundwater law.

The report is the product from the first workshop in a four-part workshop series held at Stanford University. The workshop focused on groundwater model development under SGMA. It encouraged participants from federal, state and local agencies, non-government organizations, academia and the private sector to discuss the role of groundwater models in water management decision and data-related issues.

*Projecting Forward: A Framework for Groundwater Model Development Under the Sustainable Groundwater Management Act*, was developed with support from Stanford’s Water in the West program, the Martin Daniel Gould Center for Conflict Resolution at Stanford Law School and the Center for Collaborative Policy at California State University, Sacramento.

**<http://waterinthewest.stanford.edu/news-events/news-insights/modeling-groundwater-key-step-implementing-landmark-ca-water-law>**

# The Coming Droughts of California in 2017

Submitted by Jay Lund on 12/01/2016 - 2:01pm News Deeply



California is a big, diverse place.

California probably will experience droughts this year of different types in different places, and no drought at all in some places, simultaneously. Even if conditions this year are very wet, with flooding, parts of California will have drought issues. (This is what makes California a great place to work on water problems.)

The first two months of this new water year have been wetter than average in the north and much drier than average in the south. But it is still early days.

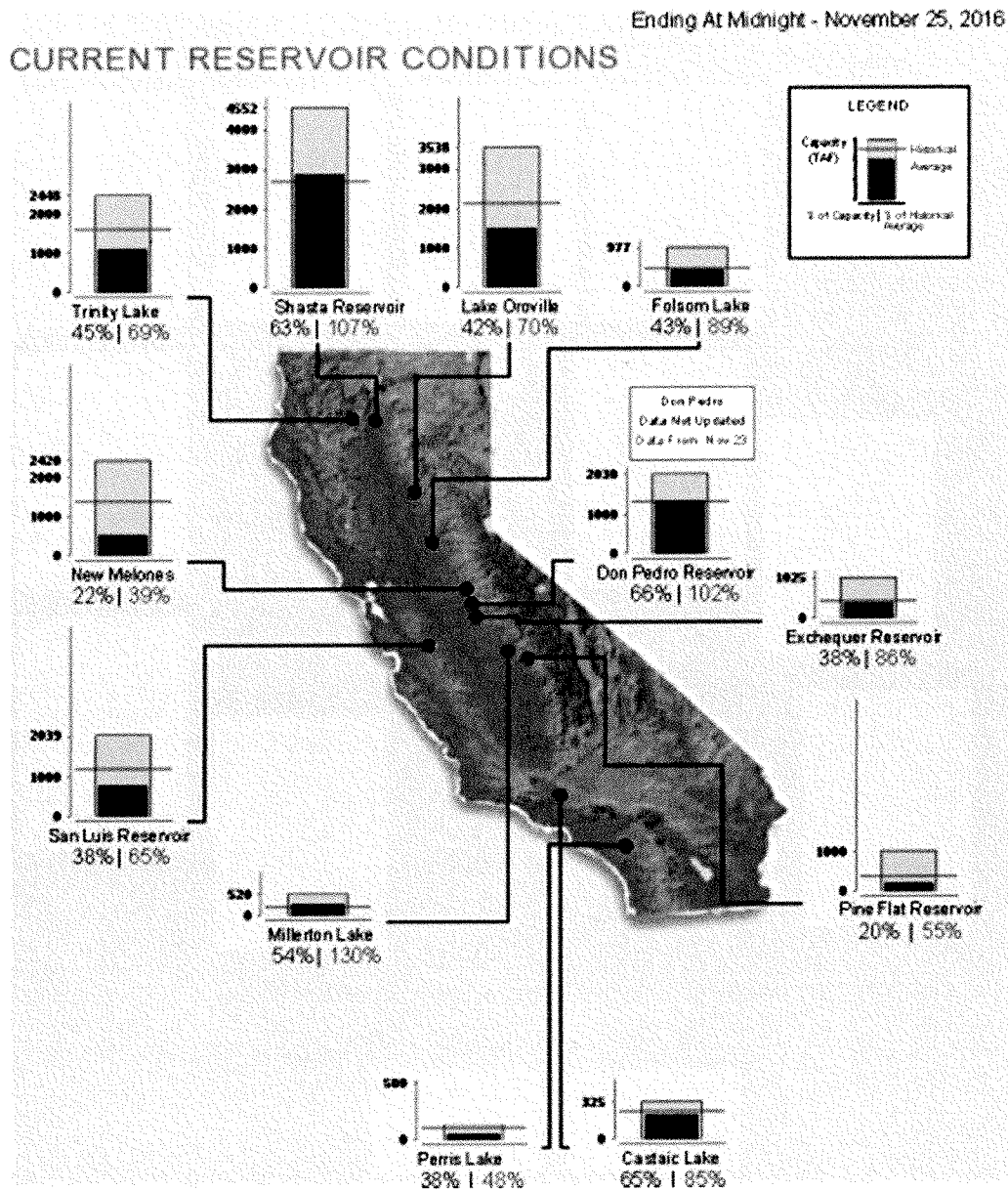
## **Reservoir and Groundwater Storage Conditions**

Reservoir storage in California is now about 2.5 million acre-feet (3.08 billion cubic meters) below historical averages for this time of year. (This is 0.8 million acre-feet – 987 million cubic meters – better than two months ago.) Some major reservoirs are below average, particularly Oroville, Trinity, San Luis, New Melones and the Tulare Basin. Cachuma Reservoir near Santa Barbara is in the worst shape at 7 percent of capacity or 10 percent of average storage for this time of year.

