# SOLANO COUNTY WATER AGENCY

#### BOARD OF DIRECTORS:

Chair.

Mayor Pete Sanchez City of Suisun City

Vice Chair:

Director John D. Kluge Solano Irrigation District

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

Vacant 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 Skip Thomson Solano County District 5

Supervisor John Vasquez Solano County District 4

Mayor Len Augustine City of Vacaville

Mayor Bob Sampayan City of Vallejo

#### GENERAL MANAGER:

Roland Sanford Solano County Water Agency

### BOARD OF DIRECTORS MEETING

DATE:

Thursday, November 9, 2017

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) <u>Minutes</u>: Approval of the Minutes of the Board of Directors meeting of October 12, 2017 is recommended.
  - (B) <u>Expenditure Approvals</u>: Approval of the October 2017 checking account register is recommended.
  - (C) Contract with cbec, inc eco engineering to conduct Lower
    Cordelia Floodplain Reconnaissance Study. Authorize General
    Manager to execute \$38,694 contract with Cbec, Inc. Eco
    Engineering for Lower Cordelia Floodplain Reconnaissance
    Study.
  - (D) Contract Amendment with Agrichem Services Incorporated for Nuisance Vegetation Management Services. Authorize General Manager to execute \$12,500 contract amendment with Agrichem Services Incorporated for weed control along the Ulatis and Green Valley Flood Control channels.
  - (E) <u>Continuation of Water Ways School Education Program through</u> <u>FY 2017-2018.</u> Authorize General Manager to execute \$66,000



contract with Putah Creek Council for continuation of Water Ways School Education Program.

(F) Contract Amendment for Development of Putah Creek Soil
Assessment Protocol in Support of LPCCC Habitat
Enhancement Projects: Authorize General Manager to execute
\$94, 978 contract amendment with UC Davis for development
of Soil Assessment Protocol in support of LPCCC habitat
enhancement projects.

**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: Form information only.

9. INCREASE PUTAH CREEK STREAMKEEPER POSITION TO FULL-TIME EMPLOYMENT STATUS (estimated time: 10 minutes)

RECOMMENDATION: Increase Putah Creek Streamkeeper position from part-time (32 hours/week) to full-time (40 hours/week) employment status.

10. <u>LEGISLATIVE UPDATES</u> (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 Mayor Patterson on activities of the Delta Conservancy.

### 12. TIME AND PLACE OF NEXT MEETING

Thursday, December 14, 2017 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 <a href="https://www.scwa2.com">www.scwa2.com</a>.

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.

NOV.2017.bod.agd

# CONSENT ITEMS

#### SOLANO COUNTY WATER AGENCY

#### **BOARD OF DIRECTORS MEETING MINUTES**

**MEETING DATE: October 12, 2017** 

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

Mayor Elizabeth Patterson, City of Benicia Mayor Thom Bogue, City of Dixon Mayor Harry Price, City of Fairfield Mayor Pete Sanchez, Suisun City Mayor Len Augustine, City of Vacaville Mayor Bob Sampayan, City of Vallejo Supervisor Monica Brown, Solano County District 2 Supervisor James Spering, Solano County District 3 Supervisor John Vasquez, Solano County District 4 Director John Kluge, Solano Irrigation District

#### **CALL TO ORDER**

The meeting was called to order at 6:30 P.M. by Chair Sanchez.

#### **APPROVAL OF AGENDA**

On a motion by Mayor Price and a second by Mayor Bogue the Board unanimously approved the agenda.

#### **PUBLIC COMMENT**

There were comments from the public.

#### **CONSENT ITEMS**

Mayor Bogue requested Consent Item 5H be pulled for further discussion.

On a motion by Mayor Price and a second by Mayor Bogue, the Board approved Consent Item 5A (Minutes), Chair Sanchez and Mayor Patterson abstained.

On a motion by Supervisor Vasquez and a second by Mayor Sampayan, the Board unanimously approved consent items 5B-5G.

- (A) Expenditure Approvals
- (B) Quarterly Financial Reports
- (C) Agreement with Bryo Technologies for PSC Algaecide Study
- (D) Agreements with Palencia Consulting for Lake Berryessa Watershed Sanitary Survey
- (E) Payment of Solano Habitat Conservation Plan-Incidental Take Permit Fee
- (F) Agreement with WaterFluence for implementation of Solano Regional Large Landscape Water Budget Program

Mayor Bogue requested additional information about the proposed Tolling Agreement. Staff explained the history and purpose of the Tolling Agreement and answered Mayor Bogue's questions. On a motion by Mayor Price and a second by Supervisor Vasquez, the Board unanimously approved consent item 5H.

### **BOARD MEMBER REPORTS**

There were no Board Member reports.

#### GENERAL MANAGER'S REPORT

Staff reported that at one point in time the ongoing Atlas fire necessitated power outages at the North Bay Aqueduct's Cordelia Pumping Plant, which supplies water to the cities of Benicia and Vallejo as well as Napa County, and that Water Agency staff worked closely with multiple local agencies and the Travis Air Force Base to provide a backup power source. Staff expressed appreciation for the swift response by

Travis Air Force Base and explained that Travis Air Force Base provided two semi-truck sized generators as well as military personnel to operate the generators

Staff reported that the final "Phase II Scientific Basis Report in Support of New and Modified Requirements for Inflows from the Sacramento River and its Tributaries and Eastside Tributaries to the Delta, Delta Outflows, Cold Water Habitat, and Interior Delta Flows" document has been released by the State Water Resources Control Board and that the report recommends increased stream flow releases from reservoirs located on tributaries to the Sacramento River, to sustain the ecology of the Bay-Delta.

Staff noted that the second annual Salmon Festival will be held on November 4th in Winters.

#### SOLANO WATER ADVISORY COMMISSION

No report.

### 3-YEAR CACHE SLOUGH COMPLEX WATER QUALITY, PRODUCTIVITY AND FISHERIES STUDY

On a motion by Supervisor Brown and a second by Mayor Sampayan, the Board passed the action item authorizing the General Manager to execute an Agreement with U.C. Davis for the 3-year Cache Slough Complex Water Quality, Productivity and Fisheries Study. Director Kluge voted no.

#### **LEGISLATIVE UPDATES**

No report, the October 5<sup>th</sup> SCWA Legislative Committee was cancelled. The next SCWA Legislative Committee meeting is scheduled for November 2, 2017.

#### **WATER POLICY UPDATES**

Staff summarized the SCWA Water Policy Committee's September 25th discussions regarding flood management. The next SCWA Water Policy Committee meeting is scheduled for October 30th.

Mayor Patterson reported she had recently attended the State of the Estuary Conference in Oakland, California and noted that habitat restoration in and near the Cache Slough Complex was discussed by several conference presenters.

### TIME AND PLACE OF NEXT MEETING

Thursday, November 9, 2017 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 7:24 p.m. in the memory of Mayor Norman Richardson

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

# ACTION OF SOLANO COUNTY WATER AGENCY

DATE:	November 9, 201	17		
SUBJECT:	Expenditures Ap	pproval		
RECOMMENDA	ATIONS:			
Approve expendi	tures from the Water Ag	gency checking accounts	for the month of	f October, 2017.
FINANCIAL IMI	PACT:			
All expenditures	are within previously ap	pproved budget amounts.		
BACKGROUND	<u>)</u> :			
Attached is a sum 2017. Additional Recommended:		From the Water Agency's available upon request.		all expenditures (in arrears). ats for the month of October,
1 1 1	pproved as commended	Other (see below)		Continued on next page
Modification to R	Recommendation and/or	r other actions:		
foregoing action v		d, passed, and adopted by		gency, do hereby certify that the Directors at a regular meeting
Ayes:				
Noes:				
Abstain:				
Absent:				
Roland Sanford	Pr Conneture to the			
Solano County W	& Secretary to the Vater Agency			

Date	Check #	Account ID	Line Description	Debit Amount	Credit Amount	
10/5/17	28434V	2020SC 1020SC	Invoice: 6/4/16 WORKSHOP THE ECOLOGY CENTER - GREYWATER ACTION	1,500.00	1,500.00	
10/3/17	30694	2020SC 1020SC	Invoice: 203695 A & L WESTERN AGRICULTURAL LABS	50.00	50.00	
10/3/17	30695	2020SC 1020SC	Invoice: 11958285 CALPERS LONG-TERM CARE PROGRAM	776.70	776.70	
10/3/17	30696	2020SC 2020SC 1020SC	Invoice: 17270 Invoice: 17269 CENTRAL VALLEY EQUIPMENT REPAIR	297.75 596.30	894.05	
10/3/17	30697	2020U 1020SC	Invoice: 15624358 CONTECH ENGINEERED SOLUTIONS LLC	2,710.18	2,710.18	
10/3/17	30698	2020SC 1020SC	Invoice: MAY 2017 WTR POL DALE CROSSLEY	100.00	100.00	
10/4/17	30698V	2020SC 1020SC	Invoice: MAY 2017 WTR POL DALE CROSSLEY	100.00	100.00	
10/3/17	30699	2020SC 1020SC	Invoice: 146613 DEPT OF FORESTRY & FIRE PROTECTION	913.60	913.60	
0/3/17	30700	2020SC	Invoice: NCA HAZ WASTE MTG	25.00		
		1020SC	SOLANO COUNTY DEPT. OF RESOURCE MANAG		25.00	
0/3/17	30701	2020SC 1020SC	Invoice: 14880742 EAN SERVICES, LLC	629.74	629.74	
0/3/17	30702	2020SC 1020SC	Invoice: B50067.01-10 ERLER & KALINOWSKI	14,484.89	14,484.89	
0/3/17	30703	2020SC 1020SC	Invoice: 19546044 EXPRESS EMPLOYEMENT PROFESSIONALS	225.00	225.00	
0/3/17	30704	2020SC 2020SC 2020SC 1020SC	Invoice: 85874 Invoice: 85872 Invoice: 85873 HERUM\CRABTREE\ SUNTAG	1,582.00 828.75 1,272.45	3,683.20	
0/3/17	30705	2020SC 1020SC	Invoice: 0107442 JUST THE FINEST PEST MNGT	240.00	240.00	
0/3/17	30706	2020SC	Invoice: MAY 2017 WATER POL	100.00		
		1020SC	JOHN D. KLUGE		100.00	
0/4/17	30706V	2020SC	Invoice: MAY 2017 WATER POL		100.00	
		1020SC	JOHN D. KLUGE	100.00		
0/3/17	30707	2020SC 1020SC	Invoice: 18544 LAUGENOUR AND MEIKLE	5,051.25	5,051.25	
0/3/17	30708	2020SC 1020SC	Invoice: 155191 LSA ASSOCIATES, INC.	35,859.65	35,859.65	
0/3/17	30709	2020SC 1020SC	Invoice: 141790 MARTIN'S METAL FABRICATION &	3,118.43	3,118.43	
0/3/17	30710	2020SC 1020SC	Invoice: 2017/18-#2 OKITA, DAVID B.	5,100.00	5,100.00	

