

SOLANO COUNTY WATER AGENCY



BOARD OF DIRECTORS MEETING

BOARD OF DIRECTORS:

Chair:
Director John D. Kluge
Solano Irrigation District

Vice Chair:
Supervisor Skip Thomson
Solano County District 5

Mayor Elizabeth Patterson
City of Benicia

Mayor Thom Bogue
City of Dixon

Mayor Harry Price
City of Fairfield

Director Ryan Mahoney
Maine Prairie Water
District

Director Dale Crossley
Reclamation District No.
2068

Mayor Ron Kott
City of Rio Vista

Supervisor Erin Hannigan
Solano County District 1

Supervisor Monica Brown
Solano County District 2

Supervisor Jim Spering
Solano County District 3

Supervisor John Vasquez
Solano County District 4

Mayor Pete Sanchez
City of Suisun City

Mayor Len Augustine
City of Vacaville

Mayor Bob Sampayan
City of Vallejo

GENERAL MANAGER:

Roland Sanford
Solano County Water
Agency

DATE: Thursday, December 13, 2018

TIME: 6:30 P.M.

PLACE: Berryessa Room
Solano County Water Agency Office
810 Vaca Valley Parkway, Suite 203
Vacaville

1. **CALL TO ORDER**

2. **PLEDGE OF ALLEGIANCE**

3. **APPROVAL OF AGENDA**

4. **PUBLIC COMMENT**

Limited to 5 minutes for any one item not scheduled on the Agenda.

5. **CONSENT ITEMS** *(estimated time: 5 minutes)*

(A) **Minutes:** Approval of the Minutes of the Board of Directors meeting of November 8, 2018.

(B) **Expenditure Approvals:** Approval of the November 2018 checking account register.

(C) **Social Security Tax on Board Member per diem:** Authorize Water Agency to pay Social Security Tax on Board member per diem allowances.

(D) **Purchase of Automation Control Box:** Authorize General Manager to purchase Automation Control Box for Putah South Canal Sweeney Check – total cost not to exceed \$15,000.

(E) **Contract Amendment with Ovivo USA, LLC:** Authorize General Manager to execute \$20,000 contract amendment with Ovivo USA, LLC for additional operations and maintenance support of Putah South Canal Headworks screen cleaning equipment.



- (F) Contract amendment with Solano Resource Conservation District to correct administrative error: Authorize General Manager to execute \$34,192 contract amendment with Solano Resource Conservation District for Pleasants Creek restoration projects.
- (G) Approve Sale of Surplus Property: Approve Resolution 2018-05 authorizing sale of surplus equipment no longer needed or useful for ongoing and anticipated Lower Putah Creek restoration activities.
- (H) Contract Amendment with Southwest Environmental Incorporated: Authorize General Manager to execute \$300,000 contract amendment with Southwest Environmental Incorporated for continuation of High Efficiency Toilet (HET) rebate program for low income residences and Commercial, Industrial and Institutional facilities.

6. **BOARD MEMBER REPORTS** *(estimated time: 5 minutes)*

RECOMMENDATION: For information only.

7. **GENERAL MANAGER'S REPORT** *(estimated time: 5 minutes)*

RECOMMENDATION: For information only.

8. **SOLANO WATER ADVISORY COMMISSION REPORT** *(estimated time: 5 minutes)*

RECOMMENDATION: For information only.

9. **FLOOD MANAGEMENT** *(estimated time: 30 minutes)*

RECOMMENDATIONS:

- 1. Adopt revised draft flood management policy proposed by Water Policy Committee
- 2. Hear report from Water Policy Committee regarding possible formation of Regional Flood Management Group and provide direction to Committee members and staff.

10. **LEGISLATIVE UPDATES** *(estimated time: 5 minutes)*

RECOMMENDATION:

- 1. Hear report from Committee Chair on activities of the SCWA Legislative Committee.

11. **WATER POLICY UPDATES** *(estimated time: 10 minutes)*

RECOMMENDATION:

- 1. Hear report from staff on current and emerging Delta and Water Policy issues and provide direction.

2. Hear status report from Committee Chair on activities of the SCWA Water Policy Committee.
3. Hear report from Supervisor Thomson on activities of the Delta Counties Coalition, Delta Protection Commission, and Delta Stewardship Council.
4. Hear report from Supervisor Vasquez on activities of the Delta Conservancy.

12. TIME AND PLACE OF NEXT MEETING

Thursday, January 10, 2019 at 6:30 p.m. at the SCWA offices.

The Full Board of Directors packet with background materials for each agenda item can be viewed on the Agency's website at www.scwa2.com.

Any materials related to items on this agenda distributed to the Board of Directors of Solano County Water Agency less than 72 hours before the public meeting are available for public inspection at the Agency's offices located at the following address: 810 Vaca Valley Parkway, Suite 203, Vacaville, CA 95688. Upon request, these materials may be made available in an alternative format to persons with disabilities.

DEC.2018.bod.agd

CONSENT ITEMS

**SOLANO COUNTY WATER AGENCY
BOARD OF DIRECTORS MEETING MINUTES
MEETING DATE: November 8, 2018**

The Solano County Water Agency Board of Directors met this evening at the Solano County Water Agency office in Vacaville. Present were:

Mayor Elizabeth Patterson, City of Benicia
Mayor Harry Price, City of Fairfield
Mayor Ronald Kott, City of Rio Vista
Mayor Len Augustine, City of Vacaville
Mayor Bob Sampayan, City of Vallejo
Supervisor Erin Hannigan, Solano County District 1
Supervisor Jim Spering, Solano County District 3
Supervisor John Vasquez, Solano County District 4
Supervisor Skip Thomson, Solano County District 5
Director Dale Crossley, Reclamation District 2068
Director John Kluge, Solano Irrigation District

CALL TO ORDER

The meeting was called to order at 6:37 p.m. by Chair Kluge.

APPROVAL OF AGENDA

On a motion by Mayor Patterson and second by Supervisor Hannigan the Board unanimously approved the agenda.

PUBLIC COMMENT

There were no public comments.

CONSENT ITEMS

On a motion by Mayor Price and second by Mayor Patterson the Board unanimously approved the following consent items:

- (5A) Minutes
- (5B) Expenditure Approvals
- (5C) Agreement with Pat Davis Design Group

BOARD MEMBER REPORTS

There were no Board Member reports.

GENERAL MANAGER'S REPORT

In addition to the written report included in the Board meeting agenda packet, General Manager Roland Sanford distributed three documents; A report by the Department of Water Resources entitled "Stakeholder Perspectives for Recommendations for Sustaining and Strengthening Integrated Regional Water Management", an informational brochure about the North Bay Watershed Association, and a letter signed by Governor Brown and Governor Elect Newson to the State Water Resources Control Board (State Board) chairwoman, requesting the State Board postpone a decision regarding implementation of minimum instream flow requirements on certain tributaries to the San Joaquin River.

Mr. Sanford briefly summarized the origins and purpose of the Integrated Regional Water Management program in California, and noted that the Water Agency is a party to two integrated regional water management plans; the "Westside Sac IRWMP", and the "Bay Area IRWMP". He explained that since inception of the Integrated Regional Water Management Program in 2002, the Water Agency has received approximately 1.5 million dollars in grant funding for projects identified in the aforementioned integrated regional water management plans. He also explained that the future of the Integrated Regional Water Management Program is uncertain because the program is heavily reliant on water bond funding – a funding source that has been dwindling in recent years.

General Manager Roland Sanford referenced the North Bay Watershed Association brochure and explained that joining the North Bay Watershed Association could provide a mechanism for strengthening relationships with entities in the North Bay. He stated that this item – whether to join or not – would be agendaized for the December Board meeting.

Mr. Sanford then discussed the letter to the State Board and noted that whatever the State Board decides to do with regard to instream flow requirements for tributaries to the San Joaquin River will provide a good indicator as to the type of instream flow requirements likely to be placed on tributaries to the Sacramento River.

Mr. Sanford reported that the third annual Winters Salmon Festival was held on Saturday, November 3rd and that the Festival, a collaborative effort of the City of Winters, Water Agency, Putah Creek Council, Lower Putah Creek Coordinating Committee, Solano Irrigation District, Solano County Parks, Bureau of Reclamation, and others was well attended, and that during the Festival the Putah Creek Streamkeeper, Rich Marovich, received a Certificate of Recognition from Yolo County Supervisor Don Saylor, for his 18 years of service and role in the restoration of Lower Putah Creek.

SOLANO WATER ADVISORY COMMISSION

There was no report from the Solano Water Advisory Commission.

2019 LEGISLATIVE PLATFORM

General Manager Roland Sanford briefly explained the reasons for adopting a Legislative Platform and noted that the proposed 2019 Water Agency Legislative Platform is based on and very similar to the prior year's Legislative Platform. On a motion by Supervisor Hannigan and second by Mayor Patterson, the Board unanimously approved the 2019 Legislative Platform; authorized the Legislative Committee Chair to sign and submit letters of support or opposition to pending Federal, State and local legislation or proposed policy guidelines that pertain to the priority issues and policy positions identified in the 2019 Legislative Platform; authorized the General Manager to sign and submit letters of support or opposition to pending Federal, State and local legislation or proposed policy guidelines that pertain to the priority issues and policy positions identified in the 2019 Legislative Platform, with the stipulation that the Legislative Committee Chair be given the opportunity to review all letters of support or opposition before release by the General Manager; and directed the General Manager to provide all Board members with copies of all letters of support or opposition within 24-hours of their submission/public release. Staff were also directed to include additional photos of Solano County citizens on the cover of the Legislative Platform.

DIXON WATERSHED MANAGEMENT PLAN UPDATE

General Manager Roland Sanford reported that with the assistance of Water Agency staff, Solano County, City of Dixon, and Dixon Resource Conservation District staff had met and agreed on a Phase I scope of work for the Dixon Watershed Management Plan Update that focuses on the quantification of pre and post development runoff rates and volumes, with the understanding that the aforementioned entities would continue to work together to develop a Phase II scope of work that will explore and evaluate options for controlling post development runoff in the study area. Mr. Sanford requested authorization to sign a contract with West Yost Associates to perform the proposed Phase I scope of work.

On a motion by Supervisor Vasquez and second by Mayor Price the Board authorized the General Manager to execute a \$61,900 contract with West Yost Associates to perform the proposed Phase I scope of work for the Dixon Watershed Management Plan update.

EMPLOYEE HEALTH BENEFIT CAFETERIA PLAN ALLOWANCE REDISTRIBUTION OF 2019 BUDGETED FUNDS

General Manager Roland Sanford briefly described the health insurance benefits currently provided to Water Agency employees and noted that the Water Agency's current "cafeteria plan", in which each employee is allocated \$12,500/year for health insurance, has remained unchanged since 2008 and that since 2008 health insurance costs, particularly for employees with families, have accelerated and are now substantially greater, nearly double, the current \$12,500 allocated to employees. But that conversely, the \$12,500/year allocation remained more than sufficient to cover the total cost of health insurance for a single, as opposed to married employee.

Mr. Sanford explained that he is ultimately seeking a more equitable distribution of health insurance benefits among Water Agency employees and that any permanent change to the Water Agency's health

insurance benefits needed to be made in the context of the overall compensation package offered to Water Agency employees. He noted that a total compensation study is underway and will be completed in the first quarter of 2019, after which the Board would be in a better position to evaluate the need for any permanent adjustment of health insurance benefits. Mr. Sanford explained that the open enrollment period for employees to select health insurance for 2019 had recently ended and that there remained \$45,000 that had been budgeted for employee health insurance, but not encumbered. He requested authorization to distribute those unencumbered funds among the employees who were within the “Employee + 1” and “Employee + family” health insurance categories.

Several Board members expressed concern that the proposal to redistribute unencumbered health insurance funds would set a precedent that may constrain any future adjustment of the health insurance benefits. After further discussion, on a motion by Supervisor Sperring and second by Supervisor Vasquez, the Board unanimously approved the one-time only redistribution of unused health insurance funds – for only calendar year 2019 – recommended by staff: Increase “Employee + 1” category allocation by \$351/month, increase “Employee + family” category allocation by \$766/month, with no change to the “Employee only” category allocation.

LEGISLATIVE UPDATES

The Legislative Committee did not meet last month, the next meeting is December 6th.

WATER POLICY UPDATES

1. There was no report from staff on emerging Delta and Water Policy issues.
2. General Manager Roland Sanford noted that the deadline for Board members and/or their supporting staff to submit comments on the draft Flood Management Policy recommended by the Water Policy Committee is November 9, 2018.
3. Supervisor Thomson reported that the Delta Stewardship Council met October 24-26 to receive public comment on the report by Delta Stewardship Council staff recommending the Department of Water Resources’ (DWR) “Consistency Determination” for Cal WaterFix be rejected. He noted that the Delta Stewardship Council will be meeting in December and at that time is expected to vote whether or not to accept their staff’s recommendation to reject DWR’s Consistency Determination for Cal WaterFix.
4. There was no report on the activities of the Delta Conservancy.

TIME AND PLACE OF NEXT MEETING

Mayor Augustine announced that this would be his last Water Agency meeting and thanked his colleagues for the opportunity to work together on water issues pertaining to Solano County.

Thursday, December 13, 2018 at 6:30 p.m., at the SCWA offices in Vacaville

ADJOURNMENT

This meeting of the Solano County Water Agency Board of Directors was adjourned at 7:36 p.m.

Roland Sanford
General Manager & Secretary to the
Solano County Water Agency

**ACTION OF
SOLANO COUNTY WATER AGENCY**

DATE: December 13, 2018
SUBJECT: Expenditures Approval

RECOMMENDATIONS:

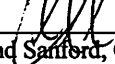
Approve expenditures from the Water Agency checking accounts for November, 2018.

FINANCIAL IMPACT:

All expenditures are within previously approved budget amounts.

BACKGROUND:

The Water Agency auditor has recommended that the Board of Directors approve all expenditures (in arrears). Attached is a summary of expenditures from the Water Agency's checking accounts for November, 2018. Additional backup information is available upon request.

Recommended: 
Roland Sanford, General Manager

☐

Approved as
recommended

☐

Other
(see below)

☐

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next page

Modification to Recommendation and/or other actions:

I, Roland Sanford, General Manager and Secretary to the Solano County Water Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on December 13, 2018 by the following vote:

Ayes:

Noes:

Abstain:

Absent:

Roland Sanford
General Manager & Secretary to the
Solano County Water Agency

SOLANO COUNTY WATER AGENCY
Cash Disbursements Journal
For the Period From Nov 1, 2018 to Nov 30, 2018

Filter Criteria includes: Report order is by Check Number. Report is printed in Detail Format.

Date	Check #	Account ID	Line Description	Debit Amount	Credit Amount
11/14/18	10181	2020WC 1010WC	Invoice: 18-09-3868 MBK ENGINEERS	14,617.50	14,617.50
11/28/18	10182	2020WC 1020SC	Invoice: 18-10-3868 MBK ENGINEERS	4,204.50	4,204.50
11/15/18	31632V	2020SC 1020SC	Invoice: APR 2018 BOD MTG ELIZABETH PATTERSON	 132.64	132.64
11/15/18	31918V	2020N 1020SC	Invoice: CLAIRE FRY CLAIRE FRY	1,065.00	1,065.00
11/5/18	32357V	2020SC 1020SC	Invoice: 58420476 ALTEC NUECO	37,500.00	37,500.00
11/5/18	32406	2020SC 1020SC	Invoice: 2829173 AMERICAN TOWER CORPORATION	601.39	601.39
11/5/18	32406V	2020SC 1020SC	Invoice: 2829173 AMERICAN TOWER CORPORATION	601.39	601.39
11/5/18	32484	2020SC 1020SC	Invoice: 213170 A & L WESTERN AGRICULTURAL LABS	36.00	36.00
11/5/18	32485	2020SC 1020SC	Invoice: 314098-4 ALPHA MEDIA II LLC	3,000.00	3,000.00
11/5/18	32486	2020N 1020SC	Invoice: NOV 2018 CLEAN TECH ADVOCATES	8,600.00	8,600.00
11/5/18	32487	2020SC 1020SC	Invoice: 5690716 TIAA BANK	1,135.17	1,135.17
11/5/18	32488	2020SC 2020SC 2020SC 2020SC 2020SC 2020SC 2020SC 2020SC 1020SC	Invoice: 7013463 Invoice: 7013462 Invoice: 5970996 Invoice: 4013914 Invoice: 4013910 Invoice: 9262801 Invoice: 9971206 Invoice: 1594656 HOME DEPOT CREDIT SERVICE	196.54 191.52 151.81 32.28 452.78 330.41 455.23 490.82	2,301.39
11/5/18	32489	2020SC 1020SC	Invoice: IMINV120454D IMAGINIT TECHNOLOGIES	1,395.00	1,395.00
11/5/18	32490	2020SC 2020SC 1020SC	Invoice: 2176 Invoice: 2211 J.T. MARTIN	200.00 200.00	400.00
11/5/18	32491	2020SC 1020SC	Invoice: NOV 2018 EXEC MTG JOHN D. KLUGE	100.00	100.00
11/5/18	32492	2020SC 1020SC	Invoice: 19678 LAUGENOUR AND MEIKLE	11,657.89	11,657.89
11/5/18	32493	2020SC 1020SC	Invoice: 162533 LSA ASSOCIATES, INC.	19,727.22	19,727.22
11/5/18	32494	2020SC 1020SC	Invoice: 526272 M&M SANITARY LLC	157.50	157.50
11/5/18	32495	2020N 2020N 1020SC	Invoice: 564769 Invoice: 565228 MEEKS	35.91 55.46	91.37

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Date	Check #	Account ID	Line Description	Debit Amount	Credit Amount
11/5/18	32496	2020SC	Invoice: 261981	72.95	
		2020SC	Invoice: 262057	77.20	
		2020SC	Invoice: 262031	98.16	
		2020SC	Invoice: 262318	2.56	
		2020SC	Invoice: 262486	78.34	
		2020SC	Invoice: 262835	115.64	
		2020SC	Invoice: 013406	44.31	
		2020SC	Invoice: 262967	3.20	
		2020SC	Invoice: 263268	25.72	
		2020SC	Invoice: 014329	77.58	
		1020SC	PACIFIC ACE HARDWARE		595.66
11/5/18	32497	2020SC	Invoice: 810703	193.67	
		2020SC	Invoice: 811004	18.11	
		2020SC	Invoice: 811708	1.28	
		2020SC	Invoice: 813253	257.15	
		2020SC	Invoice: 813533	10.71	
		1020SC	PISANIS AUTO PARTS		480.92
11/5/18	32498	2020SC	Invoice: 01043678	711.75	
		1020SC	RECOLOGY HAY ROAD		711.75
11/5/18	32499	2020SC	Invoice: 1322	1,500.00	
		1020SC	ROCK STEADY JUGGLING		1,500.00
11/5/18	32500	2020SC	Invoice: 10/31/18018	10,012.50	
		1020SC	SHANDAM CONSULTING		10,012.50
11/5/18	32501	2020U	Invoice: OCT 2018	438.06	
		1020SC	SOLANO COUNTY FLEET MANAGEMENT		438.06
11/5/18	32502	2020SC	Invoice: 4868	2,468.57	
		1020SC	SOUTHWEST VALVE, LLC		2,468.57
11/5/18	32503	2020SC	Invoice: NOV 2018	100.00	
		1020SC	EXEC MTG JAMES SPERING		100.00
11/5/18	32504	2020SC	Invoice: 57678	392.54	
		2020SC	Invoice: 57754	23.60	
		2020SC	Invoice: 57773	79.64	
		1020SC	SUISUN VALLEY FRUIT GROWERS AS		495.78
11/5/18	32505	2020SC	Invoice: 13	802.48	
		2020SC	Invoice: BAWMRP #20	7,254.00	
		1020SC	THINKING GREEN CONSULTANTS		8,056.48
11/5/18	32506	2020SC	Invoice: ELIZABETH	50.00	
		1020SC	ANN HALL ELIZABETH ANN HALL		50.00
11/5/18	32507	2020SC	Invoice: JOHN HART	1,000.00	
		1020SC	JOHN HART		1,000.00
11/5/18	32508	2020SC	Invoice: JAMES JULIAN	1,000.00	
		1020SC	JAMES JULIAN		1,000.00
11/5/18	32509	2020SC	Invoice: NICK	1,000.00	
		1020SC	LEHMANN NICHOLAS LEHMANN		1,000.00
11/5/18	32510	2020SC	Invoice: LOVELL	441.00	
		1020SC	PARKER LOVELL PARKER		441.00
11/5/18	32511	2020SC	Invoice: JOE PERPETUO	550.00	
		1020SC	JOE PERPETUO		550.00