Groundwater will be recovering in northern parts of California, with less recovery in large parts of the southern Central Valley. (Can anyone suggest a set of online well elevation records in different parts of the Central Valley to create a groundwater storage index?)

October was a nice wet month, so soil moisture in much of the Sierras and Central California is improving, but remains in drought conditions (worsened by unusually high temperatures). Conditions for forests and native fishes remain depressed and will see drought impacts for years after hydrologic conditions improve.

This seemingly bad situation is substantially better than in this time a year ago. Something to be thankful for.



Major reservoir storage in California on November 25, 2016. (Calif. Dept. of Water Resources)

## **Precipitation Conditions**

North of the Delta, so far we have above-average precipitation and improving storage in most Sacramento Valley reservoirs. In the San Joaquin Valley, this water year's precipitation is about average so far. But further south, the Tulare Basin has less than 50 percent of average precipitation so far this water year. And temperatures remain higher than average. So far, no snowpack – it is still a bit early.

## **Thoughts for the Coming Drought Year**

So far, overall drought conditions are mostly improving, but unevenly. We won't really know how wet this year will be until late March. In October, this blog looked at overall drought conditions from several perspectives and statistical projections for the new water year. (This month's election reminded us of the reliability and unreliability of statistical projections.)

Even if this year is wet, parts of California will experience drought or residual effects from five years of drought. The California Drought of 2017 will likely take several forms:

1. Dry residential and community wells drought, affecting rural areas with lowered groundwater tables. Many of these household wells and small systems are in a precarious state even in wet years.
2. Drought of surface irrigation water. Here surface water is unavailable and farmers mostly increase groundwater pumping, often at a higher cost and increasing regional groundwater depletion. This drought is more likely south of the Delta. Less surface being less available than irrigation demands south of the Delta is now a normal condition, due to a host of hydrologic, infrastructure, groundwater sustainability, economic and environmental factors, worsened by drought.
3. Higher groundwater pumping cost drought. Even if this year is wet, many areas that pump groundwater will still face higher pumping costs for some years or longer from the drought's cumulative groundwater depletions.
4. Forest drought (including snow drought). Here, lack of soil moisture or its more rapid depletion with higher temperatures affects forest ecosystems.
5. Ecosystem drought. Problems for some fish are likely to continue even if the year is wet, due to drought-depletion of some native fish populations. Dry conditions could also affect waterfowl. A drought of cold water in some reservoirs might affect both fish and farmers disrupted by reoperation of reservoirs.
6. Urban drought. So far, most urban areas have pretty healthy water supplies. The big exception is Lake Cachuma in the Santa Barbara area, now at 10 percent of its long-term storage for this time of year.
7. We could easily see some drought surprises. The wet season is still young. Welcome to California water, where anything can happen.

It is best to prepare for another drought year (and prepare for floods as well).

Here are some websites to watch, mostly from the California Department of Water Resources' fine California Data Exchange Center (CDEC) at <http://cdec.water.ca.gov>.

## **Reservoir Levels:**

- <http://cdec.water.ca.gov/cgi-progs/products/rescond.pdf>



- <http://cdec.water.ca.gov/cgi-progs/reservoirs/RES>

**Snowpack (none yet):**

- <http://cdec.water.ca.gov/cdecapp/snowapp/sweq.action>
- [http://cdec.water.ca.gov/cgi-progs/snow/PLOT\\_SWC](http://cdec.water.ca.gov/cgi-progs/snow/PLOT_SWC)
- <http://cdec.water.ca.gov/cgi-progs/products/swccond.pdf>

**Precipitation:**

- [http://cdec.water.ca.gov/cgi-progs/products/PLOT\\_ESI.pdf](http://cdec.water.ca.gov/cgi-progs/products/PLOT_ESI.pdf) – Sacramento Valley
- [http://cdec.water.ca.gov/cgi-progs/products/PLOT\\_FSI.pdf](http://cdec.water.ca.gov/cgi-progs/products/PLOT_FSI.pdf) – San Joaquin Valley
- [http://cdec.water.ca.gov/cgi-progs/products/PLOT\\_TSI.pdf](http://cdec.water.ca.gov/cgi-progs/products/PLOT_TSI.pdf) – Tulare Basin

**Weather:**

- <http://weatherwest.com/>

This story first appeared on California Water Blog, a publication of the UC Davis Center for Watershed Sciences.

Jay Lund is Director of the UC Davis Center for Watershed Sciences and Professor of Civil and Environmental Engineering at UC Davis.

**<https://www.newsdeeply.com/water/articles/2016/12/01/the-coming-droughts-of-california-in-2017>**