1020SC   OKITA, DAVID B.   5,100.00	Date	Check#	Account ID	Line Description	Debit Amount	Credit Amount
1020SC   OKITA, DAVID B.   5,100.00	10/4/17	207101/	202056	Ii 2017/19 #2		5 100 00
1020SC   PAPE MACHINERY   435.00	10/4/17	30/100			5,100.00	3,100.00
1020SC   PAPE MACHINERY   435.00	10/3/17	30711	20205C	Invoice: 1536165	435.00	
2020SC   Invoice: MAY 2017 WTR POL   100.00	10/3/17	30711			433.00	435.00
2020SC   Invoice: MAY 2017 WTR POL   100.00	0/3/17	30712	2020SC	Invoice: SEP 2017 WTR POL	100.00	
1020SC   ELIZABETH PATTERSON   300.00						
177   30713   2020SC					100.00	200.00
2020SC			1020SC	ELIZADETH PATTERSON		300.00
2020SC   Invoice: 767940   23.48	10/3/17	30713				
2020SC   Invoice: 768700   140.79						
2020SC						
2020SC						
2020SC				Invoice: 768701		
1020SC						
177   30713V   2020SC					7.05	558.84
2020SC						
2000SC	10/3/17	30713V				
2020SC						
1824   2020SC			2020SC			140.79
2020SC						
2020SC						
1020SC						
2020SC					558.84	7.03
2020SC	10/3/17	30714	2020SC	Invoice: 000196	81.64	
1020SC   SAM'S CLUB   321.04						
17   30715   2020SC					49.58	221.04
1020SC			10203C	SAM'S CLUB		321.04
1020SC   SBS LEASING A PROGRAM   1,056.39     17   30716   2020SC   Invoice: LPCCC SP-2017-01   26,449.86   26,449.86     17   30717   2020SC   Invoice: MARIA DENARDO   421.00   421.00     17   30718   2020SC   Invoice: JAMES HILDRETH   287.00   287.00     17   30719   2020U   Invoice: LIZA ONA   100.00   100.00     17   30720   2020SC   Invoice: CINDY ROBERTS   1,500.00   1,500.00     17   30721   2020SC   Invoice: JOHN SMIT   441.00   441.00     17   30722   2020SC   Invoice: SEP 2017 WTR POL   100.00   1020SC   Invoice: AUG 2017 WTR POL   100.00     1020SC   Invoice: AUG 2017 WTR POL   100.00   1020SC   1020SC   100SC 2020SC   100SC 2020S	0/3/17	30715				
DE LAGE					77.67	1.056.20
1020SC   STREAMWISE   26,449.86			10203C			1,030.39
1020SC   STREAMWISE   26,449.86	10/3/17	30716	2020SC	Invoice: LPCCC SP-2017-01	26 449 86	
1020SC   MARIA DENARDO   421.00	. 0. 5	307.10			20,447.00	26,449.86
1020SC   MARIA DENARDO   421.00	10/3/17	30717	2020SC	Invoice: MARIA DENARDO	421.00	
1020SC					421.00	421.00
1020SC	10/3/17	30718	20205C	Invoice: IAMES HII DETH	297.00	
1020SC	10/3/17	30718			287.00	287.00
1020SC	0/2/17	20710				2550
17 30720   2020SC   Invoice: CINDY ROBERTS   1,500.00	10/3/17	30719			100.00	100.00
1020SC   CINDY ROBERTS   1,500.00				DIER ONA		100.00
17   30721   2020SC	10/3/17	30720			1,500.00	
1020SC   JOHN SMIT   441.00			1020SC	CINDY ROBERTS		1,500.00
17   30722   2020SC	10/3/17	30721		Invoice: JOHN SMIT	441.00	
2020SC			1020SC	JOHN SMIT		441.00
1020SC   JOHN VASQUEZ   200.00	10/3/17	30722	2020SC	Invoice: SEP 2017 WTR POL	100.00	
17   30723   2020SC   Invoice: 10628   200.00   2020SC   Invoice: 10629   200.00				Invoice: AUG 2017 WTR POL		
2020SC Invoice: 10629 200.00 1020SC WARREN'S WATER TRUCK SERVICE  /17 30724 2020SC Invoice: 335 3,500.00 1020SC WILSON PUBLIC AFFAIRS 3,500.00 /17 30725 2020SC Invoice: 767522 116.86 2020SC Invoice: 767864 21.43 2020SC Invoice: 767940 23.48			1020SC	JOHN VASQUEZ		200.00
2020SC   Invoice: 10629   200.00   400.00	10/3/17	30723	2020SC	Invoice: 10628	200.00	
SERVICE  /17 30724 2020SC Invoice: 335 3,500.00 1020SC WILSON PUBLIC AFFAIRS 3,500.00  /17 30725 2020SC Invoice: 767522 116.86 2020SC Invoice: 767864 21.43 2020SC Invoice: 767940 23.48						
717 30724 2020SC Invoice: 335 3,500.00 1020SC WILSON PUBLIC AFFAIRS 3,500.00 717 30725 2020SC Invoice: 767522 116.86 2020SC Invoice: 767864 21.43 2020SC Invoice: 767940 23.48			1020SC			400.00
1020SC WILSON PUBLIC AFFAIRS 3,500.00  717 30725 2020SC Invoice: 767522 116.86 2020SC Invoice: 767864 21.43 2020SC Invoice: 767940 23.48	10/2/17	20724	202022			
717 30725 2020SC Invoice: 767522 116.86 2020SC Invoice: 767864 21.43 2020SC Invoice: 767940 23.48	10/3/17	30 <i>12</i> 4			3,500.00	3,500.00
2020SC       Invoice: 767864       21.43         2020SC       Invoice: 767940       23.48	0/2/**	20725				2,500.00
2020SC Invoice: 767940 23.48	0/3/17	30123				
121.13			2020SC	Invoice: 768501	121.15	

Date	Check#	Account ID	Line Description	Debit Amount	Credit Amount	
		2020SC	Invoice: 768703	58.98		
		2020SC	Invoice: 768700	140.79		
		2020SC	Invoice: 768701	118.24		
		2020SC	Invoice: 769058	72.01		
		2020SC	Invoice: 770012	7.05		
		1020SC			679.99	
		1020SC	PISANIS AUTO PARTS		019.99	
0/3/17	30726	2020U	Invoice: MAY 2017	5,060.50		
	50120	2020U	Invoice: SEPT 2017	7,242.15		
				1,242.13		
		1020SC	CRAIG D. THOMSEN		12,302.65	
12117	2072/17	202011	T - 1 - 3 / 4 7/ 0017		5.000.50	
0/3/17	30726V	2020U	Invoice: MAY 2017		5,060.50	
		2020U	Invoice: SEPT 2017		7,242.15	
		1020SC	CRAIG D. THOMSEN	12,302.65	•	
				,		
/3/17	30727	2020U	Invoice: SEPT 2017	7,242.15		
		2020U	Invoice: MAY 2017	5,060.50		
		2020U	Invoice: JULY 2017	4,588.90		
		1020SC	CRAIG D. THOMSEN		16,891.55	
	20005					
/10/17	30728	2020SC	Invoice: 07.01.17 - 09.30.17	4,174.15		
		2020SC	Invoice: POLICY YR 2017-18	53,999.37		
		1020SC	ACWA JOINT POWERS		58,173.52	
		10203C	INSURANCE AUTHORIT		JU, 1 J.JL	
			INSURANCE AUTHORIT			
/10/17	30729	2020SC	Invoice: 2326	5,000.94		
	30.27	2020SC 2020SC	Invoice: 2326 Invoice: 2395	•		
				762.50	E 763 44	
		1020SC	AG INNOVATIONS		5,763.44	
/10/17	20720	202000	Invaina 2520016	£70.07		
/10/17	30730	2020SC	Invoice: 2539816	578.26		
		1020SC	AMERICAN TOWER		578.26	
			CORPORATION			
/10/17	30731	2020SC	Invoice: 51553055	1,309.18		
		1020SC	CHEVRON AND TEXACO		1,309.18	
		102000	CILTROITAND ILANCO		1,507.10	
/10/17	30732	2020N	Invoice: OCT 2017	8,600.00		
10/1/	30132			0,000.00	B 600 00	
		1020SC	CLEAN TECH ADVOCATES		8,600.00	
/10/17	30733	2020SC	Invoice: 2017/18-#2	5,100.00		
		1020SC	DAVID OKITA		5,100.00	
				_		
/10/17	30734	2020SC	Invoice: 4742874	1,351.20		
		1020SC	EVERBANK COMMERCIAL	,	1,351.20	
		102030			1,001.60	
			FINANCE			
/10/17	20725	20202	Invaire: 97610	6 040 06		
10/17	30735	2020SC	Invoice: 87610	5,248.25	6040.00	
		1020SC	GHD, INC.		5,248.25	
	2000	****	·			
V10/1 <b>7</b>	30736	2020SC	Invoice: CL69848	398.70		
		2020SC	Invoice: CL71160	851.91		
		1020SC	INTERSTATE OIL		1,250.61	
			COMPANY		*	
/10/17	30737	2020N	Invoice: 0917-6	600.00		
-		1020SC	JEFFREY J JANIK		600.00	
/10/17	30738	2020SC	Invoice: OCT 2017 EXEC	100.00		
			MTG	- 30.00		
		1020SC	JOHN D. KLUGE		100.00	
/10/17	30739	2020SC	Invoice: 33226	3,623.90		
	-0.07	1020SC	LUHDORFF & SCALMANINI	2,023.70	3,623.90	
		102030	LONDORT & SCALMANIN		3,023.70	
/10/17	30740	2020SC	Invoice: OCT 2017 EXEC	100.00		
10/1/	30740	20203C		100.00		
		102000	MTG BYAN MAHONEY		100.00	
		1020SC	RYAN MAHONEY		100.00	
//0//2	20741	202057	Invaine 12025	12 200 00		
/10/17	50/41	2020SC	Invoice: 12025	12,300.00	10 000 00	
		1020SC	MANN, URRUTIA, NELSON,		12,300.00	
			CPAS			
10/17	30742	2020SC	Invoice: 33736	4,775.00		
		1020SC	MONARCH TREE SERVICE	•	4,775.00	
		<del>-</del>	- · · · -			
0/17	20742	2020N	Invoice: PASS THRU iNV #16	2,430.00		
U/ I /	30743	ZUZUN	INVOICE, PASS I FIXU IN V #10	<b>∠.</b> ₹JU.UU		

Date	Check #	Account ID	Line Description	Debit Amount	Credit Amount
		1020SC	NAPA COUNTY FC&WCD		2,430.00
/10/17	30744	2020SC	Invoice: 00994764	30.00	
,, 10, 17	30744	1020SC	RECOLOGY HAY ROAD	30.00	30.00
0/10/17	30745	2020SC	Invoice: 1242	2,750.00	
	****	2020SC	Invoice: 1239	500.00	
		1020SC	ROCK STEADY JUGGLING	500.00	3,250.00
V10/17	20746	202000	1	10 000 50	
0/10/17	30746	2020SC 1020SC	Invoice: 0930170229 SHANDAM CONSULTING	12,292.50	12,292.50
1/10/17	20747	202050	I IDWA (#2 6 20 17	14 265 02	•
0/10/17	30/4/	2020SC 1020SC	Invoice: IRWM #3 6.30.17 SOLANO IRRIGATION	14,365.93	14 265 02
		102050	DISTRICT		14,365.93
/10/17	30748	2020SC	Invoice: PROP TAX 210-01	1,145.60	
,, 10, 1,	30740	2020SC	Invoice: PROP TAX 210-01	695.26	
		2020SC	Invoice: PROP TAX 200-01	311.46	
		2020SC	Invoice: PROP TAX 190-01	2,139.42	
		2020SC	Invoice: PROP TAX 220-01	2,852.54	
		2020SC	Invoice: PROP TAX 230-01	709.34	
		1020SC	CHARLES LOMELI, TAX	707.54	7,853.62
		102002	COLLECTOR		1,000.02
)/10/17	30749	2020SC	Invoice: 6/4/16 WORKSHOP	1,500.00	
		1020SC	THE ECOLOGY CENTER -	1,200.00	1,500.00
			GREYWATER ACTION		.,
/10/17	30750	2020SC	Invoice: 200377683	56.25	
		2020SC	Invoice: 300272629	72.27	
		1020SC	TRACTOR SUPPLY CREDIT		128.52
			PLAN		
0/10/17	30751	2020SC	Invoice: HCP CONF 2017 -1	264.60	
		1020SC	ULATIS COMMUNITY		264.60
			CENTER		
/10/17	30752	2020SC	Invoice: 00001643	60.00	
		1020SC	VILLAGE BACKFLOW	00.00	60.00
			PREVENTION SERVICE		00.00
0/10/17	30753	2020SC	Invoice: 338	3,500.00	
		1020SC	WILSON PUBLIC AFFAIRS	5,000.00	3,500.00
/10/17	30754	2020U	Invoice: SEP 2017	364.88	
0/10/1/	30734	1020SC	SOLANO COUNTY FLEET	304.00	364.88
		10205€	MANAGEMENT		304.00
/12/17	30755	2020SC	Invoice: 234385	42.42	
	-0.00	2020SC	Invoice: 234421	74.42	0.01
		2020SC	Invoice: 968268	80.68	0.01
		2020SC	Invoice: 234707	68.60	
		2020SC	Invoice: 234880	19.14	
		2020SC	Invoice: 235087	22.02	
		2020SC	Invoice: 235199	19.29	
		2020SC	Invoice: 235555	6.96	
		2020SC	Invoice: 235594	112.36	
		2020SC	Invoice: 235685	23.57	
		2020SC	Invoice: 965919	70.72	
		2020SC	Invoice: 233431	70.75	
		2020SC	Invoice: 233473	58.58	
		2020SC	Invoice: 233948	14.77	
		2020SC	Invoice: 233717	73.70	
		2020SC	Invoice: 235877	60.38	
		2020SC	Invoice: 236108	39.66	
		2020SC	Invoice: 236148	30.60	
		2020SC	Invoice: 236251	46.79	
	•	2020SC	Invoice: 236252	50.39	
		2020SC	Invoice: 971512	116.37	46.00
		2020SC 2020SC	Invoice: 972031 Invoice: 972025	204.40	45.20
		2020SC 2020SC	Invoice: 972025 Invoice: 236732	206.49 46.29	
		2020SC 2020SC	Invoice: 972455	38.11	
		2020SC	Invoice: 972828	26.51	
		2020SC	Invoice: 237037	48.23	
		<del>-</del>			