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11/5/18	32512	2020SC	Invoice: MARION	575.00	
		1020SC	POZIVENEL MARION POZIVENEL		575.00
11/5/18	32513	2020SC	Invoice: 9817309489	2,484.05	
		1020SC	VERIZON WIRELESS		2,484.05
11/5/18	32514	2020SC	Invoice: 6741	1,119.30	
		2020SC	Invoice: 6768	699.56	
		1020SC	WINTERS AGGREGATE, LLC		1,818.86
11/5/18	32515	2020SC	Invoice: 20	18,716.43	
		1020SC	YOLO COUNTY RCD		18,716.43
11/5/18	32516	2020SC	Invoice: 58420476	37,500.00	
		1020SC	ALTEC NUECO		37,500.00
11/8/18	32517	2020SC	Invoice: 000033	848.22	
		1020SC	SOLANO BAKING COMPANY		848.22
11/14/18	32518	2020SC	Invoice: 0582934	1,707.48	
		1020SC	ACWA JOINT POWERS INSURANCE AUTHORITY		1,707.48
11/14/18	32519	2020SC	Invoice: 2829173	601.39	
		1020SC	AMERICAN TOWER CORPORATION		601.39
11/14/18	32520	2020SC	Invoice: 18-983	3,419.00	
		1020SC	BARTEL ASSOCIATES		3,419.00
11/14/18	32521	2020SC	Invoice: BA5899	750.00	
		2020SC	Invoice: BA5898	983.33	
		2020SC	Invoice: BA5900	1,233.33	
		1020SC	BLANKINSHIP & ASSOCIATES, INC.		2,966.66
11/14/18	32522	2020SC	Invoice: A832575	2,254.00	
		2020SC	Invoice: A833025	840.00	
		2020SC	Invoice: A833022	780.00	
		1020SC	BSK ASSOCIATES		3,874.00
11/14/18	32523	2020SC	Invoice: 54642480	776.87	
		1020SC	CHEVRON AND TEXACO		776.87
11/14/18	32524	2020SC	Invoice: NOV 2018 BOD	100.00	
		1020SC	MTG DALE CROSSLEY		100.00
11/14/18	32525	2020SC	Invoice: 300035720	599.00	
		1020SC	DAILY REPUBLIC, INC.		599.00
11/14/18	32526	2020SC	Invoice: 4694	29,191.40	
		1020SC	EYASCO, INC.		29,191.40
11/14/18	32527	2020SC	Invoice: 109177	1,966.00	
		1020SC	GHD, INC.		1,966.00
11/14/18	32528	2020N	Invoice: 06029478	505.75	
		1020SC	GLOBAL MACHINERY INTL.		505.75
11/14/18	32529	2020SC	Invoice: 1471	4,700.00	
		1020SC	HAWKINS LAND SURVEYING		4,700.00
11/14/18	32530	2020SC	Invoice: ADVANCE	1,250.00	
		1020SC	HOUSE AG CONSULTANTS		1,250.00
11/14/18	32531	2020SC	Invoice: CL04918	828.16	

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		2020SC 1020SC	Invoice: CL06317 INTERSTATE OIL COMPANY	3,108.37	3,936.53
11/14/18	32532	2020SC 1020SC	Invoice: 72859 INTEGRATED ENVIRONMENTAL RESTORATION	5,603.75	5,603.75
11/14/18	32533	2020N 1020SC	Invoice: 1118-1 JEFFREY J JANIK	750.00	750.00
11/14/18	32534	2020SC 1020SC	Invoice: NOV 2018 BOD MTG JOHN D. KLUGE	100.00	100.00
11/14/18	32535	2020SC 1020SC	Invoice: 34382 LUHDORFF & SCALMANINI	4,688.25	4,688.25
11/14/18	32536	2020SC 1020SC	Invoice: 16825 MANN, URRUTIA, NELSON, CPAS	4,500.00	4,500.00
11/14/18	32537	2020SC 1020SC	Invoice: 357 PALENCIA CONSULTING ENGINEERS	1,980.10	1,980.10
11/14/18	32538	2020SC 1020SC	Invoice: NOV 2018 BOD MTG ELIZABETH PATTERSON	100.00	100.00
11/14/18	32539	2020SC 1020SC	Invoice: SALMON FEST ENTERTAI PUTAH CREEK COUNCIL	625.00	625.00
11/14/18	32540	2020SC 1020SC	Invoice: 43541069 RECOLOGY VACAVILLE SOLANO	246.36	246.36
11/14/18	32541	2020SC 1020SC	Invoice: 8999 REGIONAL GOVERNMENT SERVICES	9,080.00	9,080.00
11/14/18	32542	2020SC 2020SC 2020SC 1020SC	Invoice: SCWA1810 Invoice: WCP-20 Invoice: WCP-27 RICHARD HEATH & ASSOCIATES, INC.	2,755.50 1,540.00 2,260.50	6,556.00
11/14/18	32543	2020SC 1020SC	Invoice: NOV 2018 BOD MTG BOB SAMPAYAN	127.25	127.25
11/14/18	32544	2020SC 1020SC	Invoice: 006668 SAM'S CLUB	199.34	199.34
11/14/18	32545	2020SC 2020SC 1020SC	Invoice: 0007149 Invoice: 0007148 SOLANO IRRIGATION DISTRICT	197.88 15,292.21	15,490.09
11/14/18	32546	2020SC 2020SC 2020SC 1020SC	Invoice: 1275 Invoice: 1280 Invoice: 1285 SOLANO RESOURCE CONSERVATION DISTRICT	3,499.01 4,801.56 3,294.74	11,595.31
11/14/18	32547	2020SC 1020SC	Invoice: NOV 2018 BOD MTG JAMES SPERING	100.00	100.00

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11/14/18	32548	2020SC	Invoice: NOV 2018 BOD	100.00	
		1020SC	MTG JOHN VASQUEZ		100.00
11/14/18	32549	2020SC	Invoice: 18-590	6,925.00	
		1020SC	WATER EDUCATION GROUP		6,925.00
11/20/18	32550	2020SC	Invoice: 000012185234	164.68	
		2020SC	Invoice: 000012185189	255.86	
		1020SC	CALNET3		420.54
11/20/18	32551	2020SC	Invoice: 12608038	782.91	
		1020SC	CALPERS LONG-TERM CARE PROGRAM		782.91
11/20/18	32552	2020SC	Invoice: 332566CH001	13,734.90	
		1020SC	CH2M HILL		13,734.90
11/20/18	32553	2020SC	Invoice: 1246575	43.20	
		1020SC	COUNTY OF YOLO		43.20
11/20/18	32554	2020N	Invoice: US0132174589	2,934.00	
		1020SC	ERNST & YOUNG U.S. LLP		2,934.00
11/20/18	32555	2020SC	Invoice: 21423570	160.00	
		1020SC	EXPRESS EMPLOYMENT PROFESSIONALS		160.00
11/20/18	32556	2020SC	Invoice: 24917	20,167.33	
		1020SC	GARCIA & ASSOCIATES		20,167.33
11/20/18	32557	2020SC	Invoice: 90361	37.74	
		2020SC	Invoice: 90362	75.48	
		2020SC	Invoice: 90360	963.90	
		2020SC	Invoice: 90357	66.30	
		2020SC	Invoice: 90359	132.60	
		2020SC	Invoice: 90363	982.58	
		1020SC	HERUM \ CRABTREE \ SUNTAG		2,258.60
11/20/18	32558	2020SC	Invoice: 11130253	271.50	
		2020SC	Invoice: 8130601	286.60	
		1020SC	J. RICHARD EICHMAN, CPA		558.10
11/20/18	32559	2020SC	Invoice: IRWM	101,007.32	
		1020SC	WESTSIDE FINAL NAPA COUNTY FC&WCD		101,007.32
11/20/18	32560	2020SC	Invoice: 68225	24,638.02	
		1020SC	NORMANDEAU ASSOCIATES, INC.		24,638.02
11/20/18	32561	2020SC	Invoice: APR 2018 BOD	132.64	
		1020SC	MTG ELIZABETH PATTERSON		132.64
11/20/18	32562	2020SC	Invoice: 0007145	180,602.17	
		2020SC	Invoice: 0007144	83,982.14	
		2020SC	Invoice: IRWM 9.30.18	11,031.72	
		1020SC	SOLANO IRRIGATION DISTRICT		275,616.03
11/20/18	32563	2020SC	Invoice:	1,845.73	
		1020SC	006492990046DEC 2018 STANDARD INSURANCE COMPANY		1,845.73

SOLANO COUNTY WATER AGENCY
Cash Disbursements Journal
For the Period From Nov 1, 2018 to Nov 30, 2018

Filter Criteria includes: Report order is by Check Number. Report is printed in Detail Format.

Date	Check #	Account ID	Line Description	Debit Amount	Credit Amount
11/20/18	32564	2020SC	Invoice: 0002 8297 495	304.20	
		2020SC	Invoice: 0002 8602 364	69,452.87	
		2020SC	Invoice: 0002 8340 689	2,110.68	
		2020SC	Invoice: 0002 8392 679	4,523.90	
		1020SC	CA DEPT. OF TAX AND FEE ADMIN		76,391.65
11/20/18	32565	2020SC	Invoice: 2018-10-SCWA	14,303.92	
		1020SC	SUSTAINABLE SOLANO		14,303.92
11/20/18	32566	2020SC	Invoice: CESAR ANGEL	493.00	
		1020SC	CESAR ANGEL		493.00
11/20/18	32567	2020SC	Invoice: GORDON	1,000.00	
		1020SC	BALTHAZOR GORDON BALTHAZOR		1,000.00
11/20/18	32568	2020SC	Invoice: AURA M.	794.00	
		1020SC	BALTODANO AURA M. BALTODANO		794.00
11/20/18	32569	2020N	Invoice: CLAIRE FRY	1,065.00	
		1020SC	CLAIRE FRY		1,065.00
11/20/18	32570	2020SC	Invoice: LOURDES	1,000.00	
		1020SC	MENDOZA LOURDES MENDOZA		1,000.00
11/20/18	32571	2020SC	Invoice: FERLIE	1,000.00	
		1020SC	SANTOS FERLIE SANTOS		1,000.00
11/20/18	32572	2020SC	Invoice: PATRICIA	1,000.00	
		1020SC	SELLERS PATRICIA SELLERS		1,000.00
11/20/18	32573	2020SC	Invoice: 18-683	3,580.00	
		1020SC	WATER EDUCATION GROUP		3,580.00
11/20/18	32574	2020SC	Invoice: 8565	595.00	
		1020SC	WINTERS BROADBAND		595.00
11/28/18	32575	2020SC	Invoice: 4733979-0002	7,100.13	
		2020SC	Invoice: 4771508-0001	6,059.23	
		1020SC	CRESCO EQUIPMENT RENTAL		13,159.36
11/28/18	32576	2020SC	Invoice: 155606	1,588.58	
		1020SC	DEPT OF FORESTRY & FIRE PROTECTION		1,588.58
11/28/18	32577	2020SC	Invoice: 0000001158857	1,110.00	
		1020SC	DEPARTMENT OF GENERAL SERVICES		1,110.00
11/28/18	32578	2020N	Invoice: 6-371-57802	426.67	
		1020SC	FEDEX EXPRESS		426.67
11/28/18	32579	2020SC	Invoice: 22576-01	8,195.00	
		1020SC	THE FRESHWATER TRUST		8,195.00
11/28/18	32580	2020SC	Invoice: 109707	13,633.00	
		1020SC	GHD, INC.		13,633.00
11/28/18	32581	2020SC	Invoice: 2018-81	3,979.79	
		1020SC	IN COMMUNICATIONS		3,979.79
11/28/18	32582	2020SC	Invoice: CL07686	1,066.89	
		1020SC	INTERSTATE OIL COMPANY		1,066.89
11/28/18	32583	2020SC	Invoice:	1,261.56	
			10/11/18-11/02/18		

SOLANO COUNTY WATER AGENCY
Cash Disbursements Journal
For the Period From Nov 1, 2018 to Nov 30, 2018

Filter Criteria includes: Report order is by Check Number. Report is printed in Detail Format.

Date	Check #	Account ID	Line Description	Debit Amount	Credit Amount
		1020SC	10/11/18-11/08/18 PACIFIC GAS & ELECTRIC CO,		1,261.56
11/28/18	32584	2020SC 1020SC	Invoice: 353 PALENCIA CONSULTING ENGINEERS	725.00	725.00
11/28/18	32585	2020SC 1020SC	Invoice: 2304466 RAY MORGAN COMPANY	74.52	74.52
11/28/18	32586	2020SC 1020SC	Invoice: 2018-13 SOLANO RESOURCE CONSERVATION DISTRICT	10,000.00	10,000.00
11/28/18	32587	2020SC 2020SC 2020SC 2020SC 2020SC 2020SC 2020SC 2020SC 2020SC 2020SC 1020SC	Invoice: 2180823611 Invoice: 2180745051 Invoice: 2181062421 Invoice: 2188393691 Invoice: 2184393021 Invoice: 2188502121 Invoice: 2190662561 Invoice: 2190688681 Invoice: 2191329671 Invoice: 2192061961 STAPLES	10.38 200.06 50.90 263.78 39.23 65.90 79.63 18.45 186.79 26.78	941.90
11/28/18	32588	2020SC 1020SC	Invoice: 70B70-04 THE REGENTS OF THE UNIVERSITY OF CA	49,758.90	49,758.90
11/28/18	32589	2020SC 1020SC	Invoice: PAULA CADDY PAULA CADDY	1,000.00	1,000.00
11/28/18	32590	2020SC 1020SC	Invoice: 16567 WESTERN WEATHER GROUP	1,095.00	1,095.00
11/28/18	32591	2020SC 1020SC	Invoice: 1108 WILSON PUBLIC AFFAIRS	3,550.00	3,550.00
11/28/18	32591V	2020SC 1020SC	Invoice: 1108 WILSON PUBLIC AFFAIRS	3,550.00	3,550.00
11/28/18	32592	2020SC 1020SC	Invoice: 1006 YOLO-SOLANO AQMD	573.00	573.00
11/28/18	32593	2020SC 1020SC	Invoice: 1108 WILSON PUBLIC AFFAIRS	3,500.00	3,500.00
11/20/18	5000016	2023AC 1020SC	FSA REIMBURSEMENT 11.20.18 RABIDOUX, ALEXANDER	4,423.13	4,423.13
11/23/18	5000017	2023AC 1020SC	FSA REIMBURSEMENT 11.23.18 RABIDOUX, ALEXANDER	192.31	192.31
11/25/18	ASHLEY OCT	2020SC 1020SC	Invoice: ASHLEY OCT 2018 UMPQUA BANK	756.79	756.79
11/25/18	ASHLEY OCT	2020SC 1020SC	Invoice: ASHLEY OCT 2018-1 UMPQUA BANK	350.72	350.72
11/25/18	COLIAS OCT	2020N	Invoice: COLIAS OCT 2018	759.50	

SOLANO COUNTY WATER AGENCY
Cash Disbursements Journal
For the Period From Nov 1, 2018 to Nov 30, 2018

Filter Criteria includes: Report order is by Check Number. Report is printed in Detail Format.

Date	Check #	Account ID	Line Description	Debit Amount	Credit Amount
		1020SC	UMPQUA BANK		759.50
11/25/18	COLIAS OCT	2020N	Invoice: COLIAS OCT 2018-1	7.98	
		1020SC	UMPQUA BANK		7.98
11/25/18	CRUZ OCT 20	2020N	Invoice: CRUZ OCT 2018	8.24	
		1020SC	UMPQUA BANK		8.24
11/25/18	CUETARA O	2020SC	Invoice: CUETARA OCT 2018	1,477.51	
		1020SC	UMPQUA BANK		1,477.51
11/25/18	CUETARA O	2020SC	Invoice: CUETARA OCT 2018-1	155.03	
		1020SC	UMPQUA BANK		155.03
11/1/18	EFT	2020SC	Invoice: HEALTH NOV 2018	19,409.52	
		1020SC	CALPERS		19,409.52
11/9/18	EFT	2020SC	Invoice: 2018110701	223.40	
		1020SC	PAYCHEX, INC.		223.40
11/3/18	EFT	2024AC	EMPLOYEE LIABILITIES PPE 11.03.18	17,590.52	
		6012AC	EMPLOYER LIABILITIES PPE 11.03.18	2,005.93	
		1020SC	PAYROLL TAXES		19,596.45
11/7/18	EFT	2020SC	Invoice: PPE 11.03.18	9,080.50	
		1020SC	CALPERS		9,080.50
11/7/18	EFT	2020SC	Invoice: PEPPA PPE 11.03.18	2,772.41	
		1020SC	CALPERS		2,772.41
11/7/18	EFT	2020SC	Invoice: SIP PPE 11.03.18	5,438.46	
		1020SC	CALPERS		5,438.46
11/16/18	EFT	6111AC	FSA PARTICIPANT FEE NOV 2018	115.75	
		6111AC	STRATUSTIME ADMINISTRATION NOV 2018	272.00	
		1020SC	PAYCHEX, INC.		387.75
11/21/18	EFT	2020SC	Invoice: SIP PPE 11.17.18	5,438.46	
		1020SC	CALPERS		5,438.46
11/21/18	EFT	2020SC	Invoice: PPE 11.17.18	9,080.50	
		1020SC	CALPERS		9,080.50
11/21/18	EFT	2020SC	Invoice: PEPPA PPE 11.17.18	2,818.14	
		1020SC	CALPERS		2,818.14
11/17/18	EFT	2024AC	EMPLOYEE LIABILITIES PPE 11.03.18	15,538.16	
		6012AC	EMPLOYER LIABILITIES PPE 11.03.18	1,861.37	
		1020SC	PAYROLL TAXES		17,399.53
11/23/18	EFT	2020SC	Invoice: 2018112101	286.30	
		1020SC	PAYCHEX, INC.		286.30
11/25/18	FEHRENKAM	2020SC	Invoice: FEHRENKAMP OCT 2018	234.00	
		1020SC	UMPQUA BANK		234.00
11/25/18	FLORENDO O	2020N	Invoice: FLORENDO OCT 2018	614.79	

SOLANO COUNTY WATER AGENCY

Cash Disbursements Journal

For the Period From Nov 1, 2018 to Nov 30, 2018

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Date	Check #	Account ID	Line Description	Debit Amount	Credit Amount
		1020SC	UMPQUA BANK		614.79
11/25/18	FOWLER OC	2020SC	Invoice: FOWLER OCT 2018	150.00	
		1020SC	UMPQUA BANK		150.00
11/25/18	HERR OCT 20	2020SC	Invoice: HERR OCT 2018	338.72	
		1020SC	UMPQUA BANK		338.72
11/25/18	HYER OCT 20	2020SC	Invoice: HYER OCT 2018	1,958.96	
		1020SC	UMPQUA BANK		1,958.96
11/25/18	HYER OCT 20	2020SC	Invoice: HYER OCT 2018-1	395.92	
		1020SC	UMPQUA BANK		395.92
11/25/18	JONES OCT 2	2020SC	Invoice: JONES OCT 2018	25.34	
		1020SC	UMPQUA BANK		25.34
11/25/18	LEE OCT 201	2020SC	Invoice: LEE OCT 2018	52.99	
		1020SC	UMPQUA BANK		52.99
11/25/18	LEE OCT 201	2020SC	Invoice: LEE OCT 2018-1	384.99	
		1020SC	UMPQUA BANK		384.99
11/25/18	MAROVICH	2020SC	Invoice: MAROVICH OCT 2018	52.99	
		1020SC	UMPQUA BANK		52.99
11/25/18	NGUYEN OC	2020SC	Invoice: NGUYEN OCT 2018	748.29	
		1020SC	UMPQUA BANK		748.29
11/25/18	PASCUAL OC	2020N	Invoice: PASCUAL OCT 2018	392.15	
		1020SC	UMPQUA BANK		392.15
11/25/18	PATE OCT 20	2020SC	Invoice: PATE OCT 2018	455.77	
		1020SC	UMPQUA BANK		455.77
11/25/18	RABIDOUX O	2020N	Invoice: RABIDOUX OCT 2018	9.00	
		1020SC	UMPQUA BANK		9.00
11/25/18	SANFORD O	2020N	Invoice: SANFORD OCT 2018	33.50	
		1020SC	UMPQUA BANK		33.50
11/25/18	SANFORD O	2020N	Invoice: SANFORD OCT 2018-1	6.00	
		1020SC	UMPQUA BANK		6.00
11/25/18	SNYDER OCT	2020N	Invoice: SNYDER OCT 2018	605.73	
		1020SC	UMPQUA BANK		605.73
11/25/18	SNYDER OCT	2020N	Invoice: SNYDER OCT 2018-1	372.12	
		1020SC	UMPQUA BANK		372.12
11/25/18	WILLINGMY	2020SC	Invoice: WILLINGMYRE OCT 2018	202.99	
		1020SC	UMPQUA BANK		202.99
Total				1,094,335.71	1,094,335.71

**ACTION OF
SOLANO COUNTY WATER AGENCY**

DATE: December 13, 2018

SUBJECT: Social Security Tax on Board Member per diem

RECOMMENDATION:


Authorize Water Agency to pay Social Security tax on Board and Board Committee meeting per diem allowances.

FINANCIAL IMPACT: Maximum annual cost of \$4,500

BACKGROUND:

The Internal Revenue Service recently informed staff that Board member per diem is subject to Social Security tax (see attached IRS memo). Historically, the Water Agency has not deducted or otherwise paid Social Security taxes on Board member per diem, as it was assumed that Board member per diem should be treated like employee salaries (because Water Agency employees are enrolled in the CalPERS retirement system, the Water Agency is not required to pay Social Security taxes on employee salaries). The fact that Water Agency employees, other than interns, are enrolled in an alternative retirement system provided through Water Agency employment is as it turns out, an important distinction. Water Agency intern salaries are subject to Social Security taxes because they are employees and are not enrolled in an alternative retirement system provided through Water Agency employment. The Internal Revenue Service has taken the position that Board members are, for tax purposes, employees of the Water Agency, and because Board members are not enrolled in an alternative retirement system provided through the Water Agency are, like the Water Agency interns, subject to the Social Security tax.