)ate ———	Check #	Account ID	Line Description	Debit Amount	Credit Amount	
		2020SC	Invoice: 972932	114.15		
		2020SC	Invoice: 973069	5.36		
		2020SC	Invoice: 973247	154.55		
		2020SC	Invoice: K73540	92.22		
		2020SC	Invoice: 237406	9.42		
		2020SC	Invoice: 237434	10.17		
		2020SC	Invoice: 237467	40.72		
		2020SC	Invoice: 237543	39.58		
		2020SC	Invoice: 237531	27.19		
		2020SC	Invoice: 237570	196.19		
		2020SC	Invoice: 974518	111.99		
		1020SC	PACIFIC ACE HARDWARE	111.77	2,149.71	
		102030	PACIFIC ACE HARDWARE		2,147.71	
0/18/17	30756	2020SC	Invoice: 0511334	1,522.56		
		1020SC	ACWA JOINT POWERS	-,	1,522.56	
		102050			1,522.50	
			INSURANCE AUTHORITY			
	20969	20202	r : 131 1120002005	2 500 00		
)/18/1/	30757	2020SC	Invoice: IN-1170987085	2,500.00		
		1020SC	ALPHA MEDIA II LLC		2,500.00	
)/18/17	30758	2020SC	Invoice: OCT 2017 BOD MTG	100.00		
		1020SC	THOMAS BOGUE		100.00	
		· <del>-</del>				
7/18/17	30759	2020SC	Invoice: 11966173	871.00		
0/10/1/	30139		CALPERS LONG-TERM	071.00	871.00	
		1020SC			0/1.00	
			CARE PROGRAM			
0/18/17	30760	2020SC	Invoice: 2950	4,799.43		
		1020SC	DIXON/SOLANO RCD		4,799.43	
			WATER QUALITY		,	
			COALITIO			
			COALITIO			
	2006	20207		0.040.00		
/18/17	30761	2020N	Invoice: US0131881802	2,848.00		
		1020SC	ERNST & YOUNG U.S. LLP		2,848.00	
/18/17	30762	2020SC	Invoice: 4248	21,310.37		
		1020SC	EYASCO, INC.		21,310.37	
					<b>*</b> *	
1/19/17	30763	2020SC	Invoice: 88805	4,008.39		
,, 10, 1,	30703	1020SC	GHD, INC.	4,000.57	4,008.39	
		10203C	GHD, INC.		4,000.37	
V10/17	2077.4	202000	I	2.510.40		
// 1/6/ 1/	30764	2020SC	Invoice: 86177	2,519.40		
		2020SC	Invoice: 86180	2,061.42		
		2020SC	Invoice: 86178	132.60		
		1020SC	HERUM \ CRABTREE \		4,713.42	
			SUNTAG			
/21/17	30764V	2020SC	Invoice: 86177		2,519.40	
		2020SC	Invoice: 86180		2,061.42	
		2020SC 2020SC	Invoice: 86178		132.60	
				4 712 42	134.00	
		1020SC	HERUM \ CRABTREE \	4,713.42		
			SUNTAG			
	20766					
/18/17	30765	2020SC	Invoice: OCT 2017 BOD MTG	100.00		
		1020SC	JOHN D. KLUGE		100.00	
/18/17	30766	2020SC	Invoice: 63100429778	210.00		
	<del>-</del>	1020SC	LES SCHWAB TIRE		210.00	
		102000	CENTER			
			CLITICIN			
V10/17	20767	202050	Invaina: 500570	90.00		
/18/17	30767	2020SC	Invoice: 508578	80.00	90.00	
/18/17	30767	2020SC 1020SC	Invoice: 508578 M&M SANITARY LLC	80.00	80.00	
		1020SC	M&M SANITARY LLC		80.00	
	30767 30768	1020SC 2020SC		80.00 13,340.23		
		1020SC	M&M SANITARY LLC Invoice: 65648 NORMANDEAU		80.00 13,340.23	
		1020SC 2020SC	M&M SANITARY LLC Invoice: 65648 NORMANDEAU			
		1020SC 2020SC	M&M SANITARY LLC Invoice: 65648			
/18/17	30768	1020SC 2020SC 1020SC	M&M SANITARY LLC Invoice: 65648 NORMANDEAU ASSOCIATES, INC.		13,340.23	
/18/17		1020SC 2020SC 1020SC 2020SC	M&M SANITARY LLC Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: 65648	13,340.23		
/18/17	30768	1020SC 2020SC 1020SC	M&M SANITARY LLC Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: 65648 NORMANDEAU		13,340.23	
/18/17	30768	1020SC 2020SC 1020SC 2020SC	M&M SANITARY LLC Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: 65648	13,340.23	13,340.23	
/18/17 /21/17	30768 30768V	1020SC 2020SC 1020SC 2020SC 1020SC	M&M SANITARY LLC Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: 65648 NORMANDEAU ASSOCIATES, INC.	13,340.23 13,340.23	13,340.23	
/18/17 /21/17	30768 30768V	1020SC 2020SC 1020SC 2020SC	M&M SANITARY LLC Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: OCT 2017 BOD MTG	13,340.23	13,340.23 13,340.23	
/18/17 /21/17	30768 30768V	1020SC 2020SC 1020SC 2020SC 1020SC	M&M SANITARY LLC Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: 65648 NORMANDEAU ASSOCIATES, INC.	13,340.23 13,340.23	13,340.23	
/18/17	30768 30768V	1020SC 2020SC 1020SC 2020SC 1020SC	M&M SANITARY LLC Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: OCT 2017 BOD MTG	13,340.23 13,340.23	13,340.23 13,340.23	
718/17 721/17 718/17	30768 30768V	1020SC 2020SC 1020SC 2020SC 1020SC	M&M SANITARY LLC Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: OCT 2017 BOD MTG	13,340.23 13,340.23	13,340.23 13,340.23	
18/17 21/17 18/17	30768 30768V 30769	1020SC 2020SC 1020SC 2020SC 1020SC 2020SC 1020SC	M&M SANITARY LLC Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: 65648 NORMANDEAU ASSOCIATES, INC. Invoice: OCT 2017 BOD MTG ELIZABETH PATTERSON	13,340.23 13,340.23 132.64	13,340.23 13,340.23	

Date	Check#	Account ID	Line Description	Debit Amount	Credit Amount	
			SOLANO			
0/18/17	30771	2020SC	Invoice: 1242B	2,750.00		
		1020SC	ROCK STEADY JUGGLING		2,750.00	
0/23/17	30771V	2020SC	Invoice: 1242B		2,750.00	
		1020SC	ROCK STEADY JUGGLING	2,750.00		
10/1 <b>8/17</b>	30772	2020SC	Invoice: OCT 2017 BOD MTG	126.75		
		1020SC	BOB SAMPAYAN		126.75	
10/18/17	30773	2020SC	Invoice: 0005832	12,849.44		
		2020SC 2020SC	Invoice: 0005833 Invoice: 0005834	202.35 8,787.60		
		2020SC 2020SC	Invoice: 0005835	55.68		
		1020SC	SOLANO IRRIGATION		21,895.07	
			DISTRICT			
0/18/17	30774	2020SC	Invoice: 1144	3,947.28		
		1020SC	SOLANO RESOURCE		3,947.28	
			CONSERVATION DISTRICT			
0/18/17	30775	2020SC	Invoice: OCT 2017 BOD MTG	100.00		
		1020SC	JAMES SPERING		100.00	
10/18/17	30776	2020SC	Invoice: 87413	1,215.00		
		2020SC	Invoice: 88278	0.23		
		2020SC 2020SC	Invoice: 88512 Invoice: 89759	2,158.92 77.89		
		2020SC 2020SC	Invoice: 89739 Invoice: 90064	0.23		
		2020SC	Invoice: 89944	38.94		
		2020SC	Invoice: 84030	15.42		
		1020SC	STERLING MAY CO.		3,506.63	
10/18/17	30777	2020SC	Invoice: 51833	89.23		
		2020SC	Invoice: 52036	220.60		
		2020SC 1020SC	Invoice: 52178	13.44	222.27	
		1020SC	SUISUN VALLEY FRUIT GROWERS AS		323.27	
~						
0/18/17	30778	2020SC 1020SC	Invoice: SEP 2017 SUSTAINABLE SOLANO	7,315.00	7,315.00	
		.02000	JOHN MADEL JOEANO		7,515.00	
10/18/17	30779	2020SC	Invoice: BAWMRP SEPT #7	8,809.00		
		1020SC	THINKING GREEN CONSULTANTS		8,809.00	
			CONSULTANTS			
0/18/17	30780	2020SC	Invoice: OCT 2017 BOD MTG	100.00		
		1020SC	JOHN VASQUEZ		100.00	
0/18/17	30781	2020SC	Invoice: 9793507400	2,516.32		
		1020SC	VERIZON WIRELESS	•	2,516.32	
0/18/17	30782	2020SC	Invoice: 35625	200.00		
/	20.05	1020SC	VISION TECHNOLOGY	200.00	200.00	
			SOLUTIONS, LLC DBC			
0/18/17	30783	2020SC	Invoice: 10648	200.00		
		2020SC 2020SC	Invoice: 10649	200.00		
		1020SC	WARREN'S WATER TRUCK	-	400.00	
			SERVICE			
10/18/17	30784	2020SC	Invoice: 5783	376.69		
		1020SC	WINTERS AGGREGATE,		376.69	
			LLC			
0/23/17	30785	2020SC	Invoice: 2018 DUES	21,905.00		
		1020SC	ACWA JOINT POWERS		21,905.00	
			INSURANCE AUTHORIT			
0/23/17	30786	2020SC	Invoice: INV52229	2,500.00		
		1020SC	AQUATIC INFORMATICS.		2,500.00	
			INC			
0/23/17	30787	2020SC	Invoice: A724869	7,980.00		
		1020SC	BSK ASSOCIATES		7,980.00	

# SOLANO COUNTY WATER AGENCY Cash Disbursements Journal For the Period From Oct 1, 2017 to Oct 31, 2017 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	
10/23/17	20788	2020SC	Invoice: 000010367409	252.80		
10/23/17	30766	2020SC 2020SC	Invoice: 000010367409	164.24		
				104.24	417.04	
		1020SC	CALNET3		417.04	
10/23/17	30789	2020SC	Invoice: 18-076-V SEP 2017	76,261.00		
10/25/17	30707	2020SC	Invoice: 17-024-0 NOV 2017	631.00		
		2020SC	Invoice: 17-024-0 NOV 2017	560,903.00		
		1020SC	DEPARTMENT OF WATER	300,703.00	637,795.00	
		102000	RESOURCES		037,775.00	
10/23/17	30790	2020SC	Invoice: 2728-A	1,247.90		
		1020SC	ESEF APPAREL INC.		1,247.90	
10/23/17	30791	2020SC	Invoice: 19577852	150.00		
	30/71	1020SC	EXPRESS EMPLOYEMENT	150.00	150.00	
		102000	PROFESSIONALS		.50.00	
10/23/17	30792	2020SC	Invoice: OP-58585-17	556.20		
		1020SC	HEDGEROW FARMS, INC.		556.20	
10/23/17	20702	2020SC	Invoice: 96177	1 600 65		
10/23/17	30193	2020SC 2020SC	Invoice: 86177 Invoice: 86180	1,690.65 447.78		
		2020SC 2020SC	Invoice: 86178	132.60		
		1020SC	HERUM \ CRABTREE \	132.00	2,271.03	
		10203C	SUNTAG		2,271.03	
10/23/17	30794	2020SC	Invoice: 2021337	210.76		
		2020SC	Invoice: 0021583	337.56		
		2020SC	Invoice: 9012700	210.86		
		2020SC	Invoice: 9022912	104.91		
		2020SC	Invoice: 6023282	109.65		
		2020SC	Invoice: 6023283	237.97		
		2020SC	Invoice: 6023281	26.88		
		2020SC	Invoice: 1023862	25.75		
		2020SC	Invoice: 1023863	16.82		
		2020SC	Invoice: 8010230	116.29		
		2020SC	Invoice: 5260199	225.13		
		2020SC	Invoice: 3024860	255.63		
		2020SC 2020SC	Invoice: 3025137 Invoice: 6822435	174.16 35.05		
		1020SC	HOME DEPOT CREDIT	33.03	2,087.42	
		10203C	SERVICE		2,007.42	
10/23/17	30795	2020SC	Invoice: 24.02-7	23,855.10	22.055.10	
		1020SC	MCCORD		23,855.10	
			ENVIRONMENTAL, INC.			
10/23/17	30796	2020SC	Invoice: FRIENDS OF PUTAH	6,950.00		
		1020SC	LAW OFFICE OF DONALD	-,	6,950.00	
			B. MOONEY, CLIENT		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
10/23/17	30797	2020SC	Invoice: 65648	598.50		
		1020SC	NORMANDEAU		598.50	
			ASSOCIATES, INC.			
10/23/17	30798	2020SC	Invoice: 7500	3,978.65		
10,23,17	30770	1020SC	REGIONAL GOVERNMENT	3,776.03	3,978.65	
		.02050	SERVICES		3,7 . 0.03	
10/23/17	30799	2020SC	Invoice: 006492990046 NOV	1,490.77		
		1020SC	STANDARD INSURANCE		1,490.77	
			COMPANY			
10/22/17	20900	202000	In	122.00		
10/23/17	30800	2020SC	Invoice: 20653	123.00	123.00	
		1020SC	STATION I FIRE PROTECTION		123.00	
			1 ROTECTION			
10/23/17	30801	2020SC	Invoice: TR-3212	250.00		
		1020SC	TRAFC		250.00	
10/23/17	30802	2020SC	Invoice: STEPHANIE ANANI	1,000.00		
		1020SC	STEPHANIE ANANI		1,000.00	
10/22/17	30803	ำกากรณ	Invoice: KENNIETU	768.00		
10/23/17	20003	2020SC	Invoice: KENNETH	00.801		
			BRADLEY			

Date	Check#	Account ID	Line Description	Debit Amount	Credit Amount	
		1020SC	KENNETH BRADLEY		768.00	
10/23/17	30804	2020SC - 1020SC	Invoice: ARI HOOVER ARI HOOVER	890.00	890.00	
10/23/17	30805	2020SC 1020SC	Invoice: MARK LACKEY MARK LACKEY	1,125.00	1,125.00	
10/23/17	30806	2020SC 1020SC	Invoice: JOHNNY LIM JOHNNY LIM	1,000.00	1,000.00	
10/26/17	30806V	2020SC 1020SC	Invoice: JOHNNY LIM JOHNNY LIM	1,000.00	1,000.00	
10/23/17	30807	2020SC	Invoice: ROBERT	1,000.00		
		1020SC	MAYFIELD ROBERT MAYFIELD		1,000.00	
10/23/17	30808	2020SC	Invoice: KENDRICK MCCARTHY	860.00		
		1020SC	KENDRICK MCCARTHY		860.00	
10/23/17	30809	2020SC 1020SC	Invoice: GARY MILLAN GARY MILLAN	948.00	948.00	
10/23/17	30810	2020SC	Invoice: MARY ELLEN PORTER	1,000.00		
		1020SC	MARY ELLEN PORTER		1,000.00	
10/23/17	30811	2020SC 1020SC	Invoice: MARK POTTER MARK POTTER	50.00	50.00	
10/24/17	30811V	2020SC 1020SC	Invoice: MARK POTTER MARK POTTER	50.00	50.00	
10/23/17	30812	2020SC 1020SC	Invoice: JOHN PRATT JOHN PRATT	1,000.00	1,000.00	
10/23/17	30813	2020SC 1020SC	Invoice: STANLEY STEFFEN STANLEY STEFFEN	1,000.00	1,000.00	
10/23/17	30814	2020SC 1020SC	Invoice: JOYCE WILSON JOYCE WILSON	1,000.00	1,000.00	
10/23/17	30815	2020SC 1020SC	Invoice: KAILIN YANG KAILIN YANG	1,000.00	1,000.00	
10/23/17	30816	2020SC 2020SC 1020SC	Invoice: 1 Invoice: 2 VIC CLAASSEN	17,835.38 9,112.39	26,947.77	
10/23/17	30817	2020SC 1020SC	Invoice: 170854 WATERMAN INDUSTRIES, INC.	1,526.60	1,526.60	
10/25/17	30818	2020SC	Invoice: TREE	2,364.99		
		2020SC	TRANSPLANTER Invoice: REFRIGERATION	1,898.72		
		1020SC	UNIT RICHARD MAROVICH		4,263.71	
10/27/17	30819	2020SC 1020SC	Invoice: #72 SHIPPING TM TRANSPORT	250.00	250.00	
10/30/17	30820	2020SC 2020SC 1020SC	Invoice: 204352 Invoice: 204552 A & L WESTERN AGRICULTURAL LABS	36.00 36.00	72.00	
10/30/17	30821	2020SC 2020SC 1020SC	Invoice: 17008 Invoice: 17007 AGRICHEM SERVICES, INC.	864.00 28,080.00	28,944.00	
10/30/17	30822	2020SC 2020SC 1020SC	Invoice: 9068146573 Invoice: 9068450691 AIRGAS USA, LLC	239.31 122.56	361.87	

Date	Check#	Account ID	Line Description	Debit Amount	Credit Amount	
10/30/17	30823	2020SC 1020SC	Invoice: 08012017-4037-6 ALLIANCE FOR WATER EFFICIENCY	1,343.86	1,343.86	
0/30/17	30824	2020SC 2020SC 2020SC 1020SC	Invoice: BA5202 Invoice: BA5203 Invoice: BA5205 BLANKINSHIP & ASSOCIATES, INC.	1,416.67 750.00 1,233.33	3,400.00	
0/30/17	30825	2020SC 1020SC	Invoice: 130217 BYRO TECHNOLOGIES	10,000.00	10,000.00	
0/30/17	30826	2020SC 1020SC	Invoice: 19643341 EXPRESS EMPLOYEMENT PROFESSIONALS	600.00	600.00	
0/30/17	30827	2020SC 1020SC	Invoice: 5-967-74031 FEDEX EXPRESS	351.44	351.44	
0/30/17	30828	2020SC 1020SC	Invoice: #1 LAKE COUNTY WATERSHED PROTECTION DISTRI	18,172.00	18,172.00	
0/30/17	30829	2020SC 1020SC	Invoice: 155790 LSA ASSOCIATES, INC.	36,626.95	36,626.95	
0/30/17	30830	2020SC 1020SC	Invoice: 65604 NORMANDEAU ASSOCIATES, INC.	1,630.60	1,630.60	
0/30/17	30831	2020SC 1020SC	Invoice: 9/12/17-10/10/17 PACIFIC GAS & ELECTRIC CO,	1,512.08	1,512.08	
0/30/17	30832	2020SC 1020SC	Invoice: 187340 SHELDON	335.63	335.63	
0/30/17	30833	2020SC 1020SC	Invoice: 3833 SIGN ANATOMY	805.51	805.51	
0/30/17	30834	2020SC 1020SC	Invoice: SCWA HCP 2017 SOLANO BAKING COMPANY	871.96	871.96	,
0/30/17	30835	2020SC 2020SC 1020SC	Invoice: 34883 Invoice: 34882 SOUTHWEST ENVIRONMENTAL	2,170.00 402.00	2,572.00	
0/30/17	30836	2020SC 2020SC 2020SC 2020SC 2020SC 1020SC	Invoice: 1903891811 Invoice: 1913319631 Invoice: 1914193641 Invoice: 1915009031 Invoice: 1915029081 STAPLES	303.80 92.75 32.64 71.35 29.99	530.53	
0/30/17	30837	2020SC 1020SC	Invoice: 2017/18 MWQI STATE WATER PROJECT CONTRACTORS AUTHORI	5,094.00	5,094.00	
0/30/17	30838	2020SC 2020SC 1020SC	Invoice: 20961-27 Invoice: 01-46270142 THE REGENTS OF THE UNIVERSITY OF CA	22,888.19 6,129.50	29,017.69	
0/30/17	30839	2020SC	Invoice: GLICERIO BERTUMEN	735.00	<b>**</b> *****	
0/30/17	30840	1020SC 2020SC	GLICERIO BERTUMEN Invoice: JOHNNY LIM	1,000.00	735.00	
		1020SC	JOHNNY LIM	ŕ	1,000.00	
0/30/17	30841	2020SC	Invoice: SHARON MAHER	1,008.00		

## SOLANO COUNTY WATER AGENCY Cash Disbursements Journal For the Period From Oct 1, 2017 to Oct 31, 2017 Filter Criteria includes: Report order is by Check Number. Report is printed in Detail Format.

)ate	Check #	Account ID	Line Description	Debit Amount	Credit Amount	
		1020SC	SHARON MAHER		1,008.00	
0/30/17	30842	2020SC	Invoice: MARK POTTER	46.76		
		1020SC	MARK POTTER		46.76	
0/30/17	30843	2020SC	Invoice: 11978	250.00		
	****	2020SC	Invoice: 11979	250.00		
		1020SC	WARREN'S WATER TRUCK		500.00	
			SERVICE			
0/30/17	30844	2020SC	Invoice: LPCCC-FY2017-18_1	2,155.50		
		2020SC	Invoice: SCWA_FY2017-18_1	14,080.56		
		1020SC	WILDLIFE SURVEY & PHOTO SERVICES		16,236.06	
	20045	200022				
0/30/17	30845	2020SC 1020SC	Invoice: 16 YOLO COUNTY RCD	12,017.19	12,017.19	
					· =,U : 1 . 1 /	
0/30/17	30846	2020SC	Invoice: 707035	12,882.37	12 000 27	
		1020SC	YELLOW SPRINGS INSTRUMENT CO.		12,882.37	
VI 1 /17	ACHI EV CED COLO	6040+6		<b>.</b>		
# L L/ L /	ASHLEY SEP 2017	6040AC	REMOTE LINK - BAFPAA CONF CALL	9.51		
		6040AC	NAPOLI PIZZA - GSA	56.02		
		6040AC	REMOTE LINK - GSA CONF CALL	22.60		
		6040AC	NAPOLI PIZZA - SWAC	53.67		
		6040AC	NAPOLI PIZZA - GSA	84.88		
		6040AC	REMOTELINK - HCP CONF CALL	41.95		
		6040AC	SAFEWAY - TEAM MTG	9.00		
		6040AC	VASQUEZ DELI - TEAM	148.54		
		6040AC	MTG			
		6040AC 6040AC	REMOTELINK - WSF CALL VISTA PRINT - ANDY	34.72 34.43		
		00.0.10	FLORENDO BUSINESS CARDS	CF.FC		
		6050AC	USPS	6.59		
		6040AC	REMOTELINK - DHCP	9.31		
		6040AC	CALL REMOTELINK - EXEC	9.18		
		604046	COMM			
		6040AC	REMOTELINK - LEGIS COMM	5.48		
		6040AC	REMOTELINK - GSA	1.53		
		6040AC	REMOTELINK - BAFPAA	10.40		
		6040AC	REMOTELINK - BAY DELTA	67.03		
		6040AC	REMOTELINK	9.36		
		1020SC	BANK OF THE WEST		614.20	
/18/17	BARICH SEP 2017	6310AC	CHEVRON - FUEL	68.79		
		6230SC	LOWES - SUPPLIES	72.08		
		6310AC	CHEVRON - FUEL	81.19	222.07	
		1020SC	BANK OF THE WEST		222.06	
/6/17	COLIAS SEP 2017	6040AC	PURE GRAIN BAKERY	43.50		
		6210AC	-LPCCC MTG NUGGET - BOD MTG	26.06		
		1020SC	BANK OF THE WEST	20.00	69.56	
/25/17	CUETARA SEP 2017	6144AC	LOWES - SUPPLIES	77.41		
. = 5, 1 /	CODIMIN DEL 2017	6310AC	CHEVRON - FUEL	61.71		
		6144N	PACIFIC PUBLISHERS -	59.03		
		6144SC	NCA TIDELOG CABELAS - BINOCULAR	31.81		
			CASE			
		6144SC	CABELAS - BINOCULARS	342.38		
		6144AC 2025SC	LOWES - SUPPLIES SALES TAX ON PACIFIC	23.52	4.18	
			PUBLISHERS - NCA		T. 10	
		********	TIDELOG		0.4.04	
		2025SC	SALES TAX ON CABELAS - BINOCULARS		24.26	

Date	Check#	Account ID	Line Description	Debit Amount	Credit Amount	
10/2/17	EFT	2020SC	Invoice: HEALTH OCT 2017	15,668.15		
		1020SC	CALPERS	·	15,668.15	
10/7/17	EFT	2024AC	EMPLOYEE LIABILITIES PPE 10.07.17	14,599.70		
		6012AC	EMPLOYER LIABILITIES PPE 10.07.17	2,289.51		
		1020SC	PAYROLL TAXES		16,889.21	
10/13/17	EFT	2020SC 1020SC	Invoice: PPE 10.07.17 CALPERS	8,264.91	9 364 01	
10/12/17	r. r				8,264.91	
10/13/17	Eri	2020SC 1020SC	Invoice: PEPRA PPE 10.07.17 CALPERS	1,344.05	1,344.05	
10/13/17	EFT	2020SC	Invoice: SIP PPE 10.07.17	4,442.97		
		1020SC	CALPERS		4,442.97	
10/13/17	EFT	2020SC 1020SC	Invoice: 2017101101 PAYCHEX, INC.	236.55	236.55	
10/13/17	EFT	6040AC	EE HANDBOOK	69.96		
			ADMINISTRATION OCT 2017			
		6040AC	FSA PARTICIPANT FEE OCT 2017	113.50		
		1020SC	PAYCHEX, INC.		183.46	
10/27/17	EFT	2020SC 1020SC	Invoice: SIP PPE 10.21.17 CALPERS	4,442.97	4,442.97	
10/27/17	EFT	2020SC	Invoice: PPE 10.21.17	8,264.91	224.01	
		1020SC	CALPERS		8,264.91	
10/27/17	EFT	2020SC 1020SC	Invoice: PEPRA PPE 10.21.17 CALPERS	1,263.19	1,263.19	
10/21/17	EFT	2024AC	EMPLOYEE LIABILITIES	13,467.19		
		6012AC	PPE 10.21.17 EMPLOYER LIABILITIES	1,873.35		
		1020SC	PPE 10.21.17 PAYROLL TAXES		15,340.54	
10/27/17	EFT	2020SC	Invoice: 2017102501	212.05		
		1020SC	PAYCHEX, INC.		212.05	
10/1/17	FEHRENKAMP SEP 201	6144AC	TESSCO TECH - SUPPLIES	198.31		
		6144AC	TESSCO TECH - SUPPLIES	66.15		
		6144AC 1020SC	TESSCO TECH - SUPPLIES BANK OF THE WEST	189.41	453.87	
100503	EL OBENIDO GER 2017	(220.4.0)	COLUMN FOR A IDLINES	247.06		
10/25/17	FLORENDO SEP 2017	6330AC 6330AC	SOUTHWEST AIRLINES SOUTHWEST AIRLINES	247.96 30.00		
		6551AC	360 WEB SECURITY	50.00		
		6330AC	SOUTHWEST AIRLINES	73.00		
		6040AC	GUCKENHEIMER	51.72		
		1020SC	BANK OF THE WEST		452.68	
10/25/17	JONES SEP 2017	6183SC	YOLO COUNTY LANDFILL - GARBAGE	30.78		
		6183SC	YOLO COUNTY LANDFILL - GARBAGE	44.82		
		6042AC	ROUND TABLE PIZZA -	111.95		
		6230SC	MEETING BERRYESSA SPORTING GOOD - PROPANE	21.59		
		5500SC	HODELS COUNTRY DINING	35.24		
		5500SC	STARBUCKS	7.70		
		5500SC	DENNYS	31.44		
		5500SC	CHEVRON - FUEL	63.85		
		5500SC	STARBUCKS	9.70		
		5500SC	DENNYS	26.63		
		5500SC	IN AND OUT BURGER	10.83		
		5500SC	PANDA EXPRESS	21.07		
		5500SC	INDIECO - DIESEL	83.67		