Board members receive a \$100 per diem for each meeting attended (maximum of \$200 per month). The current Social Security tax rate (employee portion plus employer portion) is 12.4 percent. Staff is recommending the Water Agency pay both the employee and employer portions of the Social Security tax on Board member per diems. In summary, Board members would continue to receive a \$100 per diem for each meeting attended and the associated Social Security tax would be paid by the Water Agency directly to the Internal Revenue Service.

Recommended: 
Roland Sanford, General Manager

☐

Approved as
recommended

☐

Other
(see below)

☐

Continued on
next page

Modification to Recommendation and/or other actions:

I, Roland Sanford, General Manager and Secretary to the Solano County Water Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on December 13, 2018 by the following vote:

Ayes:

Noes:

Abstain:

Absent:

Roland Sanford
General Manager & Secretary to the
Solano County Water Agency

Form 886-A (Rev. January 1994)	EXPLANATION OF ITEMS		Schedule number or exhibit
Name of taxpayer Solano County Water District	Tax Identification Number 68-0197823	Year/Period ended 2016	

ISSUE:

Is elected district director's employees or independent contractors of a municipality when they receive compensation?

FACTS:

The Water district is comprised of 15 board members. Board members are elected officials from surrounding Cities and the County within the water district.

The Directors receive a small stipend for their services of \$100 per meeting. The amount is a set amount for attendance at each board meeting, the amount paid is not tied to any reimbursement plan for mileage, meals, lodging, etc. The district requires no accountability of expenses to receive payment. It is strictly a set amount for their services to attend meetings.

There are State statutes that govern board of directors that are part of water districts for the State of California. There is Legislation that has been passed that outlines the duties and responsibilities of board of directors who take an oath of office once they are appointed and confirmed.

The board of directors are contractually allowed to vote on measures dealing with water supply contracts, pricing for water usage, amount of debt that can be borrowed, and the sale of any assets owned by the water district. They also decide the rate of pay for employees and any fringe benefits.

LAW:**Income Tax Withholding**

Code section 3402(a) of the Internal Revenue Code (the Code) provides that every employer making payment of wages shall deduct and withhold federal income taxes.

Code section 3401(a) defines wages as all remuneration (other than fees paid to public officials) for services performed by an employee for his employer. However, for the purposes of this chapter (Chapter 24, Collection of Income Tax at Source on Wages), Code section 3401(c) provides that the term "employee" includes an officer, employee, or elected official of a state, or any political subdivision thereof. Section 31.3401(c)-1(a) of the accompanying Employment Tax Regulations further includes both elected and appointed officials in the definition of "employee."

The Code does not define the term "public official," but section 1.1402(c)-2(b) of the Income Tax Regulations gives the following examples: the president, the vice president, a governor, a mayor, the secretary of state, a member of Congress, a state representative, a county commissioner, a judge, a justice of the peace, a county or city attorney, a marshal, a sheriff, a constable, a registrar of deeds, or a notary public.

Form 886-A (Rev. January 1994)	EXPLANATION OF ITEMS		Schedule number or exhibit
Name of taxpayer Solano County Water District	Tax Identification Number 68-0197823	Year/Period ended 2016	

Taxes under the Self-Employment Contributions Act (SECA) are imposed pursuant to sections 1401 and 1402 on the gross income, less applicable deductions, derived by an individual from any trade or business. For SECA purposes, the term "trade or business" has the same meaning as when used in Code section 162, relating to trade or business expenses.

Section 1402(c) (1) provides that the performance of the functions of a public office is not a trade or business for SECA purposes. Code section 1402(c) (1) and section 1.1402(c)-2(a) (2) (B), Income Tax Regulations, contain an exception, providing that the performance of the functions of a public office is a trade or business with respect to fees received for functions performed in a position compensated solely on a "fee basis," but only if the functions are not covered by an agreement under section 218 of the Social Security Act (218 agreement). Thus, a fee-based public official who is not covered by a 218 agreement is subject to SECA tax. The application of this rule is demonstrated both Revenue Ruling 61-113 and 74-608.

Rev. Rul. 61-113, 1961-1 C.B. 400, deals with individuals who serve as members of a hearing board of an air pollution control district, who are appointed by the county board of supervisors, take an oath of office, hold public hearings, and submit their decisions to the county. The board conducts public hearings involving the suspension and revocation of permits to build, erect, alter, or replace equipment. Its members are authorized to administer oaths and its chairman may subpoena witnesses. Any person who fails to appear, etc., is deemed in contempt and is reported to a judge of the superior court of the county. Members of the board are not under the control and direction of the county board of supervisors or any other body. Their compensation is based on the number of hearings they attend. Their services constitute the performance of the functions of a public office and do not constitute a "trade or business" for purposes of Code section 1402(c) (1).

As mentioned above the Code does not define the term "public official;" however, there is a body of case law defining the term. In Buckley v. Valeo, 424 U.S.1 (1975), the Supreme Court stated that anyone who exercises significant authority pursuant to the laws of the United States is an officer. The court further provides that, the term "officers" embraces all appointed officials exercising responsibility under the public laws of the nation. Buckley at 131. Officers perform a significant governmental duty exercised pursuant to a public law. Buckley at 141. Officers administer and enforce the public law. Buckley at 139.

In Metcalf & Eddy v. Mitchel, 269 U.S. 514 (1926), specifically defines the term "officer." There the Supreme Court considered whether consulting engineers hired by states, municipalities, water supply and sewage districts were independent contractors or "officers and employees" of a state. The Court stated: "An office is a public station conferred by the appointment of a government. The term embraces the idea of tenure, duration, emolument and duties fixed by law. Where an office is created, the law usually fixes its incidents, including its term, its duties, and its compensation." Officers and employees are agents of a state to administer its laws. Metcalf at 520. The independent contractor has liberty of action which excludes control or the right to control characteristic of the employer-employee relationship. Metcalf at 521.

Form 886-A (Rev. January 1994)	EXPLANATION OF ITEMS		Schedule number or exhibit
Name of taxpayer Solano County Water District	Tax Identification Number 68-0197823	Year/Period ended 2016	

Finally, in *Pope v. Commissioner*, 138 F.2d 1006 (6th Cir. 1943), the Sixth Circuit, following *Metcalf & Eddy*, established the following standards to define the term "public office." (1) It must be created by the constitution or the legislature or by a municipality or other body with authority conferred by the legislature. (2) There must be a delegation of a portion of the sovereign powers of government to be exercised for the benefit of the public. (3) The powers conferred and the duties to be discharged must be defined either directly or indirectly by the legislature or through legislative authority. (4) The duties must be performed independently and without control of a superior power other than the law. (5) The office must have some permanency and continuity, and the officer must take an official oath of office.

Federal Insurance Contribution Act Taxes (FICA)

The Code sections governing the application of FICA taxes to wages paid are not identical to those governing the application of income tax withholding. Code section 3121(a) provides that wages means all remuneration for employment. The term "employment" is defined in Code section 3121(b) as any service of whatever nature by an employee for the person employing him. Finally, Code section 3121(d) provides that for the purposes of this chapter the term employee means any officer of a corporation or any individual who, under the usual common law rules applicable in determining employer-employee relationship has the status of employee.

As defined by the Code, when determining a worker's status for FICA purposes one looks to the common-law rules surrounding the employer-employee relationship. The common law provides that, generally this relationship exists when the person for whom services are performed has the right to control and direct the individual who performs the services, not only as to the result to be accomplished but also as to the details and means by which the result is accomplished. In this connection, it is not necessary that the employer actually direct or control the manner in which the services are performed; it is sufficient if he has the right to do so. Section 31.3121(d)-1(c), Employment Tax Regulations.

In applying the common-law rules, the IRS considers whether the service recipient has behavioral and financial control over the worker and evaluates the relationship between the parties, including how they view their relationship.

Behavioral control is evidenced by facts that indicate whether the service recipient has a right to direct or control how the worker performs the tasks for which he or she is hired. Facts which illustrate behavioral control include the provision of training or instruction.

Financial control is evidenced by facts that indicate whether the service recipient has a right to direct or control the financial aspects of the worker's activities. Facts to consider include significant investment, unreimbursed expenses, making services available to the relevant market, the method of payment, and the opportunity for profit or loss by the worker.

The relationship of the parties is generally evidenced by examining the parties' agreements and actions with respect to each other, paying close attention to those facts which show not only how they perceive their own relationship but also how they represent their relationship to others. Facts which illustrate how the parties perceive their relationship include the intent of the parties as expressed in written contracts; the provision of, or lack of, employee benefits; the right of the parties to terminate the relationship; the

Form 886-A (Rev. January 1994)	EXPLANATION OF ITEMS		Schedule number or exhibit
Name of taxpayer Solano County Water District	Tax Identification Number 68-0197823	Year/Period ended 2016	

permanency of the relationship, and whether the services performed are part of the service recipient's regular business activities.

The fact that an individual is employed part-time, or works for more than one employer, is not evidence of independent contractor status. A part-time worker may be an employee under the common-law rules.

Other References:

PLR 200206053
 PLR 9310029
 PLR 9319930
 PLR 9340039
 FSA 199932005
 CCA 200113024

ARGUMENT:

Federal law applies when determining whether a worker is an employee or independent contractor. Generally, these determinations are made by applying the common law to the facts and circumstances surrounding the particular case. A number of factors are reviewed when making such a determination, yet one of the most important factors is whether there is a state constitution or statute establishing a position as an official. Here, the director's "position" is established by state statute. It outlines the general powers and duties of the directors over their particular metropolitan district. Further, the directors have the right and authority to set policy, the budget, address administrative actions, which includes the hiring and firing of personnel.

In reviewing the state statutes, it was determined that they have enough control for the individual to be classified as an employee. One can argue that the director position is that of a public official, in which case there is likely to be a right to control that is sufficient to indicate an employer-employee relationship thereby making the individual an employee. The Statutes specify the duties of the public office and generally establish the officers' superiors and subordinates. The statutes establish the directors' terms of office, and appear to define compensation. In addition, directors are required as public officials to take an oath of office. Statutes often establish general and specific penalties for dereliction of duty. For instance, the directors who are paid for each meeting they attend may face termination if they fail to attend a certain number of meetings.

Finally, the directors are elected officials from their respective City or County. They are not the same as a director on a board of directors for a corporation. Elected officials are responsible to the public, who has the power to not re-elect them. Elected officials may also be subject to recall.

Section 1.1402(c)-2(b), Income Tax regulations, defined "public office" to include any elective or appointive office of the U.S., a state or its political subdivisions, or of a wholly-owned instrumentality...

Form 886-A (Rev. January 1994)	EXPLANATION OF ITEMS		Schedule number or exhibit
Name of taxpayer Solano County Water District	Tax Identification Number 68-0197823	Year/Period ended 2016	

Board members are public officers. Under IRS Section 3401(c), the term "employee" includes an officer, employee, or elected official of the U.S., a State, or any political subdivision of instrumentality thereof.

Income tax withholding

Federal income tax withholding applies to wages paid for services performed by an employee for his employer. Section 3401(c) provides that, for withholding purposes, the term "employee" includes an officer, employee, or elected official of a State of political subdivision or instrumentality thereof. Income tax withholding applies under this provision regardless of whether the officials are common law employees because officers, employees and officials of a state are specifically defined as employees for this purpose.

The term "fees" paid to a public official has a very limited meaning. A fee-based public official is one who receives compensation in the form of fees directly from members of the public with whom he does business, e.g., a notary public. *Rev. Rul. 74-608*. In contrast, *Revenue Ruling 74-608* provides that where a public officer receives his remuneration from a government fund then he would not be considered a fee-based public official because none of the monies collected by him either belong to him nor can they be retained as compensation. An official who is paid a salary is not a fee-based public official. The fact that a State statute terms a payment a fee, meaning that it is paid as a fixed amount per meeting attended, does not mean that the individual is a fee-based public official within the meaning of sections 3401(a) and 1402(c)(1). Here, the Board Members do not fit the definition of a "fee-based public official," because the individuals serving as Board Members are compensated by the District based on their meeting attendance; the amounts received by board members as compensation are not directly from the public. Therefore, these amounts are not included in the calculation for net earnings from self-employment subject to self-employment tax under IRC section 1402(c) (1), and they are not excludable from federal income withholding under IRC section 3401(a). However, the amounts received are wages subject to federal income tax withholding and reportable on Form W-2.

FICA tax

FICA tax applies because the members of the Boards and Commissions are common law employees.

The definition of wages for FICA purposes is not the same as the definition of wages for income tax withholding purposes. Instead Code section 3121(a) provides that for FICA purposes wages means all remuneration for employment. This so-called anti-Rowan language was adopted by Congress to overrule Rowan v. Commissioner, 452 U.S. 247 (1981), which found that the term "wages" had the same meaning for withholding and FICA purposes. In Rowan the Supreme Court held that a regulation which interpreted the term "wages" differently for withholding and FICA purposes was invalid. Shortly after this decision, Congress amended section 3121(a) to clarify that it did not intend "wages" for FICA purposes to be identical to "wages" for withholding purposes.

In dealing with any particular individual or position, there are two questions that must be answered: whether the individual is a public official and, if so, whether that official is an employee. Members of

Form 886-A (Rev. January 1994)	EXPLANATION OF ITEMS		Schedule number or exhibit
Name of taxpayer Solano County Water District	Tax Identification Number 68-0197823	Year/Period ended 2016	

Boards and Commissions are officials under the Social Security Act, SL 60001.640 defines Public Officers.

Section 1.1402(c)-2(b), Income Tax Regulations, defines "public office" by offering examples: the President, the Vice President, and so on.

Public officials take an oath of office and exercise the powers of the state, pursuant to statutory authority. Rev. Rul. 61-113.

Pope v. Commissioner established criteria for determining whether a position is a public office. The position of Board members clearly satisfies all of these criteria. The position is created by statute, and the duties of the position are established by statute. The Board exercise sovereign powers. The offices have permanency and continuity, and the Board members must take an oath. These facts are sufficient to establish that the Board members are public officials.

Common Law

In determining whether an individual is an employee or independent contractor for the purposes of FICA one must look to the common law when making such a determination. Therefore, in determining the relationship between the county and the Board members, one must analyze the application of the common law to the facts and circumstances surrounding the water district and the Board members relationship. This analysis focuses on three categories (a) behavioral control; (b) financial control; and (c) the relationship between the State and the Board members.

a). Behavioral control

The Board members were elected officials in their respective City or County. As discussed above they are public officials. The Board members took an oath of office and they may not be removed except upon charges and after a formal hearing. They have to follow State law. They have to attend Board meetings and perform services themselves.

These factors are strong indications of behavioral control over the Board members.

b). Financial Control

The Board members received \$100 compensation for each board meeting they attend. The amount is fixed by resolutions duly adopted by the State Statutes. Further, there is no indicium of a significant investment, risk of loss, or profit or loss opportunities by the Board members related to the services they perform as Board members.

The above factors illustrate the Board members lack of financial control and are a strong indicator that the Board members are employees.

c). Relationship of the parties

The powers of the State are exercised by the Board members. The Board members play a very important role in the State. In our democracy, government is of the people, by the people and for the

Form 886-A (Rev. January 1994)	EXPLANATION OF ITEMS	Schedule number or exhibit
Name of taxpayer Solano County Water District	Tax Identification Number 68-0197823	Year/Period ended 2016

people. That is why citizen participation in local government is so essential. The Board members are integral parts of the State Government. This long term and continuous relationship is a strong indication of employer-to-employee relations.

These factors indicate the existence of an employer-employee relationship.

Application of the common law rules determines whether public officials are employees. Unlike section 3401(c), which specifically defines officers, employees, and elected officials of states and the U.S. government as employees for withholding purposes, section 3121(b)(7), defining employment for FICA purposes, applies to "service performed in the employ" of a state, political division or instrumentality of a state. In the absence of a more specific provision, employee status is determined under the common law rules. Section 3121(d) (2). We add that this point is somewhat academic in that, under the common law rules, all elected and most appointed officials are employees.

CONCLUSION:

The elected directors of the Water district are considered employees for income tax withholding purposes; and for FICA taxes via the common law. The facts above illustrate that the elected directors' offices, enumerated powers, duties, and compensation are established by state statute. In conclusion, the elected are considered employees and their compensation is subject to Federal income tax withholding and FICA taxes. *IRC sections 3401(a) and 3121(a)*. Finally, these amounts should be reported to the elected directors on Form W-2. *IRC section 6051*.

**ACTION OF
SOLANO COUNTY WATER AGENCY**

DATE: December 13, 2018

SUBJECT: Purchase of Automation Control box for Putah South Canal Sweeney Check

RECOMMENDATION:

Authorize General Manager to purchase new Automaton Control Box for Putah South Canal Sweeney Check, total cost not to exceed \$15,000.

FINANCIAL IMPACT:

Funding is programmed and available in the FY 2018-2019 Solano Project budget for this expense.

BACKGROUND:

The Putah Diversion Dam (PDD) and Putah South Canal (PSC) are part of the federally owned Solano Project. The Water Agency is responsible for operation, maintenance, and routine replacement of facility components associated with the PDD and 12 "control checks" along the PSC. The control checks are used to monitor and regulate the flow delivered to agricultural and municipal water users along the canal, and are currently all operated manually. This purchase is part of a long term project to automate the PSC and its control checks, to provide more reliable deliveries to water users. The equipment proposed here will be installed at the Sweeney Check of the PSC.

Recommended: 
Roland Sanford, General Manager

☐

Approved as
recommended

☐

Other
(see below)

☐

Continued on
next page

Modification to Recommendation and/or other actions:

I, Roland Sanford, General Manager and Secretary to the Solano County Water Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on December 13, 2018 by the following vote:

Ayes:

Noes:

Abstain:

Absent:

Roland Sanford
General Manager & Secretary to the
Solano County Water Agency

ORDERED BY:

SOLANO COUNTY WATER AGENCY

810 VACA VALLEY PARKWAY
SUITE 203
VACAVILLE, CA 95688
U.S.A.

Voice: 707-451-6090

Fax: 707-451-6099

**PURCHASE
ORDER**

Purchase Order No.: A2019-025

Date Issued: 11/6/18

To:

BUCKLES-SMITH
540 MARTIN AVE.
SANTA CLARA, CA 95050

Ship To:

EYASCO
125 HANGAR WAY
SUITE 290
WATSONVILLE, CA 95076
U.S.A.

Good Thru	Ship Via	Account No.	Terms
12/6/18			Net 30 Days

Quantity	Item	Description	Unit Cost	Amount
1.00		RADIAL GATE CONTROL BOX AS PER DESIGN DRAWINGS SUBMITTED BY EYASCO WITH FOLLOWING CHANGES: 3X3X1 HAMMOND ENCLOSURE, LIGHTING SYSTEM, THERMOSTAT CONTROLLED FAN A	13,010.56	13,010.56
1.00		TAX	1,057.11	1,057.11
1.00		SHIPPING	400.00	400.00
			TOTAL	\$14,467.67

Authorized Signature _____



TEL: 408-280-7777 FAX: 408-280-0720
www.buckles-smith.com

QUOTE

QUOTE DATE	QUOTE NO.
10/31/18	5013772-00
P.O. NO.	
REFERENCE	

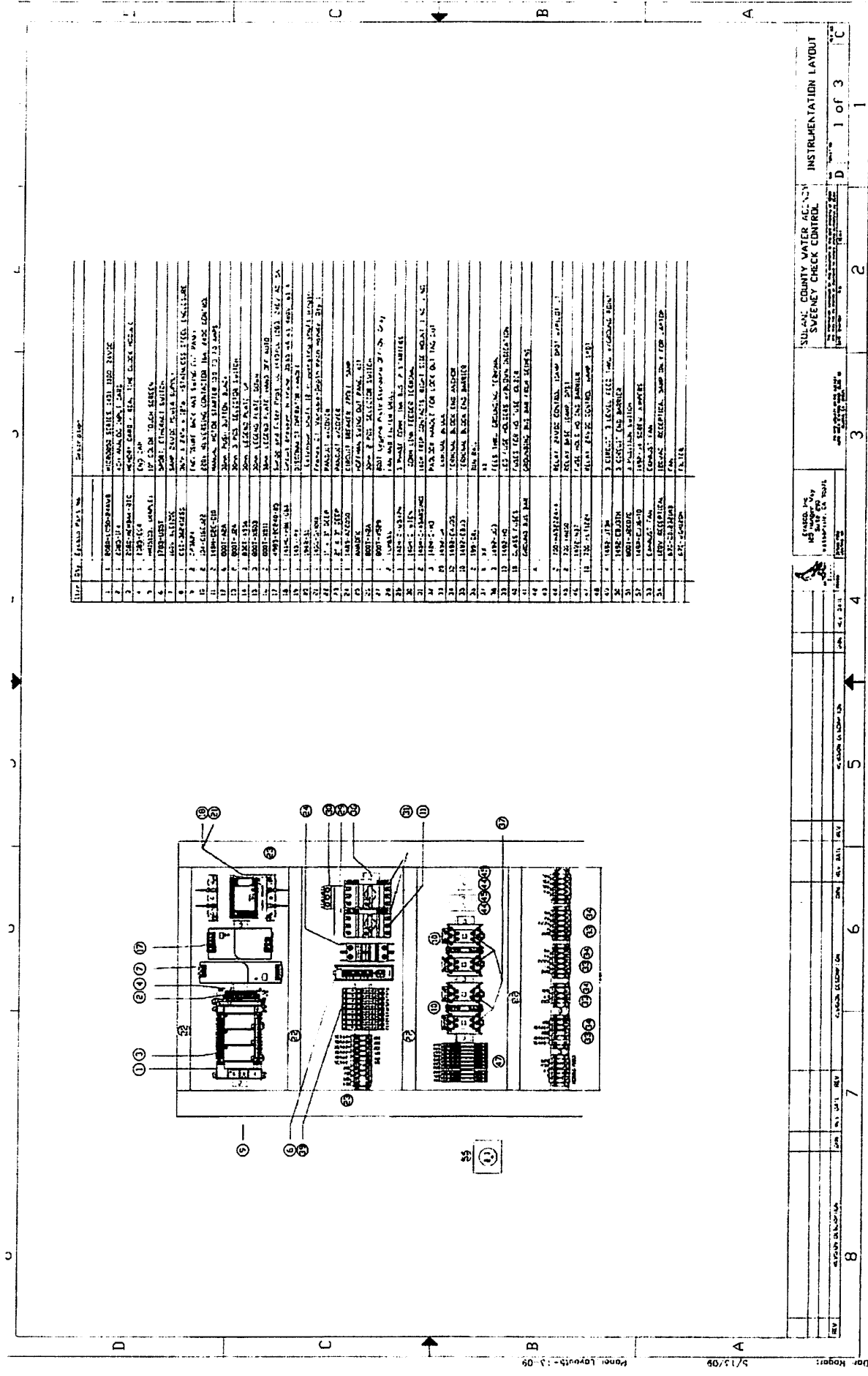
CUST.#: 119445

BILL TO: EYASCO INC
125 HANGAR WAY, STE 290
WATSONVILLE, CA 95076-2494

SHIP TO: EYASCO INC
125 HANGAR WAY
STE 290
WATSONVILLE, CA 95076-2494

REQ. DATE	REQUESTED BY		PHONE / FAX	EMAIL
10/10/18				
EXP. DATE	SHIP VIA	SHIP POINT	INSTRUCTIONS	TERMS
10/11/18		BUCKLES-SMITH ASSEMBLIES VAS		1&10DAYSN30

LINE NO.	PRODUCT AND DESCRIPTION	QTY. QUOTED	UNIT PRICE	PRICE U/M	AMOUNT (NET)
2	VAS119445-0001 RADIAL GATE PANEL SWEENEY CHECK CONTROL EXCLUDES MAPLE HMI (CONSIGNED), DELIVERY 5 WEEKS ARO. ENCLOSURE INCREASED TO 36X36X12, LIGHT PACKAGE ADDED.	1	13010.56000	EACH	13010.56
				TOTAL	13010.56
				QUOTE TOTAL	13010.56



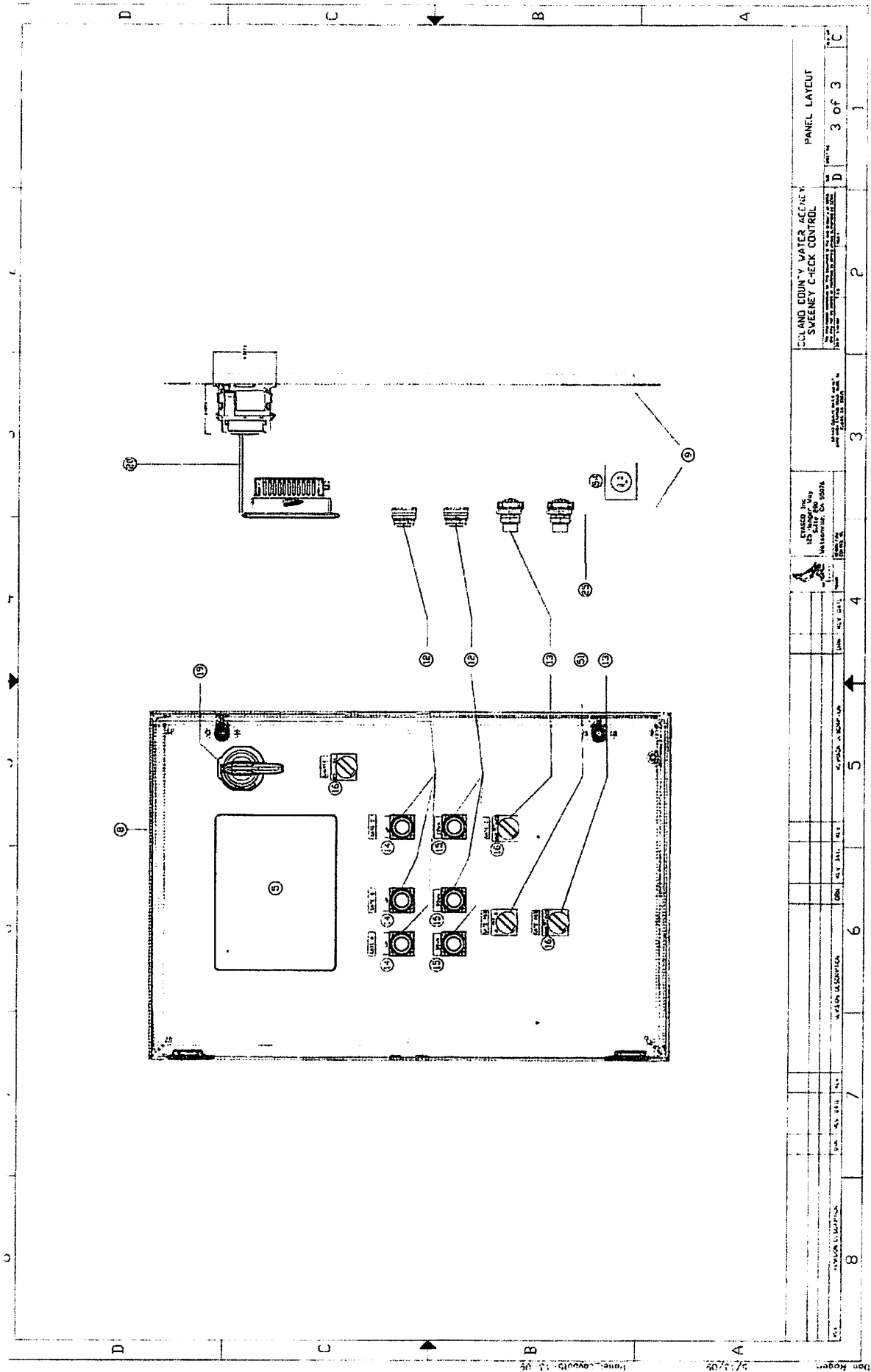
ITEM NO.	DESCRIPTION	MANUFACTURER
1	MAIN CONTROL PANEL	WESTINGHOUSE
2	POWER SUPPLY	WESTINGHOUSE
3	RELAY UNIT	WESTINGHOUSE
4	RELAY UNIT	WESTINGHOUSE
5	RELAY UNIT	WESTINGHOUSE
6	RELAY UNIT	WESTINGHOUSE
7	RELAY UNIT	WESTINGHOUSE
8	RELAY UNIT	WESTINGHOUSE
9	RELAY UNIT	WESTINGHOUSE
10	RELAY UNIT	WESTINGHOUSE
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41	RELAY UNIT	WESTINGHOUSE
42	RELAY UNIT	WESTINGHOUSE
43	RELAY UNIT	WESTINGHOUSE
44	RELAY UNIT	WESTINGHOUSE

SULAN COUNTY WATER AGENCY SWEENEY CHECK CONTROL		INSTRUMENTATION LAYOUT	
REV	DATE	REV	DATE
1	10/1/95	2	10/1/95
3	10/1/95	4	10/1/95
5	10/1/95	6	10/1/95
7	10/1/95	8	10/1/95
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31	10/1/95	32	10/1/95
33	10/1/95	34	10/1/95
35	10/1/95	36	10/1/95
37	10/1/95	38	10/1/95
39	10/1/95	40	10/1/95
41	10/1/95	42	10/1/95
43	10/1/95	44	10/1/95

Panel Layout - 10/1/95

5/1/95

Rev: 10/1/95

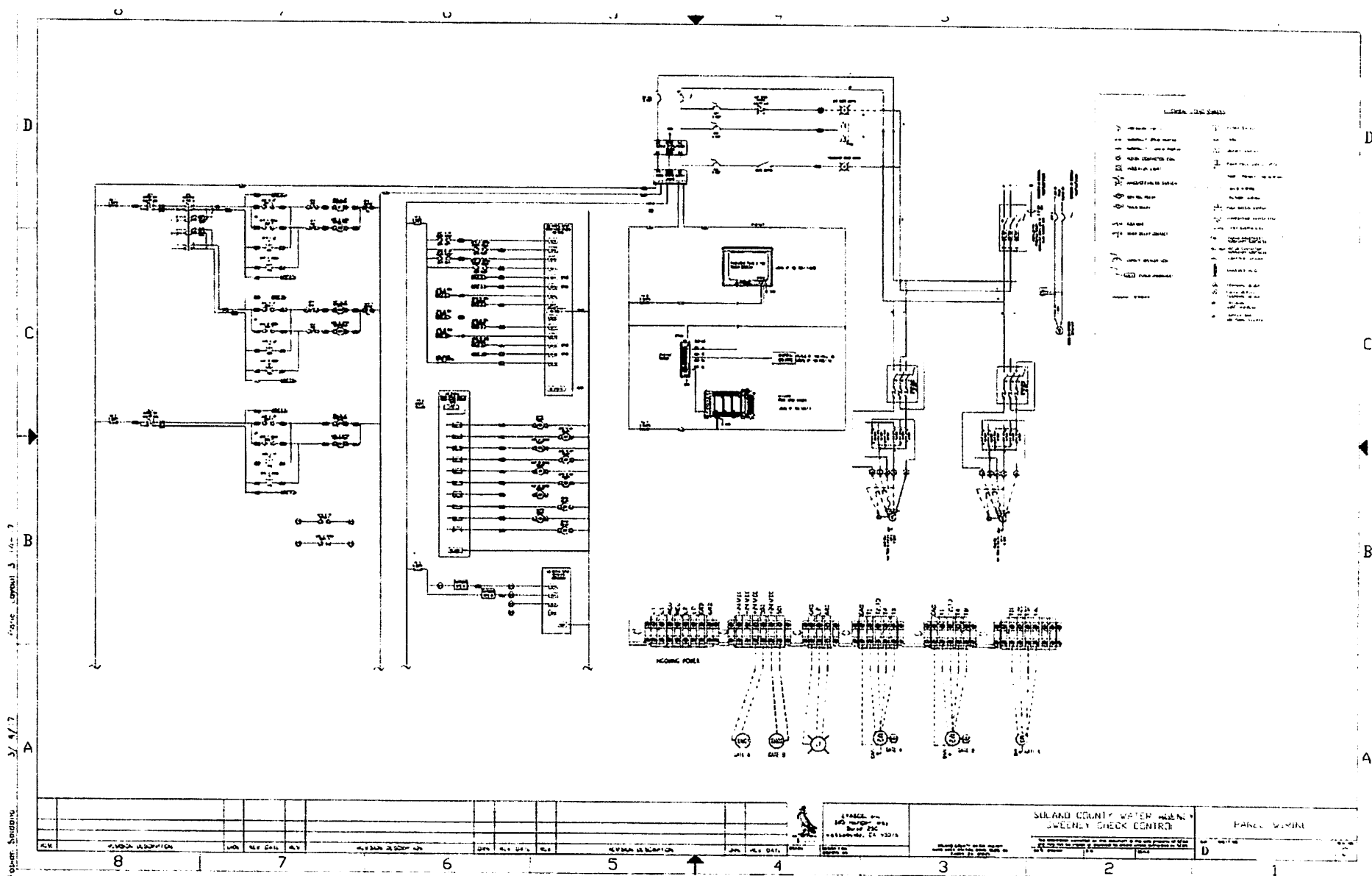


SULLAND COUNTY WATER AGENCY
SWEENEY CHECK CONTROL

PANEL LAYOUT
3 OF 3
C

1. PANEL NO.
2. PANEL DATE
3. PANEL NO.
4. PANEL DATE
5. PANEL NO.
6. PANEL DATE
7. PANEL NO.
8. PANEL DATE

Don Rogers



ACTION OF
SOLANO COUNTY WATER AGENCY

DATE: December 13, 2018

SUBJECT: Contract Amendment with Ovivo USA, LLC

RECOMMENDATIONS:

Authorize General Manager to execute \$20,000 contract amendment with Ovivo USA, LLC for additional operations and maintenance support of Putah South Canal Headworks screen cleaning equipment.

FINANCIAL IMPACT:

Increase in contract amount by \$20,000 from, \$40,000 to \$60,000. There is sufficient funding in the FY 2018-2019 Solano Project O&M and R&B budgets for this amendment.

BACKGROUND:

In 2015 the Board approved the \$750,000 purchase of the Ovivo Brackett Bosker® Raking Machine as part of the \$2,000,000 Putah South Canal (PSC) Headworks Improvement Project. The purpose of the Ovivo Brackett Bosker® Raking Machine is to remove debris and aquatic vegetation from the PSC Headworks screens (the inlet to the PSC). In 2017 the Board approved a 2-year contract with Ovivo USA, LLC. In early 2018, several unanticipated and rather expensive repairs and parts were required to maintain the raking machine and in turn, sufficient water deliveries to Solano Project water users. Additional funding is needed to ensure sufficient service support of the raking machine in 2019.

RELEVANCE TO 2016-2025 SCWA STRATEGIC PLAN

The Ovivo amendment is consistent with Goal #2 of the 2016-2025 Strategic Plan (*Water Management Infrastructure*), Objective D (*Identify and evaluate needs for infrastructure improvement*)

Recommended: _____

Roland Sanford, General Manager

☐

Approved as
recommended

☐

Other
(see below)

☐

Continued on
next page

Modification to Recommendation and/or other actions:

I, Roland Sanford, General Manager and Secretary to the Solano County Water Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on December 13, 2018 by the following vote:

Ayes:

Noes:

Abstain:

Absent:

Roland Sanford
General Manager & Secretary to the
Solano County Water Agency

SOLANO COUNTY WATER AGENCY

**AMENDMENT TO AGREEMENT-CONTRACTORS
(Small Contracts without Construction Work)**

AMENDMENT NUMBER: 1

CONTRACTOR: Ovivo USA, LLC

EFFECTIVE DATE: December 13, 2018

PROJECT: Ovivo Maintenance & Parts

DESCRIPTION OF AMENDMENT:

1. Increase compensation by \$20,000, from \$40,000 to \$60,000, for annual inspection, field service support and parts for the Water Agency's Brackett Bosker® Raking Machine.

SIGNATURES:

Solano County Water Agency,
a Public Agency

Ovivo USA, LLC

By: _____
Roland Sanford
General Manager

By: _____
Douglas King,
Aftermarket Sales Manager

FOR SCWA USE ONLY

Contract Period: July 8, 2017 to June 30, 2019
File Number: AG-O-2
Account Manager: Alex Rabidoux
G/L Account # 6690SC
Job Cost# 4305
Contract type: Vendor Contract

**ACTION OF
SOLANO COUNTY WATER AGENCY**

DATE: December 13, 2018

SUBJECT: Contract amendment with Solano Conservation District to correct administrative error

RECOMMENDATION:

Authorize General Manager to execute \$34,192 contract amendment with Solano Resource Conservation District for Pleasants Creek restoration projects.

FINANCIAL IMPACT:

Sufficient funding is included in the Water Agency's FY 2018-2019 adopted budget for this expense.

BACKGROUND:

The Water Agency routinely contracts with the Solano Resource Conservation District (Solano RCD) for a variety of services, including administration of the Water Agency's flood control small grant program, public outreach and education programs such as Watershed Explorers, and miscellaneous habitat restoration projects. In 2017 the Water Agency and Solano RCD executed Contract Amendment 1 (attached) for the continuation of ongoing restoration activities along Pleasants Creek, a tributary of Lower Putah Creek. Contract Amendment 1 extended the term of an existing contract through 2018, and was also intended to increase the contract amount by \$35,000, to provide sufficient funding for the additional work contemplated in 2018.

The Solano RCD agreed to perform the requested restoration work and was authorized to proceed by Water Agency staff. However, when Contract Amendment 1 was executed, only the extension of time was included in the "Description of Amendment". The \$35,000 increase in the contract amount should have also been included in the Description of Amendment, but was not – an administrative error neither party noticed until the work was completed and invoices submitted. The Solano RCD performed the work contemplated as a part of Contract Amendment 1. However, without a correction to Contract Amendment 1 the Water Agency cannot pay the Solano RCD for the work performed. Staff is requesting authorization to execute Contract Amendment 2 (attached), correcting the administrative error and increasing the total contract amount by \$34,192, the actual charges for work performed pursuant to Contract Amendment 1.

Recommended: 
Roland Sanford, General Manager

☐

Approved as
recommended

☐

Other
(see below)

☐

Continued on
next page

Modification to Recommendation and/or other actions:

I, Roland Sanford, General Manager and Secretary to the Solano County Water Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on December 13, 2018 by the following vote:

Ayes:

Noes:

Abstain:

Absent:

Roland Sanford
General Manager & Secretary to the
Solano County Water Agency

SOLANO COUNTY WATER AGENCY
AMENDMENT TO AGREEMENT FOR PROFESSIONAL SERVICES

AMENDMENT NUMBER: 2

CONTRACTOR: Solano Resource Conservation District

EFFECTIVE DATE: July 1, 2017

PROJECT: Pleasants Creek

DESCRIPTION OF AMENDMENT:

1. Increase contract amount by \$34,192 from \$30,000 to \$64,192.

NOTE: The purpose of contract amendment #2 is to retroactively correct an administrative error with contract amendment #1. Amendment #1 extended the term of the "Solano RCD – Pleasants Creek" contract from June 30, 2017 to June 30, 2018 and should have, but did not, include an increase in compensation to reflect the additional scope of work items contemplated with the extension of time.

SIGNATURES:

Solano County Water Agency,
A Public Agency

Solano RCD

By: _____
Roland Sanford, General Manager
Solano County Water Agency

By: _____
Chris Rose
Executive Director

FOR SCWA USE ONLY

Contract Period: _____ to _____

File Number: _____

Account Manager: _____

G/L Account #: _____

Job Cost #: _____

Contract Type: _____

SOLANO COUNTY WATER AGENCY
AMENDMENT TO AGREEMENT FOR PROFESSIONAL SERVICES

AMENDMENT NUMBER: 1

CONTRACTOR: Solano RCD

EFFECTIVE DATE: July 1, 2017

PROJECT: Pleasants Creek

DESCRIPTION OF AMENDMENT:

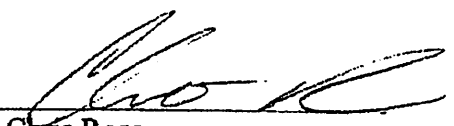
1. Extend term to June 30, 2018

SIGNATURES:

Solano County Water Agency,
a Public Agency

Solano RCD

By:  11/28/17
Roland Sanford,
General Manager

By:  11-28-17
Chris Rose
Executive Director

Name of Project: **Solano RCD – Pleasants Creek**

AG-5-9-4

SOLANO COUNTY WATER AGENCY

AGREEMENT FOR SERVICES

THIS AGREEMENT, effective July 1, 2016 is between SOLANO COUNTY WATER AGENCY, a public agency existing under and by virtue of Chapter 573 of the 1989 statutes of the State of California, hereinafter referred to as "Agency," and Solano Resource Conservation District, hereinafter referred to as "Contractor."

The Agency requires services for **Solano RCD – Pleasants Creek**; and the Contractor is willing to perform these services pursuant to the terms and conditions set out in this Agreement.

IT IS MUTUALLY AGREED, as follows:

1. **SCOPE OF SERVICES**

The Agency hereby engages the Contractor, and the Contractor agrees to perform the services for **Solano RCD – Pleasants Creek**, as described in Exhibit A, in accordance with the terms of this Agreement and any applicable laws, codes, ordinances, rules or regulations. In case of conflict between any parts of this Agreement, this Agreement shall control over any Exhibit.

2. **COMPENSATION**

Compensation for services shall be as follows: Cost of construction and hourly rate of personnel plus any allowed reimbursable expenses based on unit costs as indicated on any allowed reimbursable expense in Exhibit B not to exceed \$30,000 for all work contemplated by this Agreement.

3. **METHOD OF PAYMENT**

Upon submission of an invoice by the Contractor, and upon approval of the Agency's representative, the Agency shall pay the Contractor monthly in arrears for fees, construction costs and allowed expenses incurred the prior month, up to the maximum amount provided for in paragraph 2 of this Agreement. Every invoice shall specify hours worked, travel, and supply costs for each task identified in Exhibit A and specified in exhibit B and shall indicate current invoice amount, prior billed and balance remaining by task.

4. **TIME OF PERFORMANCE**

This Agreement shall become effective as of the date it is executed and said services will take place between this date and June 30, 2017 as directed by the Agency.

5. WARRANTY

The Agency has relied upon the professional ability and training of the Contractor as a material inducement to enter into this Agreement. The Contractor hereby warrants that all of its work will be performed in accordance with generally accepted professional practices and standards as well as the requirements of applicable federal, state and local laws, it being understood that acceptances of the Contractor's work by the Agency shall not operate as a waiver or release.