Date	Check #	Account ID	Line Description	Debit Amount	Credit Amount	
		5500SC	INDIECO - DIESEL	21.85		
		5500SC	76 - DIESEL	75.00		
		5500SC	76 - DIESEL	75.00		
		5500SC	76 - DIESEL	34.53		
		5500SC	BEST WESTERN	146.24		
		1020SC	BANK OF THE WEST	140.24	851.89	
		102000	BANK OF THE WEST		651.67	
10/25/17	LEE SEP 2017	6330AC	SOUTHWEST AIRLINES -	197.97		
		6330AC	FLIGHT HORTON GRAND HOTEL	628.89		
		6410AC	PARALLELS - SOFTWARE	49.99		
		6330AC	HERTZ RENTAL CAR	68.32		
		6041AC	VERIZON - SUPPLIES	32.28		
		6410AC	ADOBE CREATIVE CLOUD	49.99		
		6040AC	CLEVERBRIDGE	139.85		
		1020SC	BANK OF THE WEST	139.03	1,167.29	
		.02000			1,101.22	
10/25/17	MAROVICH SEP 2017	6181SC	USHIP.COM - SHIPPING	309.20		
		6199SC	TIRES ADOBE CREATIVE CLOUD	49.99		
		017700	- SOFTWARE	47.77		
		6181SC	PAYPAL - SHIPPING OF			
			TIRES			
		1020SC	BANK OF THE WEST		359.19	
10/1/17	PASCUAL AUG 2017	6144N	THE RUST STORE -	60.98		
			SUPPLIES	55.55		
		6041AC	BEST BUY - SUPPLIES	65.23		
		6041AC	BEST BUY - SUPPLIES	8.70		
		6144N	GFS CHEMICALS - SUPPLIES	323.40		
		6161SC	PACIFIC ACE - SUPPLIES	10.55		
		6144N	TARGET - SUPPLIES	11.88		
		6310AC	CHEVRON - FUEL	65.11		
		1020SC	BANK OF THE WEST	05.11	545.85	
10/25/17	SANFORD SEP 2017	6330AC	CITY OF SAC PARKING	10.50		
		6181SC	USHIP - TIRES SHIPPING	1,812.72		
		6181SC	USHIP - SOIL PROBE	2,080.28		
		6220 A C	SHIPPING	20.00		
		6330AC 6330AC	CITY OF SAC PARKING	20.00		
		1020SC	CITY OF SAC PARKING BANK OF THE WEST	9.00	3,932.50	
		102050	Britic of the west		3,732.30	
10/25/17	SNYDER SEP 2017	6040AC	PISANIS AUTO	8.89		
		6310AC	CHEVRON - FUEL	23.67		
		6360AC	AGILIS - GPS TRACKER	183.92		
		6040AC	KC LOCKSMITH - KEYS	20.12		
		6300AC	FOR OFFICE PEP BOYS - VEHICLE	62.41		
		JJOJAC	MAINT TOOLS	02.41		
		6230SC	HOME DEPOT -	31.16		
		66 <b>7</b> 0U	HOME DEPOT -	514.33		
			POA2018-091 WEED			
		631040	TRIMMER			
		6310AC	CHEVRON - FUEL	92.16		
		6310AC	CHEVRON - FUEL	14.61		
		6300AC	VV AUTO PARTS - PORTS FOR PRIUS	76.59		
		6042AC	WALMART - SAFETY	37.25		
			SUPPLIES			
		5500AC	JC GRAPHIX - LOGO FOR	202.63		
		1020SC	RAV 4 BANK OF THE WEST		1,267.74	
		102050	DAINE OF THE WEST		1,207.74	
10/25/17	WILLINGMYRE SEP 20	6210AC	ACWA CONFERENCE -	699.00		
		6210AC	PETE SANCHEZ CALPERS - CRBT	6.25		
		6040AC	HEALTHYCOM - FLOWERS	70.38		
		6040AC	AMAZON - COFFEE	145.48		
			AMAZON - WATER	23.40		
		6040AC		~~		
		6040AC	GUCKENHEIMER - GSP	83.63		
			GUCKENHEIMER - GSP CONSULTANT	83.63		
		6040AC	GUCKENHEIMER - GSP CONSULTANT INTERVIEWS			
			GUCKENHEIMER - GSP CONSULTANT	9.40 25.96		

## SOLANO COUNTY WATER AGENCY Cash Disbursements Journal For the Period From Oct 1, 2017 to Oct 31, 2017 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
			BOARD MTG		
		6210AC	BEACH HUT DELI - BOARD SANDWICHES	49.22	
		6360AC	JOINT POWERS INS - HR MTG	20.00	
		1020SC	BANK OF THE WEST		1,132.72
10/12/17	WIRE 10.12.17	2020SC	Invoice: REFRIGERATION UNIT	2,390.00	
		1020SC	FAST TRACK LOGISTICS		2,390.00
	Total			1,484,631.27	1,484,631.27

## ACTION OF SOLANO COUNTY WATER AGENCY

DATE:	November 9, 2017
SUBJECT:	Contract for Lower Cordelia Floodplain Reconnaissance Study
RECOMMEN	IDATION:
Authorize Ger Floodplain Re	neral Manager to execute \$38,694 contract with cbec, inc. eco engineering to conduct Lower Cordelia connaissance Study.
FINANCIAL	IMPACT:
Sufficient fund	ding has been included in the FY 2017-2018 Administration (Flood Control) budget for this contract.
BACKGROU	<u>ND</u> :
Water Agency partially within appears to hav GIS mapping, and identify porchec inc. eco ethe most quality RELEVANCE The Lower Co Objective C (Assertion 1987).	and is susceptible to flooding. The Green Valley Flood Control Project, which is maintained by the traverses the area before entering Suisun Marsh. The area was historically semi-rural but is now in the City of Fairfield and has experienced significant urbanization within the last 20 years, which he exacerbated flooding during major storm events. This study, which includes a literature review, and hydrologic/hydraulic analysis will characterize the factors contributing to flooding in the area of the proposed scope of work is attached. In the includes a literature review, and hydrologic some of four firms who submitted bids for the proposed scope of work is attached. In the includes a submitted bids for the proposed study and in staff's judgement, fied to conduct the study.  ETO 2016-2025 SCWA STRATEGIC PLAN:  Ordelia Floodplain Reconnaissance Study is consistent with Goal #3 (Flood Management), Assist local interests in developing flood management plans and improvements outside of SCWA inbility) of the 2016-2025 Strategic Plan.  Roland Santont, General Manager
	Approved as Other Continued on recommended (see below) next page
I, Roland Sanf foregoing action	o Recommendation and/or other actions:  ord, General Manager and Secretary to the Solano County Water Agency, do hereby certify that the on was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting in November 9, 2017 by the following vote:
	d ger & Secretary to the v Water Agency

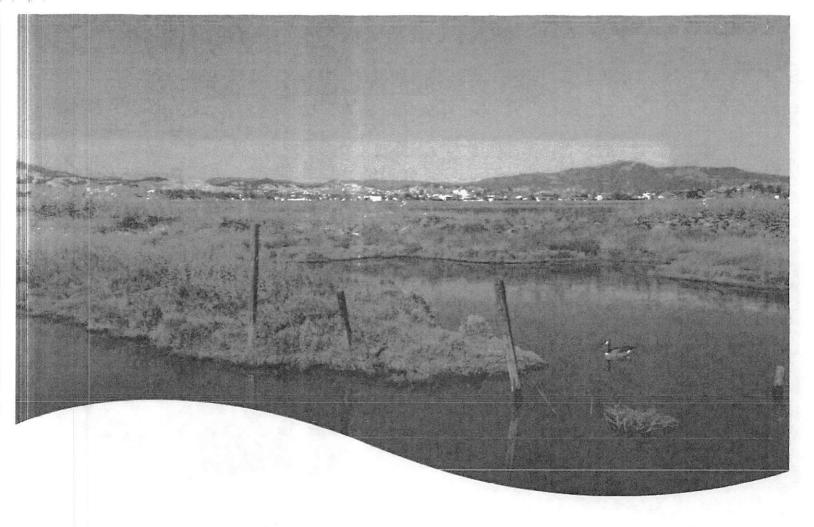
Nov.2017.It5C cbec Contract.doc File: AG-XX-XX

# Proposal for Lower Cordelia Floodplain Study Reconnaissance

Prepared for | The Solano County Water Agency
Developed by | cbec, inc. eco engineering
Proposal Manager | Chris Bowles
Proposal Number | #17-67
September 2017



cbec eco engineering 2544 Industrial Blvd West Sacramento, CA 95691 916.231.6052 cbecoeng.com



# **Table of Contents**

Prefix   Cover Letter	1
Section 1   Company Information	2
Section 2   Project Staff	3
Section 3   Relevant Projects	5
Section 4   Proposed Work Plan	10
Appendix A   Resumes	

Lower Cordelia Floodplain Study Reconnaissance

### Prefix | Cover Letter

September 25, 2017

Thomas Pate, District Engineer Solano County Water Agency 810 Vaca Valley Parkway, Suite 203 Vacavilla, CA 95688

SUBJECT: Lower Cordelia Floodplain Study Reconnaissance - Request for Proposal

Dear Thomas,

cbec, inc. eco engineering (cbec) is pleased to present this proposal to undertake reconnaissance for the Lower Cordelia Floodplain Study Reconnaissance Project.

Collectively, cbec staff has a long and extensive history of working for Solano County Water Agency (SCWA). SCWA staff know us well, particularly the individual attention that Dr. Chris Bowles and Mr. Chris Campbell has provided to the agency over the last 15 years. cbec's focus in on cost efficient and high productive outputs on schedule. What you see is what you will get; Chris Bowles and Chris Campbell will be directing and managing the project personally for you.

cbec's prior work in the Suisun Valley system since 2010 make us ideally suited for this project. We are extremely knowledgeable about this system having modeled it and taken flow measurement on the tributaries over the last seven years. We believe our staff are ideally suited to take on this project.

For the literature review, we are already prepared to undertake that at short notice and we know the most appropriate places to search. For the mapping, we have a lot of the data mentioned in the RFP and can work with SCWA rapidly to obtain the rest. GIS mapping is fundamental to our practice and we have highly experienced professionals in this field. For the hydrologic analysis we are extremely familiar with the SCWA Hydrology Manual and we will build from our prior hydrologic analysis expeditiously, further adding efficiency to the project. Finally, we will provide a succinct, "no-nonsense" report that will highlight the findings clearly and efficiently.

In summary, we know budget resources are precious, and management needs always exceed the resources available. However, as you are aware, we are a small firm with lower billing rates, and we focus on personal attention by our most experienced staff. Combine these factors with our extensive knowledge of the locality and the system and we believe we have the most effective and efficient solutions to complete this project. We sincerely hope we can continue our working relationship with SCWA through this project.

Sincerely,

Dr. Chris Bowles, PE, Managing Director, cbec, eco engineering inc.

Lower Cordelia Floodplain Study Reconnaissance

### Section 1 | Company Information



cbec will perform all work on this project from its headquarters office located at 2544 Industrial Blvd., West Sacramento, CA 95691.

cbec specializes in eco engineering, a term that refers to the practice of water resources engineering in ways that provide ecologically-sensitive and environmentally-sustainable solutions in the fields of hydrology, hydraulics, geomorphology, water quality and restoration/rehabilitation design. cbec staff have extensive expertise in stream and river restoration, process-based watershed assessments, sediment reduction, water quality monitoring, salmonid habitat restoration, multi-objective floodplain management, and generating innovative solutions for water resources challenges. We focus primarily on stream, river and wetland environments and, wherever possible, we develop solutions working from the watershed scale down to the sub-reach scale.

cbec staff proposed for this project have extensive experience working on multi-objective floodplain management projects for a broad array of clients as well as a long history of undertakings for the Solano County Water Agency. Our staff are highly skilled at integrating field-based investigations with GIS mapping and analyses to achieve our clients' objectives. We routinely use survey- and mapping-grade GPS equipment coupled with field-adapted GIS software to accurately and efficiently map river and floodplain features pertinent to our studies.

The majority of our projects require hydrologic analysis of gage records including stage, flow, tide and rainfall data. Additional strengths of our team include:

- Highly localized experience including Suisun Valley Floodplain Modeling and Suisun Flow Measurements
- Chris Bowles (Project Director) and Chris Campbell (Project Manager) both have over 15 years of experience working with Solano County Water Agency

- cbec is a small, local firm and our senior staff provide ample individualized attention to each project
- A highly integrated understanding of hydraulics, geomorphology, sediment transport and the natural environment
- Extensive expertise in developing highly specialized hydraulic and hydrodynamic models of rivers, floodplains and tidal environments
- Ample experience working at the fluvial-tidal interface

Beyond understanding the science, our team is well versed in successfully eliciting and utilizing input from stakeholders, who often reflect significantly different opinions on the best solution to a particular management challenge. cbec staff has expertise in communicating complex technical analyses in understandable terms to general audiences. This capability enables us to identify and lead the implementation of workable solutions, to the satisfaction of our clients, project stakeholders and regulatory agencies.