6. MODIFICATION AND TERMINATION

This Agreement may be modified or amended only by written instrument signed by the parties hereto, and the Contractor's compensation and time of performance of this Agreement shall be adjusted if they are materially affected by such modification or amendment.

Any change in the scope of the services to be done, method of performance, nature of materials or price thereof, or to any other matter materially affecting the performance of nature of the services will not be paid for or accepted unless such change, addition or deletion is approved in advance, in writing, by the Agency's General Manager.

This Agreement may be terminated at any time, with or without cause, by the Agency upon written notification to the Contractor, or by the Contractor upon 30 days written notice to Agency.

Following termination by the Agency or the Contractor, the Contractor shall be reimbursed for all expenditures made in good faith in accordance with the terms of this Agreement that are unpaid at the time of termination.

7. PERMITS

Permits required by governmental authorities will be obtained by the Agency at the Agency's expense. The Contractor will comply with local, state and federal regulations and statutes including Cal/OSHA requirements.

8. INDEMNIFY AND HOLD HARMLESS

To the fullest extent permitted by law, Contractor will defend, indemnify and hold harmless the Agency, its directors, officers, employees or authorized volunteers from all claims and demands of all persons arising out of the performance of the work or the furnishing of materials; including but not limited to, claims by the Contractor or Contractor's employees for damages to persons or property except for the sole negligence or willful misconduct or active negligence of the Agency, its directors, officers, employees, or authorized volunteers.

9. INSURANCE

By his/her signature hereunder, Contractor certifies that he/she is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and that Contractor will comply with such provisions before commencing the performance of the professional services under this agreement. Contractor and subcontractors will keep workers' compensation insurance for their employees in effect during all work covered by this agreement.

Contractor will file with the Agency, before beginning professional services, certificates of insurance satisfactory to the Agency evidencing general liability coverage of not less than \$1,000,000 per occurrence (\$2,000,000 general and products-completed operations aggregate (if used)) for bodily injury, personal injury and property damage; auto liability of at least \$1,000,000 for bodily injury and property damage each accident limit; workers' compensation (statutory limits) and employer's liability (\$1,000,000) (if applicable); requiring 30 days (10 days for nonpayment of premium) notice of cancellation to the Agency. Any insurance, self-insurance or other coverage maintained by the Agency, its directors, officers, employees, or authorized volunteers shall not contribute to it. The general liability coverage shall give the Agency, its directors, officers, employees, and authorized volunteers insured status using ISO endorsement CG2010, CG2033, or equivalent. Coverage is to be placed with a carrier with an A.M. Best rating of no less than A- :VII, or equivalent, or as otherwise approved by the Agency. In the event that the Contractor employs other contractors (subcontractors) as part of the work covered by this agreement, it shall be the Contractor's responsibility to require and confirm that each subcontractor meets the minimum insurance requirements specified above.

If any of the required coverages expire during the term of this agreement, the Contractor shall deliver the renewal certificate(s) including the general liability additional insured endorsement to the Agency at least ten (10) days prior to the expiration date.

10. COMPLIANCE WITH LAW

The Contractor shall be subject to and comply with all federal, state and local laws and regulations applicable with respect to its performance under this Agreement, including but not limited to, licensing, employment and purchasing practices; and wages, hours and conditions of employment.

11. SUBCONTRACT AND ASSIGNMENT

This Agreement binds the heirs, successors, assigns and representatives of the Contractor. The Contractor shall not enter into subcontracts for any work contemplated under this Agreement and shall not assign this Agreement or monies due or to become due, without the prior written consent of the General Manager of the Agency or his designee, subject to any required state or federal approval.

12. NOTICE

Any notice provided for herein are necessary to the performance of this Agreement and shall be given in writing by personal delivery or by prepaid first-class mail addressed as follows:

AGENCY

Roland Sanford, General Manager
Solano County Water Agency
810 Vaca Valley Parkway Suite 203
Vacaville, CA 95688

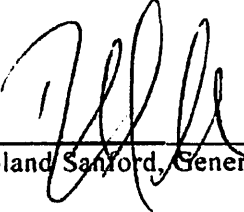
CONTRACTOR

Chris Rose, Executive Director
Solano Resource Conservation District
1170 N Lincoln Street, Suite 110
Dixon, CA 95620

The parties have executed this Agreement the day and year first above written.

Solano County Water Agency
A Public Agency

Solano Resource Conservation
District

By: 
Roland Sanford, General Manager


By: 
Joseph R. Martinez, Chair
Board of Directors

EXHIBIT A
SCOPE OF WORK

The scope of work includes assistance with weed control, planting native vegetation, erosion control and development of proposals for future projects on Pleasants Creek as directed by the Streamkeeper.

EXHIBIT B

Labor

Executive Director	\$84
Assistant Executive Director	\$72
Project Manager	\$61

Materials

At cost with receipts

Mileage

At federal rate

**ACTION OF
SOLANO COUNTY WATER AGENCY**

DATE: December 13, 2018

SUBJECT: Sale of surplus property

RECOMMENDATION:

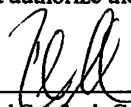
Approve Resolution 2018-05 authorizing sale of surplus equipment no longer needed or useful for ongoing and anticipated Lower Putah Creek restoration activities.

FINANCIAL IMPACT: Estimated revenue: unknown

BACKGROUND:

State law, under Government Code Section 37350, authorizes local governments to dispose of real and personal property when it is in the common good. The law does not state how the disposal of surplus property is to take place, leaving it to the local jurisdiction to make that determination. Among the methods most commonly used by local governments in California include sales at auctions by public or sealed bids, conducted either by the local government or under contract with a private auction firm, trade-ins, or sale as scrap metal. Increasingly, the use of private on-line sale agencies or sales on eBay is becoming a common practice. The Water Agency does not have any specific policies regarding the sale or disposal of surplus equipment and therefore all such sales or disposal of surplus property are conducted in accordance with Government Code Section 3750.

The Water Agency owns a number of items that were purchased through the federal government surplus sales program for various stream restoration projects along Lower Putah Creek and tributary streams. Staff has determined that the items listed in Table 1 (see page 2) are no longer needed or useful for ongoing and anticipated Lower Putah Creek restoration activities, or any other activities of the Water Agency, and is recommending they be sold or scrapped, with the proceeds set aside for future equipment purchases. Pursuant to Government Code Section 37350, the Board must authorize the sale or disposal of surplus equipment by resolution (see attached).

Recommended: 
Roland Sanford, General Manager

☐

Approved as
recommended

☐

Other
(see below)

☒

Continued on
next page

Modification to Recommendation and/or other actions:

I, Roland Sanford, General Manager and Secretary to the Solano County Water Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on December 13, 2018 by the following vote.

Ayes:

Noes:

Abstain:

Absent:

Roland Sanford
General Manager & Secretary to the
Solano County Water Agency

DEC.2018.IT5G

TABLE 1

Items to be sold

Item #	Description	Qty
1	1986 American General Auger Truck M923 5 Ton 6X6 ID #517800 C523-01986	1
2	M923 6X6 Truck with Hydroseeder VIN: NL096ZC52300210 Special Equipment License Plate # SE561373	1
3	Truck Tractor M915A4 Line Haul VIN: 1FUJCBPA42PH58925 with 1981 30 ton tilt trailer	1
4	1979 Chevy Box Truck VIN: CPL3593323262, License Plate #1297733	1
5	10,000 gallon pillow tank NSN 5430-01-414-9252	6
6	3,000 gallon water tank NSN 5430-07-543-0155	8
7	Rolls of 2-inch diameter Manila Rope 1200 ft per roll	6

Items to be scrapped

- 1) Chevy 30 Delivery Van VIN: 2GBHG31K2H4 111006
- 2) Subsoiler no distinguishable serial numbers other than Patent # 4679635
- 3) Truck Mounted Hydroseeder Motor Serial # 13148 T-10-RL #SE561369 (non-operational)

RESOLUTION NUMBER 2018-5

**Resolution of the Solano County Water Agency
Authorizing Sale of Surplus Property**

WHEREAS, State law, under Government Code Section 37350, authorizes local governments to dispose of real and personal property when it is in the common good, and

WHEREAS, The Water Agency owns certain equipment that was purchased for various stream restoration projects along Lower Putah Creek and tributary streams, and

WHEREAS, The Water Agency has determined that the items listed in Exhibit 1, hereto attached, are no longer needed or useful for ongoing and anticipated Lower Putah Creek restoration activities, or any other activities of the Water Agency.

NOW THEREFORE BE IT RESOLVED that the General Manager is authorized to sell the items listed in Exhibit 1, attached hereto, in conformance with Government Code Section 37350 of State law.

Approved and adopted the 13th day of December, 2018. I, the undersigned, hereby certify that the foregoing Resolution was duly adopted by the SOLANO COUNTY WATER AGENCY:

Ayes:

Noes:

Abstain:

Absent:

JD Kluge, Chairman

ATTEST:

Roland Sanford,
General Manager and Secretary to
Solano County Water Agency

Exhibit 1 of Resolution 2018-05

Surplus items proposed for sale or scraping pursuant to Resolution 2018-05

Items to be sold

Item #	Description	Qty
1	1986 American General Auger Truck M923 5 Ton 6X6 ID #517800 C523-01986	1
2	M923 6X6 Truck with Hydroseeder VIN NL096ZC52300210 Special Equipment License Plate # SE561373	1
3	Truck Tractor M915A4 Line Haul VIN: 1FUJCBPA42PH58925 with 1981 30 ton tilt trailer	1
4	1979 Chevy Box Truck VIN: CPL3593323262, License Plate #1297733	1
5	10,000 gallon pillow tank NSN 5430-01-414-9252	6
6	3,000 gallon water tank NSN 5430-07-543-0155	8
7	Rolls of 2-inch diameter Manila Rope 1200 ft per roll	6

Items to be scrapped

- 1) Chevy 30 Delivery Van VIN 2GBHG31K2H4 111006
- 2) Subsoiler no distinguishable serial numbers other than Patent # 4679635
- 3) Truck Mounted Hydroseeder - Motor Serial # 13148 T-10-RL

**ACTION OF
SOLANO COUNTY WATER AGENCY**

DATE: December 13, 2018

SUBJECT: Contract Amendment with Southwest Environmental Incorporated

RECOMMENDATION:

Authorize General Manager to execute contract amendment with Southwest Environmental Incorporated (SWE) for continuation of High Efficiency Toilet (HET) rebate program for low income residences and Commercial, Industrial and Institutional facilities.

FINANCIAL IMPACT:

Increase contract amount by \$300,000, from \$300,000 to \$600,000. Funding is programmed and available in the FY 2018-2019 Water Conservation budget for these expenses.

BACKGROUND:

Legislation, specifically SB407 requires, on or before January 1, 2019, that all non-water conserving plumbing fixtures in multifamily residential real property and commercial real property, be replaced with water-conserving plumbing fixtures. SB407 also requires that for specified building alterations or improvements to multifamily residential real property and commercial real property, that water-conserving plumbing fixtures replace other noncompliant plumbing fixtures as a condition for issuance of a certificate of final completion and occupancy or final permit approval by the local building department.

SCWA's program offers Solano County commercial customers a limited opportunity to receive new high-efficiency toilets (HETs) at no cost to replace older, high water use toilets. Since its inception, SCWA's commercial toilet replacement program has installed over 10,000 HETs at commercial sites throughout Solano County. SCWA's Urban Water Conservation Committee recommends a program extension to install an additional 1,000 HETs which represents an additional water savings of almost 8,000,000 gallons per year.

Recommended: 
Roland Sanford, General Manager

☐ Approved as recommended ☐ Other (see below) ☐ Continued on next page

Modification to Recommendation and/or other actions:

I, Roland Sanford, General Manager and Secretary to the Solano County Water Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on December 13, 2018 by the following vote:

Ayes:

Noes:

Abstain:

Absent:

Roland Sanford
General Manager & Secretary to the
Solano County Water Agency

SOLANO COUNTY WATER AGENCY

AMENDMENT TO AGREEMENT FOR PROFESSIONAL SERVICES

AMENDMENT NUMBER: 1

CONTRACTOR: Southwest Environmental Incorporated

EFFECTIVE DATE: December 13, 2018

PROJECT: Installation of High-Efficiency Toilets at low income residences and CII locations.

DESCRIPTION OF AMENDMENT:

1. Increase contract amount by \$300,000 from \$300,000 to \$600,000.

SIGNATURES:

Solano County Water Agency,
a Public Agency

Southwest Environmental Inc.

By: _____
Roland Sanford, General Manager &
Solano County Water Agency

By: _____
Dale Chessher Secretary to the
Director of Operations

SOLANO COUNTY WATER AGENCY



MEMORANDUM

TO: Board of Directors

FROM: Roland Sanford, General Manager

DATE: December 5, 2018

SUBJECT December 2018 General Manager's Report

Water Supply Outlook for 2019

Earlier this month the Department of Water Resources issued the initial State Water Project allocation for the 2019 calendar year. As of December 1 the initial allocation for the North Bay Aqueduct component of the State Water Project is 20 percent of the full "Table A" contractual amount. The initial 2019 allocation, although low, is not unexpected and in fact is typical. Initial allocations assume in part that the balance of the rainy season – December through March – will be well below average.

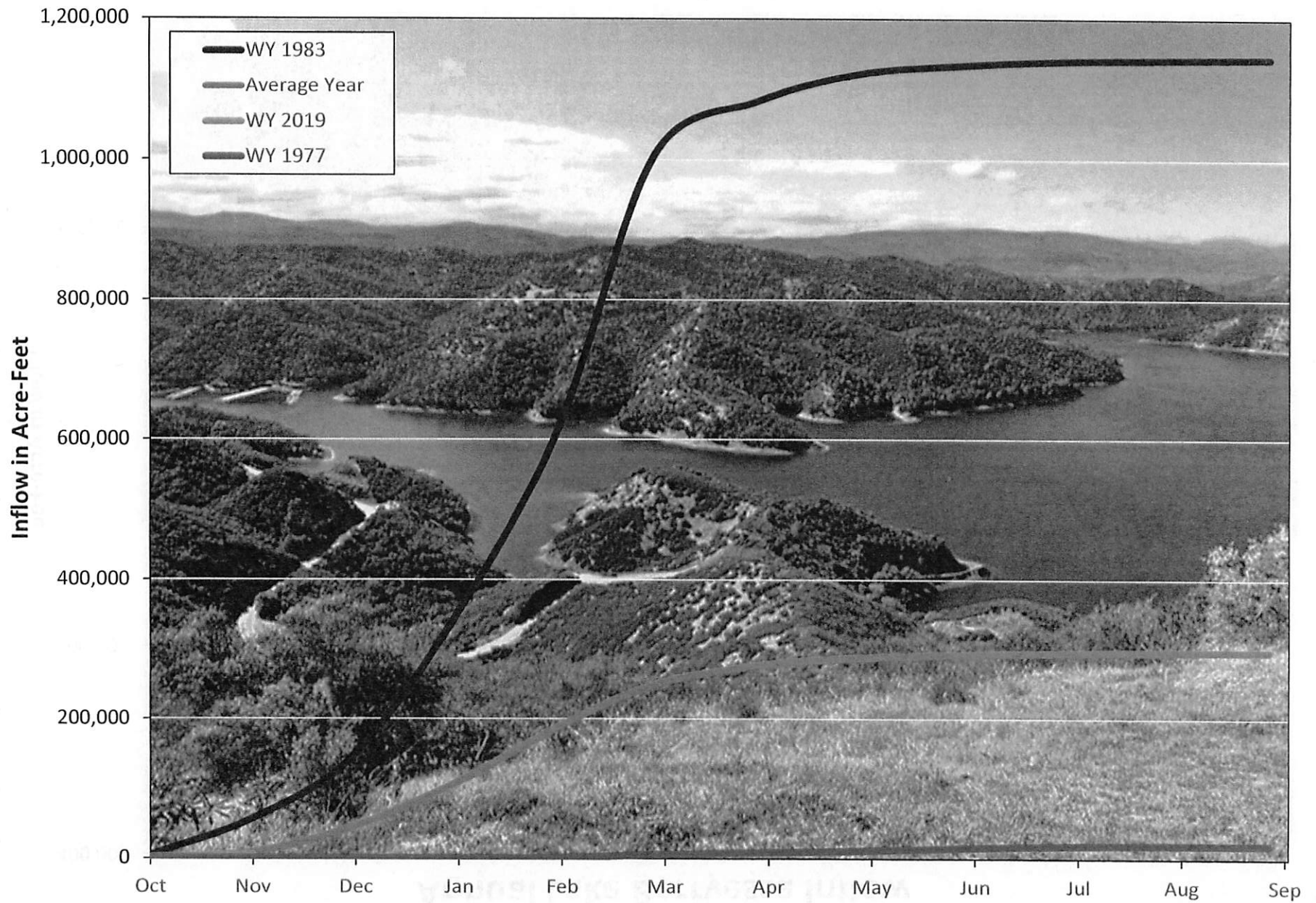
The recent rains have brought seasonal rainfall totals in the Lake Berryessa watershed up to historic averages – runoff into Lake Berryessa, although rather modest to date, is consistent with historic averages for the month of November (see attached chart). As of this writing Lake Berryessa is nearly full – 80 percent of capacity – and therefore, even if there is no rain the balance of the rainy season, will provide full water supply allocations to the Solano Project water users in 2019. Given the fact that Lake Berryessa is nearly full there remains, based on the historic record, a 50-50 chance that Lake Berryessa will spill in 2019.

Chinook Salmon Spawning in Lower Putah Creek

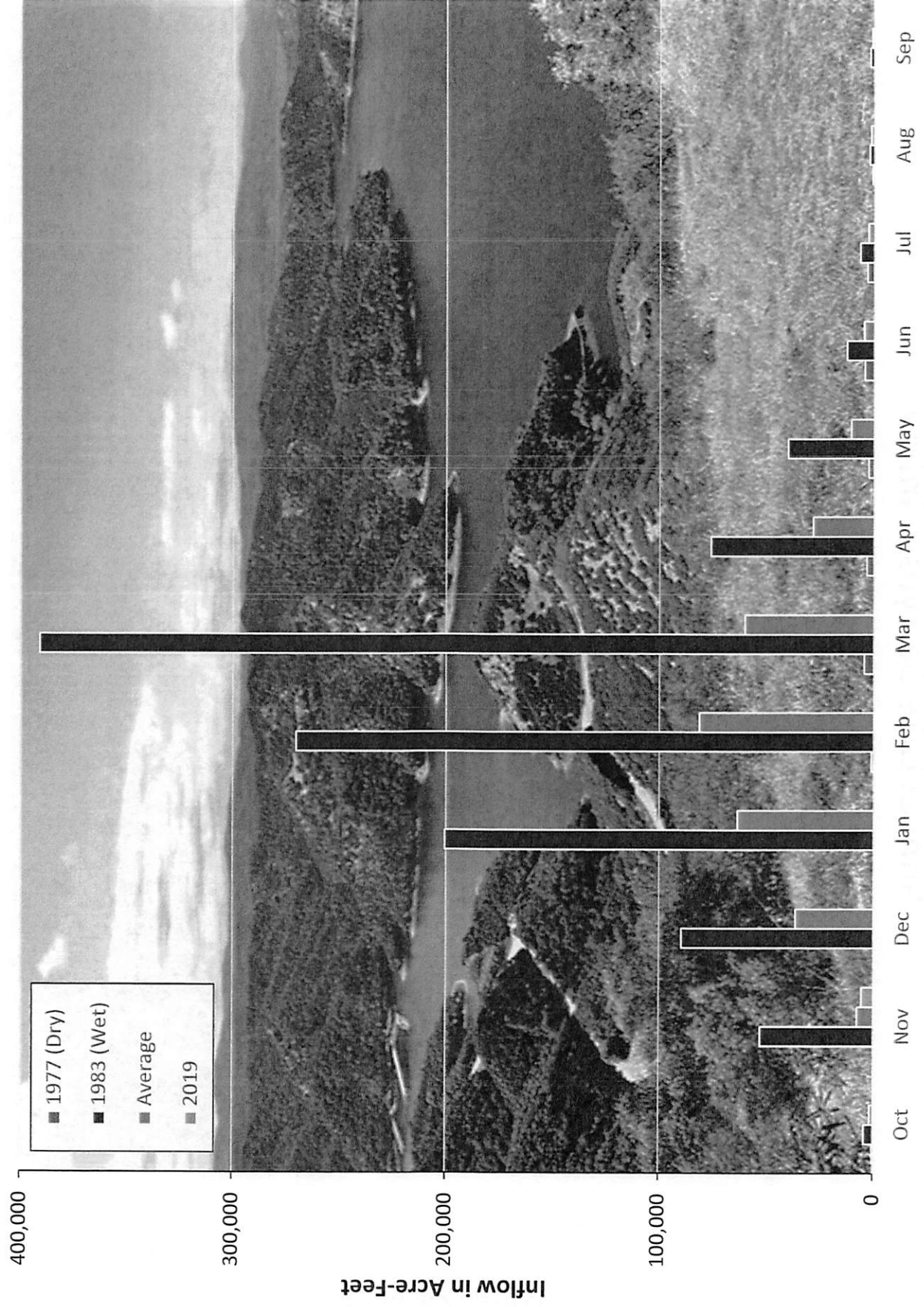
To date over 480 adult Chinook salmon have been observed in Lower Putah Creek since the beginning of November. Spawning salmon have been observed at a number of locations, primarily upstream of the Interstate 505 bridge. In the next few months UC Davis researchers will resume monitoring of downstream migrants, as a part of the ongoing Lower Putah Creek Chinook Salmon Study funded by the Water Agency.