### Section 2 | Project Staff

### **Proposed Staff Table & Bios**

Project Member	Project Role				
Chris Bowles	Project Director				
Chris Campbell	Project Manager				
Luke Tillman	Hydraulic Engineer				
Rafael Rodriguez	Field Surveyor				



Chris Bowles, President | Chris is a registered civil engineer (CA P.E. C76898) specializing in hydraulics, hydrology, geomorphology, water resources, water quality and environmental restoration. He has over 25 years of project management experience on a wide variety of large multi-disciplinary, multi-stakeholder projects such as floodplain restoration, sediment studies, watershed hydrology, water quality, river and wetland restoration in California, Nevada, Washington, Oregon, Georgia, North Carolina, Kansas and Florida, and oversees, including

projects in the UK and Central America. Eighteen of these years have been spent in practice in the US. His technical expertise spans the range of hydraulic and hydrologic modeling (HEC software and a wide variety of 1D, 2D and 3D hydraulic models), geomorphology, GIS and field data collection (topographic and bathymetric surveying, water quality monitoring, flow gauging and sediment transport measurements). Prior to specializing in environmental hydrology, Dr. Bowles worked initially as a land surveyor and latterly as a site construction supervisor in his native U.K. Dr. Bowles has a doctorate in computational fluid dynamics in the application of fluvial hydraulics and has constructed numerous 1-, 2-, and 3-dimensional hydrodynamic models over his 25 years of experience in environmental engineering. Dr. Bowles founded cbec eco engineering in 2007 as he saw a need for expertise in bridging the gap between traditional water resources engineering and the ecological needs of our aquatic environments. He has worked tirelessly to help build a burgeoning firm that can provide innovative and holistic solutions for our water environment.



Chris Campbell, Director | Chris Campbell has more than 16 years of engineering and project management experience with an emphasis in ecohydraulics and ecohydrology. He specializes in hydrodynamics, physical hydrology, sediment transport, geomorphology, water resources, and ecosystem restoration. As technical director at cbec, Chris applies his technical experience in numerical modeling and field studies to projects ranging from seasonal wetlands to lowland alluvial rivers to tidally influenced rivers and estuaries. Chris directs and provides

quality control for 1D, 2D, and 3D numerical modeling using a range of public and proprietary software packages. Chris also directs a range of field studies to include topographic and bathymetric surveying, water quality monitoring, climate monitoring, flow gauging, sediment characterization, and sediment transport sampling. Chris has worked on a range of ecosystem restoration projects with an emphasis on vernal pool restoration in the Sacramento Valley and tidal wetland and floodplain habitat restoration in the Yolo Bypass, Cache Slough Complex, and North Delta. Chris has been the principal investigator of a vernal pool research project since 2008 to understand the potential hydrologic impacts of constructed pools on natural pools to inform design standards for vernal pool creation. This has involved four years of monitoring and subsequent 3D vadose zone modeling. Chris has also been working in the Yolo Bypass for more than a decade on various data collection, restoration, and mitigation projects. These include field data collection efforts to support hydrodynamic model development; hydrodynamic model development, calibration, and alternatives evaluation for the USBR/DWR Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project EIS/EIR; realignment of Putah Creek through the Yolo Bypass Wildlife Area; tidal restoration projects in the southern Yolo Bypass such as Lower Yolo, Prospect Island, and Yolo Flyway Farms; hydrodynamic modeling and design support of various mitigation banking projects throughout the Yolo Bypass to include Fremont Landing Conservation Bank (constructed), Capital Conservation and Mitigation Bank, Liberty Island Conservation Bank (constructed), and North Delta Fish Conservation Bank; identification and prioritization of drainage and infrastructure issues within the Yolo Bypass; and contributions to land management plans for the Yolo Bypass Wildlife Area and the Liberty Island Ecological Reserve.

Lower Cordelia Floodplain Study Reconnaissance

### Section 2 | Project Staff



Luke Tillman, Eco-Engineer I | Luke completed his B.S. in Environmental Sciences, with minors in GIS and Forestry, at the University of California, Berkeley before continuing to UC Davis for a M.S. degree in Hydrology. For his Master's thesis, he modeled 3-dimensional circulation patterns in Englebright Lake to estimate streamwood flux dynamics through the Yuba River watershed in California. He has also worked extensively in the Colorado Rocky Mountains studying climate-driven altitudinal shifts in alpine plant communities through remote sensing,

geospatial modeling, and field work. Starting in 2015, he has 2 years of hydrologic and hydraulic modeling experience using HEC-HMS, HEC-ResSim, USGS PRMS, HEC-RAS (1D and 2D), TUFLOW, and Delft3D. He frequently uses R to generate custom scripts for pre- and post-processing model data, and is familiar with other coding languages. He also works extensively with GIS, having over 4 years of experience since 2013, and has experience in hydrologic field techniques using RTK GPS, ADV, and ADCP instruments.



Rafael Rodriguez, Technician II | Rafael has several years of experience in fluvial geomorphology, water quality, and hydrogeology. Rafael recently graduated from University of California, Davis with a B.S. in Hydrology where he was first introduced to GIS and 2D hydrodynamic models. Since then, he has continuously strived to increase his skillset to include field data collection, HEC-RAS 1D modeling, SRH-2D modeling through the SMS interface, HEC-EFM statistical analysis, and implementing Ground Penetrating Radar. He has

applied his multidisciplinary background to investigate flood management practices, salmonoid habitat conservation, and surface-groundwater interactions. Rafael is eager apply his experience and strong work ethic to explore the intricate hydrologic sciences field as part of the cbec team.

### 4.3 Estimated Project Budget Summary

Task #	Task Description		Subtotal
1	Literature Review		\$ 7,880.00
2	Basemapping		\$ 13,340.00
3	Hydrologic Analysis		\$ 8,260.00
4	Reporting		\$ 8,350.00
		Labor Fee	\$ 37,830.00
		Reimbursables	\$ 864.00
	Tota	Project Budget	\$ 38,694.00

### 4.3 Estimated Labor Fees

 ${\it Unless expressiy provided within the contract, rates are subject to increase annually on {\it January 1 of each year.} \\$ 

Task#	Task Description	President	Director	Eco-Engineer I Eco-Hydrologist I	Technician II	Technician I	Subtotal Labor Hours Per Task		Subtotal Labor Fee Per Task
		\$210	\$200	\$130	\$115	\$85			
1	Literature Review	2	4	30	24	0	60	\$	7,880.00
2	Basemapping	2	8	12	76	12	110	\$	13,340.00
3	Hydrologic Analysis	2	4	40	16	0	62	\$	8,260.00
4	Reporting	3	6	36	16	0	61	\$	8,350.00
							0	\$	-
Totals		9	22	118	132	12	293	\$	37,830.00

### 4.3 Estimated Reimbursable Expenses

Item Description	Quantity	Unit Cost		Item Cost
Mileage	miles	0.54 /mile	\$	-
Parking	trip	/trip	\$	-
Lodging	day(s)	/day	\$	-
Per Diem	day(s)	/day	\$	
Airfare	day(s)	/day	\$	-
Field Truck	2 day(s)	100.00 /day	\$	200.00
ATV	day(s)	150.00 /day	\$	
Canoe	day(s)	30.00 /day	\$	
Utility Boat	day(s)	200.00 /day	\$	-
Jet Boat	day(s)	350.00 /day	\$	
Soil Sampler	day(s)	20.00 /day	\$	
Soil Samples	unit(s)	150.00 /unit	\$	-
Total Station	day(s)	75.00 /day	\$	-
RTK GPS	1 day(s)	350.00 /day	\$	350.00
Mapping Grade GPS	1 day(s)	150.00 /day	\$	150.00
Temp Probes	month(s)	/month	\$	130.00
The same of the sa		,	•	
Software Lease	month(s)	/month	\$	*
Copying / Production	1 unit(s)	100.00 /unit	\$	100.00
Courier / Delivery			\$	-
Archiving / Documentation			\$	es e
	Su	btotal Reimbursables	\$	800.00
	Admir	nistrative Charge (8%)	\$	64.00
		<b>Total Reimbursables</b>	\$	864.00

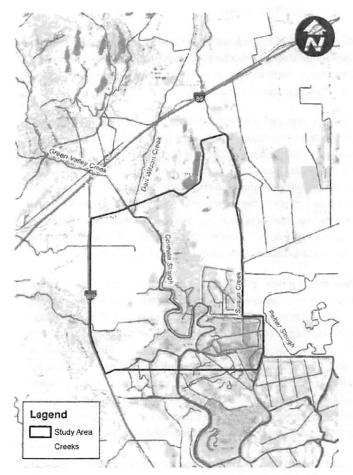
### 4.1 Proposed Approach/Scope of Services

#### PROJECT UNDERSTANDING & OBJECTIVES

Many of the challenges present at this study site are driven by the site's location at the fluvial-tidal interface and the unknown consequences of upstream urban development. It is our understanding that Solano County Water Agency seeks to achieve the following goals through this undertaking:

- Understand the effects of hydromodification and drainage changes on the drainage and inundation patterns of the a floodplain
- Map historic and present-day features along the site drawing on historic resources, remotely sensed data and field reconnaissance
- Conduct hydrologic analysis using recent stage, tide and rainfall data to evaluate flood events and the influence of tides and hydromodification
- Develop a report that synthesizes existing information and analyses conducted as part of this project, and presents potential recommendations for alleviating flooding within the study area

With our extensive experience working at the fluvial-tidal interface and on hydromodification studies as well our local experience in the Suisun Creek watershed, we believe cbec can accurately and efficiently address the objectives for this project.



Map of study area.

### 4.1 Proposed Approach/Scope of Services

### TASK 1 | LITERATURE OVERVIEW

Goal: The goal of this task will be to elucidate the cumulative effect of drainage development over time and its potential impact on the Cordelia floodplain through changes in drainage patterns and / or changes in runoff timing, magnitude, and duration.

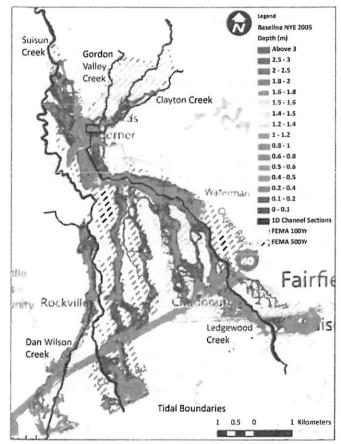
Approach: cbec staff will visit the Agency office for one day to inventory available plans and reports (most likely in hardcopy) and identify the most pertinent historic and current documents, cbec will use a portable scanner for smaller scan jobs that can be performed onsite. If needed, any larger hardcopies will be scanned offsite to facilitate a more thorough review of the documents (at the permission of the Agency) and returned to the Agency. In addition to plans and reports, cbec will collect any information and anecdotal evidence that documents the extent of flooding within the study area associated with floods in 2005, 2010, 2014, and 2017.

Relevant drainage plans and reports associated with Caltrans improvement projects and City development projects will be reviewed in detail to understand how these improvements have affected drainage over time. As part of the Suisun Valley Floodplain Modeling project, cbec is already familiar with some of the improvement plans within Suisun Valley. As a component to the report in Task 4, an annotated bibliography will be prepared that succinctly summarizes the plans and reports, which will be supported by the development of additional GIS-based mapping that simply and effectively portrays the succession of development and drainage alterations affecting the Cordelia floodplain.

In addition to coordinating with the Agency to obtain relevant reports and studies, cbec will coordinate with the City of Fairfield to obtain relevant reports, studies, and GIS mapping portraying zoning, development footprints, and the City's mapping of the storm drainage network and features to support Task 1 and Task 2 basemapping.

#### Deliverables:

- Annotated bibliography / summary of relevant drainage plans and reports.
- Drainage development basemapping.



Example modeling graphics from previous Suisun Valley Foodplain Modeling study by cbec.

### 4.1 Proposed Approach/Scope of Services

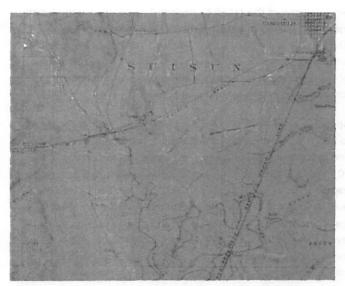
TASK 2 | BASEMAPPING

Goal: The goal of this task is to prepare GIS-based basemapping for historic and present-day conditions for the study area and the areas tributary to the study area.

Approach: It is our understanding the Agency has multiple years of LiDAR data and aerial imagery between 2004 and 2017 for which some features have been digitized. cbec is very capable at using and analyzing LiDAR data. We are also very familiar with LiDAR data quality relative to accuracy standards in which the data was acquired and its limitations in certain environments. For example, and in coordination with the Agency, present-day basemaps will be prepared and will consist of 1) a watershed scale map consisting of complimentary aerial imagery overlain on a hillshade of the LiDAR which will be further overlain by topographic contours and watershed boundaries and 2) similarly a study area map further overlain by key hydrologic features (i.e., primary channels and ditches, flood training features, storage depressions, and culverts and other drainage infrastructure).