Annual Lake Berryessa Inflow



Annual Lake Berryessa Inflow



**REPORT OF CONSTRUCTION CHANGE ORDERS AND
CONTRACTS APPROVED BY GENERAL MANAGER UNDER
DELEGATED AUTHORITY**

Construction Contract Change Orders (15% of original project costs or \$50,000, whichever is less) - none

Construction Contracts (\$30,000 and less) - none

**Professional Service Agreements (\$30,000 and less) –
none**

Non-Professional Service Agreements (\$30,000 and less) –

**Construction contracts resulting from informal bids authorized by SCWA
Ordinance- none**

Note: Cumulative change orders or amendments resulting in exceeding the dollar limit need Board approval.

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Vacaville food forest garden project continues with irrigation workshop

By **Sustainable Solano**

VACAVILLE — Day 3 of a public, hands-on installation workshop series at the "Shalom" demonstration food forest garden takes place Saturday.

This is an opportunity to see a dead, barren front lawn transformed into a customized food forest based on permaculture design principles. See the newly installed laundry-to-landscape gray water system and a simple roof water catchment technique that you can do at home to capture water.

Topics covered during the workshop include:

- Planting a community of plants with multiple functions that support a healthy, diverse ecosystem.
- Surface drip irrigation installation; adding irrigation for young plants and water conservation.
- Covering the food forest with free wood chips (mulch) to prevent water evaporation and improve soil health.

This installation includes a short lecture from a sustainable landscape expert and hands-on experience on how to build a food forest. A vegetarian lunch will be provided by the property owner. Participants should bring hats, gloves, reusable water bottle and sunblock.

The project, which takes place from 10 a.m. to 4 p.m. is sponsored by the Solano County Water Agency.

To register, visit www.sustainablesolano.org/events. You will receive the location when you register.

— **Marcella Licea**

Printed in the November 16, 2018 edition on page A3 | Published on November 16, 2018 | Last Modified on November 16, 2018 at 2:35 am

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November 29, 2018

[Elaine Weinreb](#)[Contact Us](#)

The New Zealand Invaders

Tiny snails bring big threat to North Coast waterways

BY ELAINE WEINREB

[WIKIMEDIA COMMONS](#)

New Zealand mudsnails measure just under 5 millimeters but reproduce prolifically and can take over an ecosystem.

About the last thing Northern California needs right now is another environmental crisis, especially one that affects the already beleaguered salmon population. Consequently, scientists were not happy to learn that New Zealand mudsnails, which have the unpleasant habit of taking out the algae at the bottom of the aquatic food chain, have invaded local waterways.

[click to enlarge](#)[WIKIMEDIA COMMONS](#)

Once the algae are gone, the rest of the aquatic food chain crashes, too.

The term "food chain" refers to the idea that every animal, insect, bird, worm, fungus, bacterium or virus eats something else, and is, in turn, eaten by something else. At the very base of this chain are plants, which create their own food from sunshine, water and carbon dioxide. In waterways, these plants are usually algae.

New Zealand mudsnails are tiny critters, 5 millimeters long or less, and easy to overlook. They cluster on stream bottoms and on rocks, and dine on whatever algae or dead organic matter they can find. They also reproduce asexually and multiply very quickly.

According to a report by Darren Ward, a fisheries biologist at Humboldt State University, each female can produce broods of up to 80 daughters every two to three months, allowing populations to rapidly reach densities of more than 100,000 per square meter. As their numbers multiply, they outcompete native insect larvae that also munch on these food sources. When the insect larvae disappear, so do the adult mayflies and caddisflies that feed salmon and trout.

Moreover, the mudsnails have an uncanny ability to wall themselves off, sealing up their shells when devoured by a fish and going into a state of suspended animation. They pass through the fish's digestive tract unharmed and come out the other end, much like seed passing through a bird.

They also affect terrestrial biology. The same insects that feed fish also feed riparian spiders — which can compose 80 percent of the diet of some songbird nestlings.

New Zealand mudsnails measure just under 5 millimeters but reproduce prolifically and can take over an ecosystem.

Report Sightings

Provided you can tell the difference between the harmless native snail and the New Zealand invaders, report your sightings online at <https://on.doi.gov/2P5s6aH>. For more information on the snails, visit <https://bit.ly/2RkRcUL>.

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more from the author

McKinleyville Water Rates Set to Spike

Residents confused, frustrated by 26 percent increase over five years

by Elaine Weinreb

Fish commonly eat native snails, which don't have that self-protective ability. But a fish that eats a New Zealand mudsnail won't get any nutrition out of it. Trout have been caught on the verge of starvation, with bellies full of undigested snails.

Scientists studying the little mollusks have noted that, at least in this part of the world, their densities are highest in estuaries and lagoons. This may be due to the chemistry of the water — the mudsnails thrive in water that is high in calcium and relatively low in salt, which at least keeps them out of Humboldt Bay. It also seems to keep them from traveling far upstream, at least in densities high enough to cause ecological damage.

But the mudsnails can do a lot of harm in estuaries. In some parts of the country, they replace most of the biomass of the stream. Juvenile salmon live in estuaries while they grow and gain weight for their future life in the ocean. If they can't survive in the estuaries, the species is in trouble.

To make matters even worse, there is no known way of eliminating the mudsnails. Dumping poison into a waterway is never a good idea, nor is draining it, even where possible. Martha Volkoff, the environmental project manager of the Invasive Species Program of the California Department of Fish and Wildlife, noted that snail populations often crash after reaching very high densities. However, the population crash could be the result of the mudsnails using up the algae that sustain them. How — and if — this will all play out is still unknown to biologists and fishery managers.

Scientists believe that the first mudsnails arrived in this country as an accidental import, like most other invasive plants and animals. They first showed up in 1987, in the Middle Snake River of Idaho. In California, they were first noted in Putah Creek, in Yolo and Solano counties, and near Owens Dry Lake in Inyo County. Now a United States Geological Survey map of invasive species shows findings scattered all over the state, with a huge cluster in the East Bay region of California. (They are also found in many other states across the nation.)

After Heated Meeting, Planning Commission Sends Zoning Changes to Supes

by Elaine Weinreb

Visions Collide at Harbor District Forum

by Elaine Weinreb

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Here on the North Coast, they are found from Lake Earl in Del Norte County to Arcata. The latest finding — in October — was made along the Mad River, one at the boat launch near the mouth of the river and the other on the banks of a small public park owned by the Humboldt Bay Municipal Water District. So far, there is no sign of the critters having invaded the Mad River Hatchery, which is 8 miles farther upstream. The HSU hatchery was not so lucky and has been quarantined. Arcata city employees have also discovered the snails in Gannon and Jolly Giant sloughs.

Humans seem to be the chief vector for transporting the mudsnails from one waterway to another. According to a government report, New Zealand mudsnails may be transported on fishing gear, on waders and boots, swimsuits and swimming toys and even by hunting dogs and horses. Hikers, backpackers, horseback riders and bicyclists may inadvertently transfer the snail when encountering multiple stream crossings during their outings. The snails' small size allows them to be carried in tiny crevices that might escape detection. The mudsnails have also been inadvertently distributed via live bait and bait containers.

Even personnel involved in monitoring projects, restoration activities and other natural resource activities that cross watershed boundaries may transport New Zealand mudsnails to new water bodies in the same way. Mudsnails can live in moist environments near the edges of streams and therefore can also be picked up and moved by people who don't even enter the water.

So far, authorities are combating the further spread of the mudsnails via warning signage. But nobody really knows how widespread the invasion is and Volkoff said that Fish and Wildlife does not have the resources to check every waterway in the state. Instead, she said the agency relies on reports from smaller, local agencies — and by members of the public who notice strange little brown dots on anything that has touched a creek.

— *This story appeared in print as "The New Zealand Invaders."*

Employee Calls Police After Alleged Dispute with Public Defender

by Thadeus Greenson

Dying and Destitute

Terminal patients become collateral damage in the war between the Squireses and the city

by Thadeus Greenson



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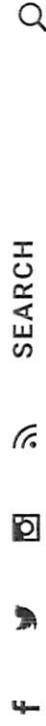
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View of the Tuolumne River as it approaches the confluence with the San Joaquin. Dos Rios Ranch, with more than six miles of river frontage, is among sites where floodplains are being restored. Photo via River Partners



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Let it flow: In about-face, state breaks and shifts levees to restore natural floodplains

By [Alastair Bland](#) ✉ | Dec. 4, 2018 | [ENVIRONMENT](#)

At the confluence of the San Joaquin and Tuolumne rivers, a winter of heavy rains could inundate about 1,200 acres of riverside woodland for the first time in 60 years. That's by design: Here, a few miles west of Modesto, work crews removed or broke several miles of levee last spring and replanted the land with tens of thousands of native sapling trees and shrubs.

"We are very eager to see what happens when there is some overbank flooding here," said Julie Rentner, executive vice president of River Partners, a habitat restoration group that is directing the project, known as the [Dos Rios Ranch Preserve](#).

The work, much of it conducted by the California Conservation Corps, comes as the state overhauls its approach toward flood control, with a growing emphasis on reconnecting floodplains to rivers so they can absorb floodwaters. This shift in methodology marks a U-turn from past reliance on levees to protect cities and towns.

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“It’s a paradigm change,” said Trout Unlimited biologist Rene Henery, who is among several California scientists helping drive the transition from “gray infrastructure” to “green infrastructure.”

A prime idea behind the surge of enthusiasm is simple: When a swollen river is allowed to flood in one location, it is less likely to inundate another. At the Dos Rios project, for example, the area newly opened to floodwaters could contain thousands of acre-feet of water that, in flood events, would otherwise flow straight downstream toward Stockton, a city of 310,000 people where a ruptured levee could be disastrous.

Climate change brings a sense of urgency to the matter.

“The modeling shows we are going to see a lot more extreme events, including flooding on our rivers,” said Ted Sommer, a biologist with the Department of Water Resources who has studied floodplain ecology for more than 20 years.

California’s Central Valley Flood Protection Plan, updated in 2017, warns that by late this century “flood magnitudes in some San Joaquin River watersheds are expected to increase by 60 to 80% relative to historical conditions.” This change—even greater than the 10 to 20 percent predicted for the Sacramento system—is expected mainly because warmer temperatures will cause more winter precipitation to fall as water, rather than snow, in the high Sierra Nevada, producing rapid flow

surges downstream. The plan concludes that “wise land use and floodplain management...represent some of the most cost-effective means of reducing long-term flood risk.”

Inundated floodplains offer other benefits, too. When they soak up water, they help recharge depleted aquifers—currently a grave water supply issue in a drought-stricken state with a rapidly rising human population.

And they provide waterfowl and other wildlife with valuable habitat. Young Chinook salmon, for example, use inundated river valleys as feeding and refuge areas as they migrate toward the ocean.

Interest in using floodplains as absorptive shields against flooding in California started in the 1990s. But, said Jeffrey Mount, a senior fellow at the Public Policy Institute of California, “it takes decades to turn government policy into action, especially when you’re talking about knocking down levees.”

Now, that it’s starting to happen, scientists and nonprofit groups—including California Trout and The Nature Conservancy—have their eyes on roughly a million acres of historic floodplains that could potentially be reconnected to rivers with levee modifications. The 60,000-acre Yolo Bypass, a sprawl of fields and wetland a few miles west of Sacramento, is just one project on the to-do list. The Sutter Bypass, north of the capital, is another. River Partners alone hopes to restore 50,000 acres of floodplain in the next decade.

Funding is coming mostly from state agencies. To date, the California Department of Water Resources has provided \$13 million of the total Dos Rios project cost of \$42 million, according to Rentner. The U.S. Bureau of Reclamation, the San Francisco Public Utilities Commission and other agencies have also chipped in millions. Much of this money—about \$14 million, Rentner said—has



A male Chinook salmon returns from the Pacific to spawn. Photo via California Sea Grant/Flickr

come from 2014's Prop 1 water bond, which allocated \$395 million in flood control funding.

Another \$300 million from 2018's Prop. 68 is designated for projects that simultaneously improve public safety and fish and wildlife enhancement—money that underwrite restoring floodplains.

While they have yet to encounter strong opposition, some farmers remain cautious about what floodplain projects could mean for their properties. Floodwaters were long considered anathema to farming, particularly for orchard-growers and others with permanent root stock who feared rot, fungus and disease from the inundation.

But recent persistent drought has prompted a rethinking, with some agriculture interests teaming with UC Davis to experiment with flooding on fallow farmland.

Nonetheless the floodplain strategy remains a concern for others. And Justin Fredrickson, the California Farm Bureau Federation's environmental policy analyst, also noted the risk that renewed annual flooding of land that has remained more or less high and dry for decades could allow jungle-like riparian woodlands to overgrow some parcels. Because of rules about clearing such vegetation, "it can be almost impossible to get that land back," Fredrickson said.

Even among seasonal crop farmers, there are timing concerns.

"Some farmers want to be planting by early spring," Fredrickson said, "and if their land is inundated each winter, that might not be possible."

And in some cases, shifting a levee could mean transferring ownership of a property that has been farmed for generations, under the principle of eminent domain.



UC Davis scientists flooded this Modesto almond orchard, testing how its dormant trees react when flooding is allowed to seep into the aquifer.

Henery said he wants to see floodplain restoration programs offer farmers financial incentives to participate—and reimbursements should they suffer impacts.

In the 1800s, farmers and landowners began building thousands of miles of levees to confine California's rivers within their banks. For the next century, the state engineered its waterways to flow as ribbon-like channels that moved neatly toward the sea, while farmers and towns removed the water they needed via pipes and canals.

The strategy was hardly perfect. Because levees compress rivers into narrow channels, the water exerts great outward force on the earthen walls.

"So, when they failed, results were catastrophic," said Mount, who served on a state panel of flood control advisors in the early 2000s.

The levees separated Central Valley rivers from more than 90 percent of their historic floodplain acreage, too—an ecological blow that preceded declines in waterfowl and salmon populations.

Eventually, scientists and engineers began to recognize these flaws. In 2001, Sommer, at the Department of Water Resources, published a seminal paper after observing that Central Valley Chinook salmon populations often spiked immediately after flood events. Research would show why: Young salmon with access to flood plains grew larger and faster, and were more likely to reach the ocean, than smolts confined to a watershed's main river channel.

A big boost for floodplain conservation came in 2009 with a few clauses tucked deep within an 844-page report from the U.S. National Marine Fisheries Service. There, the service recommended state and federal agencies "provide significantly increased acreage of seasonal floodplain rearing habitat" as one measure for helping slow the decline of the Central Valley's endangered salmon and steelhead runs.

EcoRestore, the state's companion program to the controversial Delta tunnels proposal, promises large areas of revitalized floodplains.

Mount said the recurring mention of floodplain enhancements and restoration in numerous government planning documents adds up to a "de facto state policy" of restoring floodplains.

The floodplain revolution isn't unique to California. Levee setback projects aimed at enlarging floodplains, Mount noted, are underway on the Mississippi and Missouri rivers, and in Europe. Holland's Room for the River program is another example of progressive floodplain policy abroad.

"They have rising sea level and growing population on the floodplains, and they've realized they can't structurally build their way out of increasing flood risk," Mount said. "Instead, they're pursuing this idea of creating more room for the river, so it can spread out."

Alastair Bland is a CALmatters contributor who specializes in environmental reporting.



CALmatters



ADVISORY COMMISSION UPDATES

**Solano Water Advisory Commission
Meeting Minutes
October 24, 2018**

Present: Roland Sanford, Thomas Pate and Alex Rabidoux, SCWA; Felix Riesenberger, Fairfield; Justen Cole and Steve Sawyer, Vacaville; William Tarbox and Leo Larkin, Benicia; Melissa Cansdale, Vallejo; Cary Keaten and Kevin King, SID; Bryan Busch, RD 2068; Misty Kaltreider, Solano County; John Currey, Dixon RCD; Taylon Sorter, FSSD; Mike Hardesty.

The meeting was called to order at 12:34 PM.

1. Approval of Minutes

The minutes of the September 26, 2018 meeting were approved.

2. SCWA General Manager's Report

No status change on the Water Supply-Demand Analysis and Ulatris Channels Working Group. For Board items, will have the Agency's legislative platform and health benefit changes on the agenda.

On NBA water exchanges, the Dudley Ridge transaction is done, and the Santa Clara Valley Water District is almost complete. Rick Wood will be putting together a white paper on Water Exchanges and any initial suggestions or comments should be sent to Thomas Pate. Commission members will need to help guide the water exchange discussions, and help inform their representative SCWA Board members on the importance of the exchanges. The Commission will ultimately need to bring something to the Water Policy Committee. On other NBA issues, Roland is looking at the possibility of storing NBA water in the Bay Area groundwater basins. For the NBA treatment analysis, SCWA staff will be putting together a memo summarizing the 2009 MWH study, to see if it is worth updating.

For the Solano Project, the Water Master for Putah Creek (MBK Engineers) has observed that SWRCB staff have forgotten about the Settlement Agreement that adjudicated the upper basin. A total of 30-TAF of water is allocated to the upper Putah Creek Basin, and Napa County is likely close to their allocation limit. Roland will send out the Condition 12 Settlement Agreement.

On Bay Delta Planning issues, the SWRCB will be holding a hearing on November 7 to approve flow allocations for the San Joaquin River tributaries. The hearing will provide a good indication of the State's position on the voluntary settlement agreements. For the Sacramento River system, the CDFW is working with agencies on the Feather River to come up with a voluntary settlement agreement. In January, the State will also have new administration which may change the direction on these issues as well. For potential impacts to the Solano Project, water users may have to consider weighting the reliability of the Solano Project with taking more water out.

On Flood Management, the draft flood policy was sent out and comments are due by November 7. If there are significant comments, approval of the flood policy may be delayed until the January Board meeting. On regional issues, Mike Hardesty provided a brief update on four proposals that ACWA is sponsoring. The proposals looked at compliance periods

for MCLs, an alternative approach to a water tax, exemptions to conflict of interest, and modifications to the Public Contract Code. There was also interest in inviting the new ACWA director over to Solano County.

3. Groundwater Planning

Misty updated the Commission on SGMA activities. The group is currently fact gathering, and waiting for the state to come out with a new State Model. Everyone is also waiting for approval of the Basin Modifications. If approved, the North Delta Basin would be removed from the Solano Subbasin well as a few additional Reclamation Districts. The North Delta Basin currently has dual coverage but with the intent to separate out of the Solano Subbasin.

4. Solano County Report

The County, Cal OES, and the City of Vallejo are currently working on inundation studies as well as a grant program to help secure funding. The County and others are also working on repetitive loss issues with flooding.

5. PSC/NBA Maintenance

The Napa-Solano NBA Coordination meeting will be happening in early November. October 25 will also be the end of SID's irrigation season followed by the start of the annual PSC cleanout.

6. Solano Water Authority Report

None

7. Water Conservation

None

8. Legislative/Initiative/Court Decision Issues Not Discussed Above

None

9. New Business

None

10. Public Comments

None

The next meeting will be December 5, 2018 at 12:30 PM.

The meeting adjourned at 1:36 PM.

**ACTION OF
SOLANO COUNTY WATER AGENCY**

DATE: December 13, 2018

SUBJECT: Flood Management

RECOMMENDATIONS:

1. Adopt revised draft flood management policy proposed by Water Policy Committee
2. Hear report from Water Policy Committee regarding possible formation of Regional Flood Management Group and provide direction to Committee members and staff

FINANCIAL IMPACT:

None

BACKGROUND:

Defining the Water Agency's future role in flood management is one of the stated goals of the 2016-2025 SCWA Strategic Plan (Goal # 3, Objective B). In 2017 the Board assigned the task of formulating recommendations regarding the Water Agency's future role in flood management to the Water Policy Committee. For the purposes of this assignment the Water Policy Committee was expanded and consisted of two County Supervisors, two mayors, two irrigation district managers, and a member of the Solano Water Advisory Commission. The Committee met on a semi-monthly basis for nearly a year and a half and on September 13, 2018 presented the attached draft flood management policy (Version 8; dated 8-31-18) to the Board for review and comment. Initial Board member comments were received at the September 13, 2018 Board meeting and the Board elected to extend the comment period – for Board members and their respective staff – until November 9, 2018. A revised draft flood management policy (Version 9, dated 11-20-18), which incorporates all of the comments received, is attached. The Water Policy Committee recommends the Board adopt the revised draft flood management policy.

Recommended: 

Roland Sanford, General Manager

☐

Approved as
recommended

☐

Other
(see below)

☒

Continued on
next page

Modification to Recommendation and/or other actions:

I, Roland Sanford, General Manager and Secretary to the Solano County Water Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on December 13, 2018 by the following vote:

Ayes:

Noes:

Abstain:

Absent:

Roland Sanford
General Manager & Secretary to the
Solano County Water Agency

Action Item No. 2018-XX
Agenda Item No. 9

In addition to the initial draft of the flood management policy, at the September 13, 2018 Board meeting the Water Policy Committee also presented the attached memo regarding possible formation of a “Regional Flood Management Group” – a group that would include organizations involved in flood management but not directly represented on the Water Agency Board of Directors, such as the Dixon Resource Conservation District. The Water Policy Committee believes formation of a Regional Flood Management Group would enhance implementation and the overall effectiveness of the proposed flood management policy. However, the Committee also acknowledges that formulating the organizational structure of a Regional Flood Management Group and defining the Group’s roles and responsibilities would take time.