Prior to field verifying the key hydrologic features, many features will be identified through a desktop review of the aerial imagery, existing features digitized by the Agency, and processing of the LiDAR to aid in identifying key features. Following the desktop review, pertinent hydrologic and river engineering features will be field verified over a two-day field reconnaissance. The features will be located and documented using 1) survey grade GPS to map locations and record key elevations (i.e., culvert inverts), 2) photographs to document present-day conditions, and 3) a computer field tablet with a preprogrammed library of features that will be customized to the project to document key attributes (e.g., culvert size, material type, condition, etc.). All of the photographs and feature attributes will be consolidated into an interactive geodatabase. Site access is assumed to be arranged by the Agency.

It is our understanding the Agency may have historic aerial imagery as early as the 1970s. However, we will work with the Agency to identify available historic aerial imagery and maps. We may consult or search with UC Santa Barbara Map & Imagery Laboratory, UC Berkeley Earth Sciences & Map Library, CSU Chico and/or Historic Map Works



Example of available maps for the site: 1898 Carquinez Strait 15-minute Quadrangle

to acquire older imagery, historic quads, and historic maps. Based on a preliminary search, imagery is likely available for 1937, historic topo maps as early as 1898 (see below), and historic maps as early as 1896. At the direction of the Agency, historical basemaps will be prepared and historic hydrologic features will be digitized and overlain through a desktop exercise.

#### Deliverables:

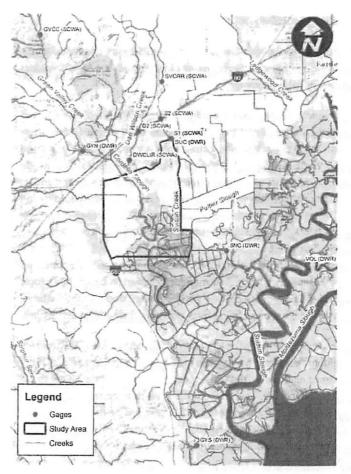
- Historic basemapping in an ESRI geodatabase.
- Present-day basemapping in an ESRI geodatabase and field verified attributes of key hydrologic features.

### 4.1 Proposed Approach/Scope of Services

### TASK 3 | HYDROLOGIVC ANALYSIS

Goal: The goal of this task is to perform 1) a simple desktop-based hydrologic analysis to approximate the recurrence interval of recent flood events and evaluate the influence of tides on creek flooding within the study area, and 2) evaluate the present-day performance of the GVFCP relative to its as-built design condition and map the corresponding potential inundation areas.

Approach: A spreadsheet-based hydrologic analysis will be developed to focus initially on ponding conditions documented by the Agency and supported by anecdotal evidence for flood events in 2005, 2010, 2014, and 2017. Rainfall records will be collected from readily available gages for each event including antecedent conditions. Creek water level records and slough tide level records will be acquired from readily available gages for each event including Lake Curry reservoir levels. Data quality and reliability will be checked and level data will be converted to a common vertical datum (i.e., NAVD88). The recurrence intervals for each event will be approximated from the rainfall records based on depth-duration-frequency tables from SCWA's Hydrology Manual and cross checked against information gathered from Task 1. The impact of the tides will also be evaluated as it relates to elevating upstream creek water levels causing creeks to spill their banks sooner and / or impede drainage within the study area. A summary of the spreadsheet analysis and a series of graphs will be generated that will be documented in the Task 4 report.

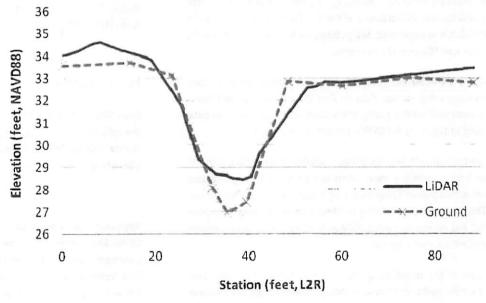


Location of anticipated gage data sources for the project. Note: other gages installed by SCWA in response to flood complaints

### 4.1 Proposed Approach/Scope of Services

The performance of the GVFCP will be analyzed. It is our understanding that the Agency is having another consultant collect cross section data every 200 feet (and every 50 feet south of Cordelia Road) along with hydraulic structure elevations (i.e., culvert inverts). This information will serve to provide an updated topographic map for the GVFCP which will be incorporated into the basemapping in Task 2. It is also our understanding that the Agency will prepare a comparison between the present-day cross sections and the as-built design cross sections. This comparison will facilitate a performance

analysis of the GVFCP and mapping of potential inundation areas for present-day and as-built conditions. It is understood that the Agency said no new modeling would need to be performed, but we would strongly suggest developing a basic HEC-RAS model of the GVFCP as it will allow for more efficient and accurate mapping of potential inundation areas. Because the cross section data is already within AutoCAD, it can be quickly imported from Civil 3D into HEC-RAS. From there, the performance of the GVFCP can be readily determined using design flows and a range of tidal conditions to identify where the CVFCP is capacity limited and likely to overtop its levees.



Example of previous cross section comparisons conducted by cbec on Dan Wilson



### 4.1 Proposed Approach/Scope of Services

Supplemental Information Informing Approach:

- 1. Data on CDEC is a real-time archive. Published data will either be secured from Water Data Library or DWR staff directly responsible for gage maintenance.
- 2. As part of the Suisun Valley Floodplain Modeling project, tidal datums previously prepared by cbec in 2010 for GYS, SNC, and VOL will be updated with newer information and any gage adjustments.
- 3. As part of Suisun Valley Floodplain Modeling project, cbec adapted previously developed hydrologic model, recalibrated them for the Suisun Valley watershed based on the 2005 flood with validation to the 1995 flood, and generated design flows for the 24-hr and 4-day 5-, 10-, 25-, 50-, and 100-year storm events.
- 4. As part of the Suisun Valley Floodplain Modeling project, cbec collected some cross section data on Dan Wilson and Suisun Creeks and previously verified the quality of the 2008 LiDAR data set. This data can be used to augment the GVFCP performance analysis.
- 5. As part of Suisun Valley Floodplain Modeling project, cbec assisted SCWA in implementing a monitoring program on the creeks and tributaries within Suisun Valley including Suisun Creek and Dan Wilson Creek. This included the installation of several water level recorders that SCWA has maintained since 2009 with reliable level data through 2014 (Jay Ceutara, pers comm).
- 6. As part of the monitoring program implemented above, cbec was in the field performing flow monitoring with SCWA staff during the January 10, 2017 flood when Lake Curry was spilling. While flow monitoring on Suisun Creek at Cordelia Road, cbec staff witnessed overbank flooding on Suisun Creek and overtopping of Cordelia Road as the creek was cresting concurrent with elevated high tides with floodwaters entering the top of the study area near Thomasson Lane, which confirms that overbank flooding contributes to runoff within the study area. Flow monitoring was challenging for cbec and SCWA given the sediment and debris laden water. It is our understanding that SCWA collected high water marks following the flood and this data still needs to be reviewed (Jay Ceutara, pers comm).

#### Deliverables:

- Spreadsheet containing the gage data, analyses, and graphs.
- GVFCP design flood water surface profiles and mapping of potential inundation areas.

cbec monitoring flow on Suisun Creek at Cordelia Road as its cresting (1/10/2017 at 3:40pm)

Suisun Creek overtopping its right bank and overtopping Cordelia Road (1/10/2017 at 4:30pm)

#### TASK 4 | REPORTING

Goal: The goal of this task is to synthesize and further summarize the information from Tasks 1, 2, and 3 to develop key findings for flooding within the study area and potential recommendations for alleviating flooding within the study area.

Approach: cbec will prepare a draft report inclusive of figures and tables. The draft report will be provided to the Agency for review and comment. cbec will respond to one set of collated comments. The final report will be prepared and provided to the Agency along with a final ESRI geodatabase of all basemapping.

#### Deliverables:

- Draft report in electronic format (Word and PDF).
- · Final report in electronic format (Word and PDF).

The project will be commenced promptly following aware of the executed contract and will be completed within four months. Per the RFP, we assume that an executed contracted will be awarded in October 2017.

### Appendix A | Resumes



### Christopher Bowles, President

#### Education

- Ph.D., 1999, Hydraulics, specializing in 3-D numerical modeling of environmental flows related to run-of-the-river hydropower.
   Nottingham Trent University, England
- CIWEM, 1995, Water and Environmental Management Diploma, Nottingham Trent University, England.
- B. Eng., 1995, Civil Engineering (First Class with Honors), Nottingham Trent University, England.
- H.N.D., 1989, Engineering Surveying, Trent Polytechnic, Nottingham, England.

#### **Professional Registration**

· 2010, Professional Engineer, CA, #76898

#### Professional Experience

- 2007-Present, President cbec, inc., eco-engineering, Sacramento, CA Providing environmental consulting services to the water resources industry.
- 1998–2007, Hydrologist to Principal
   Philip Williams & Associates (PWA), Ltd., Sacramento, CA
- 1995–1998, Standard Instructor: Land Surveying, I.T., and Fluid Mechanics Nottingham Trent University, Nottingham, England
- 1995, Flood Defense Technician
   National Rivers Authority, Scarrington Road,
   Nottingham, England
- 1994, Assistant Flood Defense Technician National Rivers Authority, Scarrington Road, Nottingham, England
- 1989–1993, Site Engineer/Project Manager G.F. Tomlinson & Sons Civil Engineering Contractors, Derby, England

Dr. Bowles is Civil Engineer specializing in hydraulics, hydrology, geomorphology, water resources, water quality and environmental restoration. He has more than nineteen years of project management experience on a wide variety of large multi-disciplinary, multi-stakeholder projects such as floodplain restoration, sediment studies, watershed hydrology, water quality, river and wetland restoration in California, Nevada, Washington, Oregon, and Florida, and overseas, including projects in the UK and Central America. Fourteen of these years have been spent in practice in the US. His technical expertise spans the range of hydraulic and hydrologic modeling (HEC software and a wide variety of 1D, 2D and 3D hydraulic models), geomorphology, GIS and field data collection (topographic and bathymetric surveying, water quality monitoring, flow gauging and sediment transport measurements). Prior to specializing in environmental hydrology, Dr. Bowles worked initially as a land surveyor and latterly as a site construction supervisor.

Dr. Bowles founded cbec, inc., eco-engineering in 2007, specializing in engineering services as they relate to the water resources industry to provide ecologically sensitive and sustainable solutions in the fields of hydraulics, hydrology, geomorphology and restoration design. Since 1998 he has managed or directed numerous projects in northern California (Central Valley, the Bay Area and Coastal Regions) the Sierra Nevada (the Tahoe Basin) and southern California. Clients have included Federal, State, and local agencies and private client such as West Sacramento Area Flood Control Agency (WSAFCA), Sacramento Area Flood Control Agency (SAFCA), Yolo County, Solano County Water Agency, Solano Land Trust, California Department of Fish and Wildlife (CDFW), US Fish and Wildlife Service, the Sacramento Water Forum, Department of Water Resources, Three Rivers Levee Improvement Authority and the US Army Corps of Engineers (USACE) and many other Cities and Counties in California. Other clients that Dr. Bowles has served include local private developers in the Central Valley, where his involvement has primarily involved advising clients on hydromodification impacts of new development (assessing the impacts of stormwater flows on the geomorphology of receiving waters).

His experience in other areas of the United States is extensive, including multiple projects in Oregon, Washington, Florida, Georgia and Indiana. Dr. Bowles has worked in the United Kingdom and other parts of Europe for over 25 years and co-founded cbec UK in 2010.

Dr. Bowles regularly gives training courses in hydraulics and hydrology and has prepared and delivered courses to the State Water Resources Control Board (and the Regional Boards), CDFW and UC Davis Extension. He has had lecturing experience in several fields including land surveying, IT, hydraulics and hydrology. He has also presented technical papers at numerous conferences and meetings and regularly gives technical presentations to Clients and Stakeholders in his project management and direction roles.

Dr. Bowles has had significant field reconnaissance and assessment experience including bathymetric surveying, flow and tide measurement, and velocity measurement using the latest technology in Acoustic Doppler Velocimetry and water quality monitoring. His knowledge of laboratory based hydraulic modeling is also extensive with a substantial part of his doctoral research based on this technology.

Dr. Bowles is focused on providing innovative, environmentally sensitive solutions to impacted watersheds from the Sierras to the Central Valley to achieve the protection, enhancement, and restoration of water dependent ecosystems. He has particular interests in multi-objective floodplain management and innovative urban development that is sensitive to, and sustainable for, our natural water resources systems.

# Appendix A | Resumes

#### Selected Projects

North Sacramento Streams Evaluation and Levee Repair Project | Sacramento, CA. 2014-present. For. Dr. Bowles is the Project Director for cbec's responsibility for input into this EIR for levee improvement projects in the northern regions of Sacramento for SAFCA. cbec are also supporting the hydrology, hydraulics and geomorphology components of mitigation and restoration design associated with the project.