To date, the Board has largely focused on the draft flood management policy and there has been no substantive discussion pertaining to the possible formation of a Regional Flood Management Group. Accordingly, the Water Policy Committee is seeking Board direction - whether or not to further explore formation of a Regional Flood Management Group.

RELEVANCE TO 2016-2025 SCWA STRATEGIC PLAN

Defining the Water Agency’s future role in flood management is one of the stated goals of the 2016-2025 SCWA Strategic Plan.

F

SOLANO COUNTY WATER AGENCY



REVISED DRAFT Flood Management Policy

(11-20-18)

Ver. 9

Introduction

The Solano County Water Agency (SCWA) Board of Directors recognized the need to define SCWA's role in flood management and included that need in their 2016 – 2025 Strategic Plan (Goal #3, Objective B).

Goal #3: Flood Management: Implement SCWA's role in flood management.

B Define SCWA's role in flood management.

SCWA's Water Policy Committee was tasked with developing a draft policy for consideration and approval by the full Board. The following represents the Committee's best thinking.

Overview

There currently is no one agency responsible for flood management in Solano County. Responsibility for flood management runs the gamut from areas of overlapping jurisdiction to areas not actively served by flood management agencies. Additionally, there is no consistent coordination between upstream and downstream users. Given that one person's drainage has the potential to be another person's flood, the need for coordination is evident.

The Committee recognizes that the residents of the County would benefit from a regional approach to flood management, and that SCWA is well positioned to facilitate, coordinate, communicate and collaborate with the County and the cities, irrigation districts, reclamation districts, and resource conservation districts (hereafter called "stakeholder agencies¹") and other interested parties within Solano County. Currently, SCWA is responsible for operations and maintenance of the Ulati Flood Control Project and the Green Valley Flood Control Project. SCWA also has authority to deal with flood control matters within the boundaries of SCWA, though SCWA is not a first responder.

¹ Stakeholder agencies include: Solano County; the cities of Benicia, Dixon, Fairfield, Rio Vista, Suisun City, Vacaville, Vallejo; Reclamation District 2068; Maine Prairie Water District; Solano Irrigation District; Dixon Resource Conservation District (RCD); Solano RCD; and Suisun Marsh RCD.

The Water Policy Committee makes the following policy recommendation for consideration and approval by the SCWA Board. To aid the reader, a list of acronyms and a glossary of terms related to flood management can be found on pages 6 - 13.

Policy Purpose

The purpose of this policy is to replace the current piecemeal approach to flood management with a regional approach. This policy applies to the entire county including cities and the unincorporated areas, and is based on:

1. Commitment to working together and voluntary compliance with the recommendations.
2. Encouraging communications with stakeholder agencies and other interested parties.
3. Creation of a system-wide approach to flood management.
4. Avoiding delays in obtaining permits such as grading, drainage, and/or stormwater.
5. Avoiding unintended consequences of drainage and flood management.

Proposed Policy

To achieve a more regional approach, SCWA will, in concert with the stakeholder agencies and other interested parties:

1) Update the Master Drainage Plan and Revise the Hydraulic Design Manual

The purpose of the Master Drainage Plan is to provide information and guidance to anyone involved in flood management including stakeholder agencies, flood managers, planners, engineers, developers, and the public. The Hydrology Manual is a technical manual used for design of drainage and flood control facilities. Activities include:

- a) Update the Master Drainage Plan to include:
 - i) Inventory of facilities and capacities including:
 - (1) Identification of historic flood plains, agricultural and joint-use drainage ditches, levees, and flood control projects.
 - (2) Identification of joint-use and other multi-purpose facilities.
 - (3) Qualitative analysis of system including:
 - (a) Identification of system design capacities, if known.
 - (b) Deficiencies when operating at design capacity.
 - (c) Rank areas of most vulnerability.
 - ii) Identification of repetitive loss properties in the entire County.
 - iii) Addressing water quality programs including National Pollutant Discharge Elimination System (NPDES) stormwater requirements, and Irrigated Lands Program.

- iv) Definition of jurisdictional responsibilities including each agency and district's roles and responsibilities – and geographical area served.
 - v) Identification of SCWA and stakeholder agency committees, their purpose, membership, and how they operate (see #3 and 4).
 - b) Revise and update Hydraulic Design Manual.
 - c) Identify and Map jurisdictional areas based on watershed.
- 2) Facilitate a process, with preference for early consultation, to review new projects, development proposals, expansion projects and change of land use projects within the entire County that might contribute to flooding**

Currently, not all jurisdictions that may be affected by drainage system modifications, development or change of land use are aware of pending plans in other jurisdictions. Only after the completion of the project are downstream users acquainted with any drainage or flood impacts – at which point it is too late or expensive to redesign the project. The goal of this process is to provide an easy and efficient method for notifying stakeholder agencies and organizations and allow each the opportunity to review potential land use changes and analyze the flood impacts of the project. The desired outcome is to manage flooding to protect lives and property through better communications and early identification of issues. To achieve this outcome:

- a) SCWA would act as a “clearinghouse” to disseminate project notifications.
 - i) All stakeholder agencies would submit “Project Notification and Request for Review” and maps of any applicable projects to SCWA.
 - ii) SCWA would send out the notification to the flood management Point of Contact (POC) in each stakeholder agency – along with contact information of the originating jurisdiction.
 - iii) To confirm notification and review, stakeholder agencies would respond to the project proponent, with a copy to SCWA, commenting that the project would likely have:
 - (1) No Impact,
 - (2) Minor Impact,
 - (3) Major Impact – and request the full packet of information.
 - iv) It would be up to the individual stakeholder agency to submit comments and/or attend the originating jurisdiction's review meeting.
- b) Once the County's watershed boundaries are mapped, future notifications could be tailored to only agencies within a specific watershed.

3) Convene Flood Management Technical Working Group

A group of multi-disciplined experts including engineers, land use planners, scientists and flood managers from the stakeholder agencies would serve a multitude of purposes. SCWA would convene a Technical Group to:

- a) Advise the Water Policy Committee as requested (see #7).
- b) Review Master Drainage Plan (see #1).
- c) Develop BMPs for stream channel maintenance (see #5).
- d) Review the potential for expansion of flood management facilities.
 - i) Recommend alternatives for future growth.
 - ii) Determine life-cycle costing of upgrades and new facilities.
- e) Discuss flood management issues and create recommendations to reduce flooding using a system-wide approach including drainage ditches, floodplain management and other strategies.
- f) Develop criteria and score regional projects (see #4.a.ii).
- g) Coordinate the flood management message to the public (See #6) by developing ideas and reviewing drafts.
- h) Initially meet monthly.

4) Assist County/cities/agencies/private property owners

SCWA has resources to assist ~~agencies~~ Local government entities and private property owners with leveraging resources, lobbying, and securing permits. Recommended activities include:

- a) Leverage resources to fund large flood management projects.
 - i) Review standing policy (i.e., fund up to 1/3 of capital costs) – and revise as necessary.
 - ii) Use Flood Management Technical Committee (#3) to develop criteria and score projects.
 - iii) Tie funding to outcome-based projects.
 - iv) Include other public benefits (including groundwater recharge, habitat, etc.)
 - v) Advocate on behalf of cities, agencies, and County as requested. Efforts could include support for levee maintenance, creek and drainage clearing, permitting or other.
 - vi) Promote coordination with other regulatory and non-regulatory programs to minimize duplicative work.

- vii) Secure permits including regional permits and assist/consult with individual landowners to implement projects that fall within the regional permit.
- b) Continue funding existing programs (Small Grant Program to assist landowners with localized flood management issues, Sweeney Creek Home Raising Program to elevate homes in flood prone areas, funding and technical assistance for development of local and regional watershed management plans and technical studies).
- c) Expand Small Grant Program to include additional assistance with the acquisition of regulatory permits.
- d) Conduct annual “call for projects” each spring to solicit funding requests for projects that can be funded through the Water Agency’s various grant funding programs (see #4.a,b,c).
- i) Use Flood Management Technical committee (see #3) to review and rank project proposals, and make funding recommendations to Water Agency Board of Directors.

5) Develop County-wide recommended Best Management Practices (BMPs) for preservation of flood conveyance capacity of natural watercourses

Compliance with the BMPs would be voluntary – but highly encouraged. This recommendation includes:

- a. Creation of Best Management Practices (BMPs) for stream channel maintenance including vegetation management, sediment removal and bank protection.
- b. Highlighting the connection between BMP compliance and consistency with regional permits.
- c. Creation of implementation recommendations that comply with regional permits.
- d. Encourage planning that recognizes and discourages over subscription of available capacity.

6) SCWA to lead resident/landowner education

Rather than have each jurisdiction duplicate efforts, SCWA is in a position to create educational materials to address flood protection, and promote BMPs for channel and streambed maintenance. The Flood Management Technical Group (#4) would consult on the development of the materials, which would be made available for use by any of the stakeholder agencies.

- a. Main Theme: Be Neighborly - emphasizing downstream responsibilities.
- b. Sponsor community engagement and education in coordination with the RCDs.

7) Incorporate Adaptive Management Strategies

Changing conditions require the need to review and revise policies as necessary. The SCWA Water Policy Committee is well suited to fulfill this function. The Water Policy Committee will review flood management policies at least annually, and address any immediate concerns as required.

ACRONYMS

BMP	Best Management Practice
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDPR	California Department of Pesticide Regulation
CEQA	California Environmental Quality Act
CIP	Capital Improvement Project
Corps or USACE	U.S. Army Corps of Engineers
CWA	Clean Water Act
DO	Dissolved Oxygen
EIR	Environmental Impact Report
EPA or USEPA	U. S. Environmental Protection Agency
ESA	Federal Endangered Species Act
GIS	Geographic Information System
ISA	International Society of Arboriculture
LWD	Large Woody Debris
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer Systems
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act of 1966
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPS	Nonpoint source
NRCS	Natural Resources Conservation Services, a division of the U.S. Department of Agriculture
OHWM	Ordinary High Water Mark
PCN	Preconstruction Notification Report
PRC	California Public Resources Code
RMA	Routine Maintenance Agreement
RWQCB	Regional Water Quality Control Board
SHPO	State Historic Preservation Officer
SMP	Stream Maintenance Program
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Loads
USACE	U.S. Army Corps of Engineers
USEPA	U. S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WDR	Waste Discharge Requirement

GLOSSARY OF SIGNIFICANT TERMS

Adaptive management	Learning from experience by adjusting management practices based on the feedback received through monitoring.
Alluvial fan	A landscape feature that is formed by the accumulation of sediment and organic material deposited by flowing water, and formed at the point where a stream enters a valley or plain or another, larger stream.
Amphibian	A cold-blooded vertebrate that spends some time on land but must breed and develop into an adult in water. Frogs, salamanders, and toads are amphibians.
Anadromous fish	Fish that are born and rear in freshwater, move to the ocean to grow and mature, and return to freshwater to reproduce. Salmon, steelhead, and lamprey eel are examples of anadromous species.
Armoring	Protective coverings or structures (natural or man-made) used to dissipate the erosive energy of water.
Atmospheric River	Atmospheric rivers are relatively long, narrow regions in the atmosphere – like rivers in the sky – that transport most of the water vapor outside of the tropics.
Bank failure	Occurs where a significant portion of the streambank has failed, slumped, eroded into the creek below, or has been removed entirely.
Bank stabilization	The act of preventing erosion or repairing an eroded bank in order to provide a stable streambank.
Bedform	A feature of a river or other flowing body of water that is formed by the movement of sediment and other material due to the flow of water.
Best Management Practices (BMPs)	A technique or series of techniques, which is the best known practice available to be effective in protecting water quality and stream habitat.
Brackish water	Somewhat salty, especially from being a mixture of fresh and salt water.

Channel	A stream, river bed or constructed ditch; generally refers to the physical form where water commonly flows.
Channel reach	See: Stream reach.
Climate change	Climate change is a change in the usual weather found in a place.
Cofferdam	A temporary watertight structure that is pumped dry to enclose an area underwater and allow construction work to be carried out.
Culvert	A transverse drain, usually a metal pipe, set beneath the road surface which drains water from the inside of the road to the outside of the road. Culverts are used to drain ditches, springs, and streams across the road alignment.
Detritus	Organic debris formed by the decomposition of plants or animals; fragments of rock that have been worn away.
Dewatering	The temporary diversion of water away from a work site to protect water quality and allow progression of work. Diversion is accomplished with coffer dams, pipes, or other means. Water is removed from the work site only, and not the entire stream or body of water.
Downed tree	Trees and large branches that naturally fall into stream channels. Such debris can promote recruitment of woody in channels to benefit instream habitat. However, downed trees may threaten flood conveyance capacity or channel stability.
Drainage basin	See: Watershed.
Drop inlet	A vertical riser on a culvert inlet, usually of the same diameter as the culvert, and often slotted to allow water to flow into the culvert as streamflow rises around the outside. Drop inlets are often used on stream or ditch relief culverts where sediment or debris would otherwise threaten to plug a traditional horizontal inlet.
Easement	A limited right to make use of a property owned by another, e.g. a right of way across the property.
Ecology	The study of the relationships between living organisms and their interactions with their natural or developed environment.

Emergency	"A sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property or essential public services. Emergency includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage." (CEQA 15359).
Endangered Species	Any species which is in danger of extinction throughout all or a significant portion of its range; an official designation of the California and/or Federal Endangered Species Acts.
Erosion	The wearing away of land surface primarily by wind or water. Erosion occurs naturally as a result of weather or runoff, but can be intensified by clearing, grading, or excavation of the land surface. Erosion usually refers to processes of surface erosion (rain drop erosion, rilling, gullying, and ravelling) and not to mass soil movement (landsliding).
Erosion protection	The act of preventing erosion from occurring or repairing an eroded bank in order to provide a stable streambank that will not require additional maintenance in the foreseeable future
Floodplain	A nearly level alluvial plain that borders a channel and is occasionally inundated by floods (unless artificially protected). The landform is formed by sediment transport and deposition from flows over the streambank and lateral movement of the stream. The '100-year floodplain' represents the area potentially inundated for an unusual but possible flood event with the probability of occurring once every 100 years on the average.
Fluvial Geomorphology	A science devoted to understanding how the natural setting and human land use in a watershed determine the shape of the river channel.
Geographic information system (GIS)	A computer system designed for storing, manipulating, analyzing, and displaying data in a geographic context, usually as maps.
Geomorphology	The study of the physical features of the surface of the earth, including their form, nature, origin, and development. See also fluvial geomorphology.
Groundwater	The standing body of water beneath the surface of the ground, consisting largely of surface water that has seeped down into the earth.

Hardscape	Inanimate, engineered elements of landscaping, such as rock.
Headwater	The place from which the water in the river or stream originates.
Hydraulic roughness	The amount of frictional resistance water experiences when passing over land and channel features.
Hydrologic unit	A drainage area delineated to nest in a multi-level, hierarchical drainage system. Its boundaries are defined by topographic criteria that delineate an area of land upstream from a specific point on a river, stream, or similar surface waters.
Hydrology	The scientific study of the properties, distribution, use, and circulation of the water on Earth and in the atmosphere in all of its forms.
Hydromodification	The "alteration of the hydrologic characteristics of waters, which in turn could cause degradation of water resources (source: EPA).
Invasive species	Species that show a tendency to spread out of control.
Large woody debris (LWD)	Portions of downed trees, such as large branches and root wads, that collect in the stream and provide channel structure and habitat for aquatic animals.
Levee	An embankment built to prevent the overflow of a river.
Life cycle cost	The cost of an asset that includes the initial (projected) capital costs, projected life-time operating costs, projected life-time maintenance costs, projected capital rehabilitation costs, projected disposal costs, and projected residual value.
Limbing	The removal of unwanted branches from a tree.
Loppers	A large type of scissors used for pruning twigs and small branches. They are usually operated with two hands.
Microclimate	A microclimate is the climate of a small, specific place within an area as contrasted with the climate of the entire area. For example, a small sunny area that is sheltered from harsh winds and frost of the surrounding region. Such a microclimate provides a different habitat than its surroundings.

Ordinary High Water Mark	"That line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area." [33 CFR 328.3(e)]
Outfall	The location where discharge from a culvert (drainage pipe) occurs.
Propagule	Any of various usually vegetative portions of a plant, such as a bud or other offshoot, that aid in dispersal of the species and from which a new individual may develop.
Pruning	To cut branches away from a plant to manipulate growth.
Reach	See: Stream reach.
Refugia	An isolated place of relative safety from danger and hardship used by aquatic species, such as fish; the only remaining high quality habitat within an area.
Riffle	An area of rocks or a sandbar lying just beneath the surface of the water.
Rip-rap	Large rocks or other suitable material placed on the ground or along streambanks as an armoring device to prevent or reduce erosion.
Riparian	The banks and other lands adjacent to lakes, watercourse, estuaries, and wet areas. Often refers to water-loving vegetation along the water's edge.
Runoff	Rainfall which flows overland across the surface or hillslopes and along roads and trails.
Salmonid	A species of fish that is a member of the salmon and trout family. Also see: Anadromous fish.
Scour	To clear something out by passing water through it; a place that has been scoured, especially by water.
Sea level rise	An increase in the volume of water in the world's oceans, resulting in an increase in global mean sea level.
Sediment	Organic or inorganic material that is carried or suspended in water and that settles out to form deposits in the stream system or receiving waters.
Shade tolerance	A plant's abilities to tolerate low light levels.

Silt fence	A constructed barrier used to contain soil eroded from a construction site. The barrier is made from filter fabric stretched between fence posts placed on contour along a slope.
Siltation	Fine-grained sediment, especially of mud or clay particles at the bottom of a river or lake.
Species of Special Concern	A designation used by California (CSC) and federal (FSC) agencies to refer to those species of animals (and sometimes plants) that have declining population levels, limited ranges, and/or continuing threats that have made them vulnerable to extinction. They may soon reach the point where they meet criteria for listing as threatened or endangered under the State and/or Federal Endangered Species Acts. No special legal protections are associated with this designation alone.
Storm water	The runoff generated when precipitation from rain and snowmelt events flows over land or impervious surfaces without percolating into the ground.
Stream	A natural waterway that transports water in a perennial, intermittent, or ephemeral circumstance.
Streambank	That portion of the channel bank cross-section that controls the lateral movement of water.
Streambank erosion	A natural process driven by stream bank characteristics (erodibility) and hydraulic/gravitational forces. Many land use activities can affect both of these components and lead to accelerated bank erosion. Acceleration of this natural process leads to a disproportionate sediment supply, stream channel instability, land loss, habitat loss and other adverse effects.
Streambank stabilization	See: Bank stabilization.
Stream channel incision	The deepening of the channel of a stream by erosion.
Stream reach	A continuous portion of a stream between two designated points.
Swale	A depression or low area on a hillslope which rarely carries runoff except during high rainfall events.
Terrace	A low-gradient surface formed by fluvial aggradation or erosion when the stream flowed at a higher elevation in the landscape. The term implies that the surface is rarely inundated by floods in the current climate.
Thalweg	The line of lowest elevation within a valley or watercourse.

Threatened Species	Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range; an official designation under the California and/or Federal Endangered Species Acts.
Toe-of-slope	The base of an embankment; the base of the streambank where it meets the channel bed.
Total Daily Maximum Load	A process under the federal Clean Water Act that provides a tool for implementing State water quality standards and is based on the relationship between pollution sources and instream water conditions.
Tree snags	A dead or dying tree that is still standing in place.
Tributary	A stream or river that flows into a larger stream, river, or lake.
Turbidity	Water that is cloudy or muddy usually due to suspended sediment.
Understory	Lower vegetation in a forest; a layer of small trees and bushes below the level of the taller trees.
Water quality	A measure of the suitability of water for a particular use based on selected physical, chemical, and biological characteristics.
Watershed	The area or drainage basin contributing water, organic matter, dissolved nutrients and sediments to a stream or lake.

SOLANO COUNTY WATER AGENCY



MEMO

To: Solano County Water Agency (SCWA) Board of Directors
From: SCWA Water Policy Committee
Re: Regional Flood Management Coordination Group Proposal
Date: July 30, 2018

The SCWA Water Policy Committee recently completed drafting a flood management policy for SCWA Board consideration and approval. In developing the draft policy, one overriding concern surfaced: there currently is no one agency responsible for flood management in Solano County. Responsibility for flood management runs the gamut from areas of overlapping jurisdiction to areas not actively served by any flood management agency. Additionally, there is no consistent coordination between upstream and downstream users. Given that one person's drainage has the potential to be another person's flood, the need for coordination is evident. The management of regional drainage systems is central to effective flood management.

The Committee recognizes that the residents of the County would benefit from a regional approach to flood management. While SCWA also has authority to deal with flood control matters within the boundaries of SCWA, SCWA has neither land use authority nor enforcement authority to enact flood management solutions. Any regional approach requires the participation of all jurisdictions in the County. At issue is the authority to enforce regional policies.

The Water Policy Committee makes the following policy recommendation for consideration by the SCWA Board.

Convene a Regional Flood Management Coordination Group (RFMCG)

The purpose of this Group is to create county-wide consistency for flood management. Changing conditions require a mechanism to create, review, revise, and enforce policies as needed. For that reason, it is important that this group be comprised of decision-makers from the various jurisdictions who have the authority to develop policy. The RFMCG should include representatives from city and county land use agencies, planners, elected officials, floodplain managers/coordinators, Public Works Directors, Irrigation Districts, Resource Conservation Districts (RCDs), County Office of Emergency Services (OES), transportation directors, SCWA management, representatives from the SCWA Flood Management Technical Working Group, representatives from the agricultural community, and the SCWA Flood Advisory Committee

(representing the public.) The group would operate collaboratively and meet quarterly to review policies and address any immediate concerns.

The convener could be SCWA, or the County. Policies would be developed or amended by consensus of the group. Policies developed by the RFMCG potentially would be adopted by the County and the cities who have enforcement authority. Without adoption, flood management policies would continue to be voluntary, sustaining the current disparate system.

Because the players include more than the jurisdictions represented on the SCWA Board, it is likely that a Joint Powers Authority (JPA) would be the most effective organizational structure. LAFCo approval would be required to create a JPA. Funding for the group is yet to be determined as is implementation funding for flood management projects.

The benefits are numerous. They include a regional approach to flood management, the ability to enforce county-wide best management practices (BMPs), certainty to developers, the ability to maximize flood facilities county-wide, and other economies of scale.

Clearly this is a far-reaching idea that needs further development and consent from the County and the cities. This recommendation is being presented to the SCWA Board for further discussion before moving forward.

SOLANO COUNTY WATER AGENCY



DRAFT Flood Management Policy

(08-31-18)

Ver. 8

Introduction

The Solano County Water Agency (SCWA) Board of Directors recognized the need to define SCWA's role in flood management and included that need in their 2016 – 2025 Strategic Plan (Goal #3, Objective B).

Goal #3: Flood Management: Implement SCWA's role in flood management.

B Define SCWA's role in flood management.

SCWA's Water Policy Committee was tasked with developing a draft policy for consideration and approval by the full Board. The following represents the Committee's best thinking.

Overview

There currently is no one agency responsible for flood management in Solano County. Responsibility for flood management runs the gamut from areas of overlapping jurisdiction to areas not actively served by flood management agencies. Additionally, there is no consistent coordination between upstream and downstream users. Given that one person's drainage has the potential to be another person's flood, the need for coordination is evident.

The Committee recognizes that the residents of the County would benefit from a regional approach to flood management, and that SCWA is well positioned to facilitate, coordinate, communicate and collaborate with the County and the cities, irrigation districts, reclamation districts, and resource conservation districts (hereafter called "stakeholder agencies¹") and other interested parties within Solano County. Currently, SCWA is responsible for operations and maintenance of the Ulatis Flood Control Project and the Green Valley Flood Control Project. SCWA also has authority to deal with flood control matters within the boundaries of SCWA, though SCWA is not a first responder.

¹ Stakeholder agencies include: Solano County; the cities of Benicia, Dixon, Fairfield, Rio Vista, Suisun City, Vacaville, Vallejo; Reclamation District 2068; Maine Prairie Water District; Solano Irrigation District; Dixon Resource Conservation District (RCD); Solano RCD; and Suisun Marsh RCD.

The Water Policy Committee makes the following policy recommendation for consideration and approval by the SCWA Board. To aid the reader, a list of acronyms and a glossary of terms related to flood management can be found on pages 6 - 13.

Policy Purpose

The purpose of this policy is to replace the current piecemeal approach to flood management with a regional approach. This policy applies to the entire county including cities and the unincorporated areas, and is based on:

1. Commitment to working together and voluntary compliance with the recommendations.
2. Encouraging communications with stakeholder agencies and other interested parties.
3. Creation of a system-wide approach to flood management.
4. Avoiding delays in obtaining permits such as grading, drainage, and/or stormwater.
5. Avoiding unintended consequences of drainage and flood management.

Proposed Policy

To achieve a more regional approach, SCWA will, in concert with the stakeholder agencies and other interested parties:

1) Update the Master Drainage Plan and Revise the Hydraulic Design Manual

The purpose of the Master Drainage Plan is to provide information and guidance to anyone involved in flood management including stakeholder agencies, flood managers, planners, engineers, developers, and the public. The Hydrology Manual is a technical manual used for design of drainage and flood control facilities. Activities include:

- a) Update the Master Drainage Plan to include:
 - i) Inventory of facilities and capacities including:
 - (1) Identification of historic flood plains, agricultural and joint-use drainage ditches, levees, and flood control projects.
 - (2) Identification of joint-use and other multi-purpose facilities.
 - (3) Qualitative analysis of system including:
 - (a) Identification of system design capacities, if known.
 - (b) Deficiencies when operating at design capacity.
 - (c) Rank areas of most vulnerability.
 - ii) Identification of repetitive loss properties in the entire County.
 - iii) Addressing water quality programs including National Pollutant Discharge Elimination System (NPDES) stormwater requirements, and Irrigated Lands Program.

- iv) Definition of jurisdictional responsibilities including each agency and district's roles and responsibilities – and geographical area served.
- v) Identification of SCWA and stakeholder agency committees, their purpose, membership, and how they operate (see #3 and 4).
- b) Revise and update Hydraulic Design Manual.
- c) Identify and Map jurisdictional areas based on watershed.

2) Facilitate a process, with preference for early consultation, to review new projects, development proposals, expansion projects and change of land use projects within the entire County that might contribute to flooding

Currently, not all jurisdictions that may be affected by drainage system modifications, development or change of land use are aware of pending plans in other jurisdictions. Only after the completion of the project are downstream users acquainted with any drainage or flood impacts – at which point it is too late or expensive to redesign the project. The goal of this process is to provide an easy and efficient method for notifying stakeholder agencies and organizations and allow each the opportunity to review potential land use changes and analyze the flood impacts of the project. The desired outcome is to manage flooding to protect lives and property through better communications and early identification of issues. To achieve this outcome:

- a) SCWA would act as a “clearinghouse” to disseminate project notifications.
 - i) All stakeholder agencies would submit “Project Notification and Request for Review” and maps of any applicable projects to SCWA.
 - ii) SCWA would send out the notification to the flood management Point of Contact (POC) in each stakeholder agency – along with contact information of the originating jurisdiction.
 - iii) To confirm notification and review, stakeholder agencies would respond to the project proponent, with a copy to SCWA, commenting that the project would likely have:
 - (1) No Impact,
 - (2) Minor Impact,
 - (3) Major Impact – and request the full packet of information.
 - iv) It would be up to the individual stakeholder agency to submit comments and/or attend the originating jurisdiction's review meeting.
- b) Once the County's watershed boundaries are mapped, future notifications could be tailored to only agencies within a specific watershed.

3) Convene Flood Management Technical Working Group

A group of multi-disciplined experts including engineers, land use planners, scientists and flood managers from the stakeholder agencies would serve a multitude of purposes. SCWA would convene a Technical Group to:

- a) Advise the Water Policy Committee as requested (see #7).
- b) Review Master Drainage Plan (see #1).
- c) Develop BMPs for stream channel maintenance (see #5).
- d) Review the potential for expansion of flood management facilities.
 - i) Recommend alternatives for future growth.
 - ii) Determine life-cycle costing of upgrades and new facilities.
- e) Discuss flood management issues and create recommendations to reduce flooding using a system-wide approach including drainage ditches, floodplain management and other strategies.
- f) Develop criteria and score regional projects (see #4.a.ii).
- g) Coordinate the flood management message to the public (See #6) by developing ideas and reviewing drafts.
- h) Initially meet monthly.

4) Assist County/cities/agencies

SCWA has resources to assist agencies with leveraging resources, securing permits and lobbying. Recommended activities include:

- a) Leverage resources to fund large flood management projects.
 - i) Review standing policy (i.e., fund up to 1/3 of capital costs) – and revise as necessary.
 - ii) Use Flood Management Technical Committee (#3) to develop criteria and score projects.
 - iii) Tie funding to outcome-based projects.
 - iv) Include other public benefits (including groundwater recharge, habitat, etc.)
 - v) Advocate on behalf of cities, agencies, and County as requested. Efforts could include support for levee maintenance, creek and drainage clearing, permitting or other.
 - vi) Promote coordination with other regulatory and non-regulatory programs to minimize duplicative work.

vii) Secure permits including regional permits and assist/consult with individual landowners to implement projects that fall within the regional permit.

- b) Continue funding existing programs (Small Grant Program to assist landowners with localized flood management issues, Sweeney Creek Home Raising Program to elevate homes in flood prone areas, funding and technical assistance for development of local and regional watershed management plans and technical studies).

5) Develop County-wide recommended Best Management Practices (BMPs) for preservation of flood conveyance capacity of natural watercourses

Compliance with the BMPs would be voluntary – but highly encouraged. This recommendation includes:

- a. Creation of Best Management Practices (BMPs) for stream channel maintenance including vegetation management, sediment removal and bank protection.
- b. Highlighting the connection between BMP compliance and consistency with regional permits.
- c. Creation of implementation recommendations that comply with regional permits.
- d. Encourage planning that recognizes and discourages over subscription of available capacity.

6) SCWA to lead resident/landowner education

Rather than have each jurisdiction duplicate efforts, SCWA is in a position to create educational materials to address flood protection, and promote BMPs for channel and streambed maintenance. The Flood Management Technical Group (#4) would consult on the development of the materials, which would be made available for use by any of the stakeholder agencies.

- a. Main Theme: Be Neighborly - emphasizing downstream responsibilities.
- b. Sponsor community engagement and education in coordination with the RCDs.

7) Incorporate Adaptive Management Strategies

Changing conditions require the need to review and revise policies as necessary. The SCWA Water Policy Committee is well suited to fulfill this function. The Water Policy Committee will review flood management policies at least annually, and address any immediate concerns as required.

ACRONYMS

BMP	Best Management Practice
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDPR	California Department of Pesticide Regulation
CEQA	California Environmental Quality Act
CIP	Capital Improvement Project
Corps or USACE	U.S. Army Corps of Engineers
CWA	Clean Water Act
DO	Dissolved Oxygen
EIR	Environmental Impact Report
EPA or USEPA	U. S. Environmental Protection Agency
ESA	Federal Endangered Species Act
GIS	Geographic Information System
ISA	International Society of Arboriculture
LWD	Large Woody Debris
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer Systems
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act of 1966
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPS	Nonpoint source
NRCS	Natural Resources Conservation Services, a division of the U.S. Department of Agriculture
OHWM	Ordinary High Water Mark
PCN	Preconstruction Notification Report
PRC	California Public Resources Code
RMA	Routine Maintenance Agreement
RWQCB	Regional Water Quality Control Board
SHPO	State Historic Preservation Officer
SMP	Stream Maintenance Program
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Loads
USACE	U.S. Army Corps of Engineers
USEPA	U. S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WDR	Waste Discharge Requirement

GLOSSARY OF SIGNIFICANT TERMS

Adaptive management	Learning from experience by adjusting management practices based on the feedback received through monitoring.
Alluvial fan	A landscape feature that is formed by the accumulation of sediment and organic material deposited by flowing water, and formed at the point where a stream enters a valley or plain or another, larger stream.
Amphibian	A cold-blooded vertebrate that spends some time on land but must breed and develop into an adult in water. Frogs, salamanders, and toads are amphibians.
Anadromous fish	Fish that are born and rear in freshwater, move to the ocean to grow and mature, and return to freshwater to reproduce. Salmon, steelhead, and lamprey eel are examples of anadromous species.
Armoring	Protective coverings or structures (natural or man-made) used to dissipate the erosive energy of water.
Atmospheric River	Atmospheric rivers are relatively long, narrow regions in the atmosphere – like rivers in the sky – that transport most of the water vapor outside of the tropics.
Bank failure	Occurs where a significant portion of the streambank has failed, slumped, eroded into the creek below, or has been removed entirely.
Bank stabilization	The act of preventing erosion or repairing an eroded bank in order to provide a stable streambank.
Bedform	A feature of a river or other flowing body of water that is formed by the movement of sediment and other material due to the flow of water.
Best Management Practices (BMPs)	A technique or series of techniques, which is the best known practice available to be effective in protecting water quality and stream habitat.
Brackish water	Somewhat salty, especially from being a mixture of fresh and salt water.

Channel	A stream, river bed or constructed ditch; generally refers to the physical form where water commonly flows.
Channel reach	See: Stream reach.
Climate change	Climate change is a change in the usual weather found in a place.
Cofferdam	A temporary watertight structure that is pumped dry to enclose an area underwater and allow construction work to be carried out.
Culvert	A transverse drain, usually a metal pipe, set beneath the road surface which drains water from the inside of the road to the outside of the road. Culverts are used to drain ditches, springs, and streams across the road alignment.
Detritus	Organic debris formed by the decomposition of plants or animals; fragments of rock that have been worn away.
Dewatering	The temporary diversion of water away from a work site to protect water quality and allow progression of work. Diversion is accomplished with coffer dams, pipes, or other means. Water is removed from the work site only, and not the entire stream or body of water.
Downed tree	Trees and large branches that naturally fall into stream channels. Such debris can promote recruitment of woody in channels to benefit instream habitat. However, downed trees may threaten flood conveyance capacity or channel stability.
Drainage basin	See: Watershed.
Drop inlet	A vertical riser on a culvert inlet, usually of the same diameter as the culvert, and often slotted to allow water to flow into the culvert as streamflow rises around the outside. Drop inlets are often used on stream or ditch relief culverts where sediment or debris would otherwise threaten to plug a traditional horizontal inlet.
Easement	A limited right to make use of a property owned by another, e.g. a right of way across the property.
Ecology	The study of the relationships between living organisms and their interactions with their natural or developed environment.

Emergency	"A sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property or essential public services. Emergency includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage." (CEQA 15359).
Endangered Species	Any species which is in danger of extinction throughout all or a significant portion of its range; an official designation of the California and/or Federal Endangered Species Acts.
Erosion	The wearing away of land surface primarily by wind or water. Erosion occurs naturally as a result of weather or runoff, but can be intensified by clearing, grading, or excavation of the land surface. Erosion usually refers to processes of surface erosion (rain drop erosion, rilling, gullying, and ravelling) and not to mass soil movement (landsliding).
Erosion protection	The act of preventing erosion from occurring or repairing an eroded bank in order to provide a stable streambank that will not require additional maintenance in the foreseeable future
Floodplain	A nearly level alluvial plain that borders a channel and is occasionally inundated by floods (unless artificially protected). The landform is formed by sediment transport and deposition from flows over the streambank and lateral movement of the stream. The '100-year floodplain' represents the area potentially inundated for an unusual but possible flood event with the probability of occurring once every 100 years on the average.
Fluvial Geomorphology	A science devoted to understanding how the natural setting and human land use in a watershed determine the shape of the river channel.
Geographic information system (GIS)	A computer system designed for storing, manipulating, analyzing, and displaying data in a geographic context, usually as maps.
Geomorphology	The study of the physical features of the surface of the earth, including their form, nature, origin, and development. See also fluvial geomorphology.
Groundwater	The standing body of water beneath the surface of the ground, consisting largely of surface water that has seeped down into the earth.

Hardscape	Inanimate, engineered elements of landscaping, such as rock.
Headwater	The place from which the water in the river or stream originates.
Hydraulic roughness	The amount of frictional resistance water experiences when passing over land and channel features.
Hydrologic unit	A drainage area delineated to nest in a multi-level, hierarchical drainage system. Its boundaries are defined by topographic criteria that delineate an area of land upstream from a specific point on a river, stream, or similar surface waters.
Hydrology	The scientific study of the properties, distribution, use, and circulation of the water on Earth and in the atmosphere in all of its forms.
Hydromodification	The "alteration of the hydrologic characteristics of waters, which in turn could cause degradation of water resources (source: EPA).
Invasive species	Species that show a tendency to spread out of control.
Large woody debris (LWD)	Portions of downed trees, such as large branches and root wads, that collect in the stream and provide channel structure and habitat for aquatic animals.
Levee	An embankment built to prevent the overflow of a river.
Life cycle cost	The cost of an asset that includes the initial (projected) capital costs, projected life-time operating costs, projected life-time maintenance costs, projected capital rehabilitation costs, projected disposal costs, and projected residual value.
Limbing	The removal of unwanted branches from a tree.
Loppers	A large type of scissors used for pruning twigs and small branches. They are usually operated with two hands.
Microclimate	A microclimate is the climate of a small, specific place within an area as contrasted with the climate of the entire area. For example, a small sunny area that is sheltered from harsh winds and frost of the surrounding region. Such a microclimate provides a different habitat than its surroundings.

Ordinary High Water Mark	"That line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area." [33 CFR 328.3(e)]
Outfall	The location where discharge from a culvert (drainage pipe) occurs.
Propagule	Any of various usually vegetative portions of a plant, such as a bud or other offshoot, that aid in dispersal of the species and from which a new individual may develop.
Pruning	To cut branches away from a plant to manipulate growth.
Reach	See: Stream reach.
Refugia	An isolated place of relative safety from danger and hardship used by aquatic species, such as fish; the only remaining high quality habitat within an area.
Riffle	An area of rocks or a sandbar lying just beneath the surface of the water.
Rip-rap	Large rocks or other suitable material placed on the ground or along streambanks as an armoring device to prevent or reduce erosion.
Riparian	The banks and other lands adjacent to lakes, watercourse, estuaries, and wet areas. Often refers to water-loving vegetation along the water's edge.
Runoff	Rainfall which flows overland across the surface or hillslopes and along roads and trails.
Salmonid	A species of fish that is a member of the salmon and trout family. Also see: Anadromous fish.
Scour	To clear something out by passing water through it; a place that has been scoured, especially by water.
Sea level rise	An increase in the volume of water in the world's oceans, resulting in an increase in global mean sea level.
Sediment	Organic or inorganic material that is carried or suspended in water and that settles out to form deposits in the stream system or receiving waters.
Shade tolerance	A plant's abilities to tolerate low light levels.

Silt fence	A constructed barrier used to contain soil eroded from a construction site. The barrier is made from filter fabric stretched between fence posts placed on contour along a slope.
Siltation	Fine-grained sediment, especially of mud or clay particles at the bottom of a river or lake.
Species of Special Concern	A designation used by California (CSC) and federal (FSC) agencies to refer to those species of animals (and sometimes plants) that have declining population levels, limited ranges, and/or continuing threats that have made them vulnerable to extinction. They may soon reach the point where they meet criteria for listing as threatened or endangered under the State and/or Federal Endangered Species Acts. No special legal protections are associated with this designation alone.
Storm water	The runoff generated when precipitation from rain and snowmelt events flows over land or impervious surfaces without percolating into the ground.
Stream	A natural waterway that transports water in a perennial, intermittent, or ephemeral circumstance.
Streambank	That portion of the channel bank cross-section that controls the lateral movement of water.
Streambank erosion	A natural process driven by stream bank characteristics (erodibility) and hydraulic/gravitational forces. Many land use activities can affect both of these components and lead to accelerated bank erosion. Acceleration of this natural process leads to a disproportionate sediment supply, stream channel instability, land loss, habitat loss and other adverse effects.
Streambank stabilization	See: Bank stabilization.
Stream channel incision	The deepening of the channel of a stream by erosion.
Stream reach	A continuous portion of a stream between two designated points.
Swale	A depression or low area on a hillslope which rarely carries runoff except during high rainfall events.
Terrace	A low-gradient surface formed by fluvial aggradation or erosion when the stream flowed at a higher elevation in the landscape. The term implies that the surface is rarely inundated by floods in the current climate.
Thalweg	The line of lowest elevation within a valley or watercourse.

Threatened Species	Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range; an official designation under the California and/or Federal Endangered Species Acts.
Toe-of-slope	The base of an embankment; the base of the streambank where it meets the channel bed.
Total Daily Maximum Load	A process under the federal Clean Water Act that provides a tool for implementing State water quality standards and is based on the relationship between pollution sources and instream water conditions.
Tree snags	A dead or dying tree that is still standing in place.
Tributary	A stream or river that flows into a larger stream, river, or lake.
Turbidity	Water that is cloudy or muddy usually due to suspended sediment.
Understory	Lower vegetation in a forest; a layer of small trees and bushes below the level of the taller trees.
Water quality	A measure of the suitability of water for a particular use based on selected physical, chemical, and biological characteristics.
Watershed	The area or drainage basin contributing water, organic matter, dissolved nutrients and sediments to a stream or lake.

4. *Chlorophyll a* and *Chlorophyll b* were determined by the method of

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1. The first step in the process of identifying a problem is to determine the nature of the problem. This involves gathering information about the problem and its context. The second step is to identify the causes of the problem. This involves analyzing the information gathered in the first step to determine the factors that are contributing to the problem. The third step is to develop a plan of action to address the problem. This involves identifying the steps that need to be taken to solve the problem and the resources that will be needed to implement the plan. The fourth step is to implement the plan. This involves carrying out the steps that were identified in the third step. The fifth step is to evaluate the results of the plan. This involves determining whether the plan has been successful in solving the problem and whether any adjustments need to be made.

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87. 1000 (1000)

88. 1000 (1000)

89. 1000 (1000)

90. 1000 (1000)

91. 1000 (1000)

92. 1000 (1000)

93. 1000 (1000)

94. 1000 (1000)

95. 1000 (1000)

96. 1000 (1000)

97. 1000 (1000)

98. 1000 (1000)

99. 1000 (1000)

100. 1000 (1000)

[illegible][illegible][illegible]