Southport Early Implementation Plan | West Sacramento, CA. 2011-present. Dr. Bowles is the Project Director for the project including geomorphic design of the proposed levee setback project through the City of West Sacramento. Studies have included detailed 2D sediment transport modeling, levee breach analysis, extensive bathymetric, side scan sonar, sub-bottom profiling and sediment transport measurements. The project has included substantial erosion control designs along the Sacramento River to address various site-specific concerns. This project has required extensive research into current, successful riverbank restoration designs, as well as application of regulatory guidance. This project involves working collaboratively with a design team and several regulatory agencies to develop sustainable solutions. Erosion repair and prevention designs included biotechnical stabilizations, as well as ripirap design, based on 2D hydraulic modeling data.

Suisun Valley Floodplain Modeling | 2009-2010. For MTCo/Nolte Joint Venture on behalf of Solano Transportation Authority. Chris was project director for a two-phase project to develop a two-dimensional model for the Suisun Valley, which includes Suisun, Ledgewood and Dan Wilson creeks. The Suisun Valley Floodplain Modeling project was conceived, following a decade of creek specific hydrologic and hydraulic studies, to evaluate valley-wide flood impacts to existing infrastructure and formulate practicable alternatives to alleviate these impacts.

Various Yolo Bypass Studies | Yolo County, CA. 2008-present. For. cbec has, and is, assisting multiple agencies (Yolo County, California Department of Fish and Wildlife, Yolo Basin Foundation, Metropolitan Water District) in the collection of new field data to support various modeling efforts like the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project. Field efforts include collection of Tule Canal low flows, Tule Canal bathymetry, and Yolo Bypass air photo acquisition, all to support model calibration. cbec has also performed a study to improve the availability and quality of data for planning drainage and water infrastructure improvements that benefit wetlands and agriculture in the Yolo Bypass, which will assist Yolo County and the Yolo Basin Foundation in securing future funding for projects or feasibility studies to benefit agriculture and wetland operations.

Dry Creek Habitat Enhancement Project | Sonoma County, CA. 2013-present. For the Sonoma County Water Agency. This project will enhance up to 6 miles of Dry Creek below Warm Springs Dam through creation of in-channel and offchannel habitats to improve summer rearing and winter high-flow refuge for coho salmon and steelhead trout. Design elements include alcoves and side channels, in-channel riffle enhancement, large wood structures, biotechnical stabilization measures, and native revegetation. Working with Inter-Fluve, Inc., cbec supported the development of channel designs by performing detailed field surveys of the low flow channel and conducting 2D hydrodynamic model development and calibration using TUFLOW to evaluate the performance of the design features from low flows through the 100-year flood.

Lower Sacramento River Regional Geomorphic Assessment Project | 2003-2004. For SAFCA. Project manager for this project to assess the geomorphic impact of proposed changes to the regional flood management of the Sacramento River and its tributaries and bypasses. The project focused on the geomorphic overview and in developing sediment transport models of the potential scenarios.

*Urrutia Pond Restoration* | 2008-present. For SAFCA and City of Sacramento. cbec is part of a team preparing the SMARA reclamation and restoration plan for the Urrutia Pond in the Lower American River Parkway.

Sacramento Area Flood Control Agency (SAFCA) Lifecycle Management of Vegetation on Levees White Paper | 2009. Dr. Bowles has recently completed the co-authoring of a white paper into the lifecycle management of vegetation on levees, a topic prominent in the scientific and political realms of flood risk management locally and nationally. This involved development of a conceptual decision support tool for life cycle management, working with nationally renowned academics.

# Appendix A | Resumes



#### Christopher Campbell, President

#### Education

- M.S., 2003, Biological and Agricultural Engineering University of Idaho, Moscow, Idaho, USA
- B.S., 1998, Agricultural Engineering (summa cum laude)
   University of Idaho, Moscow, Idaho, USA

#### **Professional Registration**

• 1999, Engineer-in-Training, Idaho, #4896

#### **Professional Experience**

- 2008-Present, *Director* cbec, inc., eco-engineering, Sacramento, CA
   Providing environmental consulting services to the water resources industry.
- 2001-2008, Hydrologist to Senior Associate
   Philip Williams & Associates (PWA), Ltd., Sacramento, CA

Chris Campbell has more than fifteen years of engineering and project management experience with an emphasis in ecohydraulics and ecohydrology. He specializes in hydrodynamics, physical hydrology, sediment transport, geomorphology, water resources, and ecosystem restoration. As technical director, at cbec, Chris applies his technical experience in numerical modeling and field studies to projects ranging from seasonal wetlands to lowland alluvial rivers to tidally influenced rivers and estuaries. Chris directs and provides quality control for 1D, 2D, and 3D numerical modeling using a range of public and proprietary software packages (e.g., HEC-RAS, MIKE 11/21, TUFLOW, Delft3D, FLOW-3D, FEFLOW). Chris also directs and performs a range of field studies to include topographic and bathymetric surveying, water quality monitoring, climate monitoring, flow gauging, sediment characterization, and sediment transport sampling. Chris Campbell has worked on a range of ecosystem restoration projects with an emphasis on vernal pool restoration in the Sacramento Valley and tidal wetland and floodplain habitat restoration in the Yolo Bypass, Cache Slough Complex, and North Delta. Chris has been the principal investigator of a vernal pool research project since 2008 to understand the potential hydrologic impacts of constructed pools on natural pools to inform design standards for vernal pool creation. This has involved four years of monitoring and subsequent 3D vadose zone modeling. Chris has also been working in the Yolo Bypass for more than a decade on various data collection, restoration, and mitigation projects. These include field data collection efforts to support hydrodynamic model development; hydrodynamic model development, calibration, and alternatives evaluation for the USBR/DWR Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project EIS/EIR; realignment of Putah Creek through the Yolo Bypass Wildlife Area; tidal restoration projects in the southern Yolo Bypass such as Lower Yolo, Prospect Island, and Yolo Flyway Farms; hydrodynamic modeling and design support of various mitigation banking projects throughout the Yolo Bypass to include Fremont Landing Conservation Bank (constructed), Capital Conservation and Mitigation Bank, Liberty Island Conservation Bank (constructed), and North Delta Fish Conservation Bank; identification and prioritization of drainage and infrastructure issues within the Yolo Bypass; and contributions to land management plans for the Yolo Bypass Wildlife Area and the Liberty Island Ecological Reserve.

#### Selected Projects

Upper Yolo Bypass Locally Developed Plan | Yolo and Solano Counties. 2014-present. For the Sacramento Area Flood Control Agency. This project aims to prepare a locally developed plan or alternative that meets the salmonid habitat and fish passage goals for the Yolo Bypass Project while being sensitive to other Yolo Bypass land uses. Conceptualization of the plan elements has occurred with substantial support from stakeholders and local agencies. The alternative includes managed floodplain inundation to amplify rearing habitat benefits and provide opportunities for food web production and export to the Delta based on the basic elements of a passive intake channel at Fremont Weir, operable weirs within Tule Canal to manage water levels within each management unit, and enhanced agricultural berms to control water levels within each management unit. As project manager for cbec, Chris prepared the concept design for the plan based on stakeholder input and directed the application of the Yolo Bypass TUFLOW model to evaluate the performance of the plan (ongoing).

Central Valley Flood Protection Plan-Identification and Prioritization of Potential Restoration Sites | Sacramento County, CA. 2010. For California Department of Water Resources. cbec is currently assisting DWR through a sub-contract with AECOM, to identify and prioritize potential restoration sites for the CVFPP. The project involves sophisticated GIS techniques and HEC-Ecosystems Function Model (EFM).

# Appendix A | Resumes

Various Yolo Bypass Studies | Yolo County, CA. 2008-present. cbec has and is assisting multiple agencies (Yolo County, California Department of Fish and Wildlife, Yolo Basin Foundation, Metropolitan Water District) in the collection of new field data to support various modeling efforts like the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project. Field efforts include collection of Tule Canal low flows, Tule Canal bathymetry, and Yolo Bypass air photo acquisition, all to support model calibration. cbec has also performed a study to improve the availability and quality of data for planning drainage and water infrastructure improvements that benefit wetlands and agriculture in the Yolo Bypass, which will assist Yolo County and the Yolo Basin Foundation in securing future funding for projects or feasibility studies to benefit agriculture and wetland operations. Chris managed these efforts.

Suisun Valley Floodplain Modeling | 2009-2010. For MTCo/Nolte Joint Venture on behalf of Solano Transportation Authority. Chris was project director for a two-phase project to develop a two-dimensional model for the Suisun Valley. which includes Suisun. Ledgewood and Dan Wilson creeks. The Suisun Valley Floodplain Modeling project was conceived, following a decade of creek specific hydrologic and hydraulic studies, to evaluate valley-wide flood impacts to existing infrastructure and formulate practicable alternatives to alleviate these impacts.

Santa Clara River Parkway | 2011 - 2012. For California State Coastal Conservancy. Mr. Campbell was the acting project manager for developing a 2D hydrodynamic model using MIKE FLOOD for approximately 40 miles of the Santa Clara River from the Los Angeles County Line to the Ocean. The model was validated against the January 2005 flood event and was used to assess the flood attenuation benefits of multiple levee setback scenarios incrementally and in aggregate for Q25 and Q100 under existing and future climatic conditions.

Lower Yolo Ranch Tidal Restoration Project | Solano County, CA. 2008-present. Mr. Campbell is the project hydrologist for the largest restoration project in the Yolo Basin of California, for the State and Federal Water Contractors Agency. The project is being completed in partial fulfillment of the contractors' requirement to provide mitigation restoration for the endangered Delta Smelt.

Solano County Water Agency North Delta Hydrodynamic and Water Quality Modeling and Monitoring | Yolo County, CA. 2008–present. For Solano County Water Agency. As project manager on these multi-stakeholder, multi-objective studies, Mr. Campbell designed, installed, collected, and QC'd the monitoring data; supervised and QC'd the bathymetric data collection; created the bathymetric surface model; directed and QC'd the development and calibration of a MIKE 21FM hydrodynamic model for the Yolo Bypass–Liberty Island–Cache Slough complex; and continues to oversee the development and application of the model. The model is currently being used to support ongoing WQ and restoration studies.

Oroville Wildlife Area Flood Stage Reduction Project | Butte County, CA. 2014. For the Sutter Butte Flood Control Agency. This Project consists of weir improvements and associated ecosystem restoration in order to improve the connectivity of the Feather River to its historic floodway and reduce stages within the main channel. cbec conducted a reconnaissance level geomorphic assessment along 8 miles of the Feather River corridor in the vicinity of the Oroville Wildlife Area D-Unit with the goal to develop a better understanding of potential project related impacts to the local sediment regime and water quality within the study reach. Chris was the project director for this effort.

Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project | Yolo and Solano Counties, CA. 2013-present. In support of the US Bureau of Reclamation and California Department of Water Resources Environmental Impact Statement and Environmental Impact Report, this project aims to develop a preferred alternative to meet the Reasonable and Prudent Alternative actions set forth in the National Marine Fisheries Service's Biological Opinion for creating floodplain habitat for juvenile salmonids and improving fish passage within the Yolo Bypass. Working with HDR Engineering to evaluate the alternatives, a detailed 1D/2D hydrodynamic model based on the TUFLOW platform was developed, calibrated, and applied. The efficacy of multiple alternatives were evaluated over 16-year simulation period based on the hydrodynamic outcomes that were also used to inform subsequent agricultural economic impact and fish benefits analyses. As project manager for cbec, and using his extensive knowledge of the Yolo Bypass, Chris directed the detailed TUFLOW model development and calibration, developed the long-term hydrology, collected missing bathymetric data, prepared preliminary gate designs for the alternatives, and supported the team by presenting the alternative outcomes (ongoing).

# Appendix A | Resumes



#### Luke Tillman, Eco-Hydrologist

#### Education

- M.S., 2017, Hydrologic Sciences,
   University of California Davis, Davis, CA
- B.S., 2014, Environmental Sciences,
  University of California Berkeley, Berkeley, CA

#### Professional Experience

- 2016–Present, Eco-Hydrologist cbec, inc., eco-engineering, Sacramento, CA Providing environmental consulting services to the water resources industry.
- 2014-2016, *Graduate Student Researcher*Department of Land, Air, and Water Resources,
  University of California Davis, Davis, CA
- 2013-2014, Undergraduate Researcher/GIS Technician Department of Environmental Policy, Science, and Management University of California - Berkeley, Berkeley, CA

Luke completed his B.S. in Environmental Sciences, with minors in GIS and Forestry, at the University of California, Berkeley before continuing to UC Davis for a M.S. degree in Hydrology. For his Master's thesis, he modeled 3-dimensional circulation patterns in Englebright Lake to estimate streamwood flux dynamics through the Yuba River watershed in California. He has also worked extensively in the Colorado Rocky Mountains studying climate-driven altitudinal shifts in alpine plant communities through remote sensing, geospatial modeling, and field work. Starting in 2015, he has 2 years of hydrologic and hydraulic modeling experience using HEC-HMS, HEC-ResSim, USGS PRMS, HEC-RAS (1D and 2D), TUFLOW, and Delft3D. He frequently uses R to generate custom scripts for pre- and post-processing model data, and is familiar with other coding languages. He also works extensively with GIS, having over 4 years of experience since 2013, and has experience in hydrologic field techniques using RTK GPS, ADV, and ADCP instruments.

#### Selected Projects

Moosa Creek Mitigation Bank | San Diego County, CA. 2013-present. For San Luis Rey Downs Enterprises, LLC. Luke used HEC-RAS to model the impacts of cbec's proposed grading and land cover on the 100-year water surface elevations for Moosa Creek and the San Luis Rey River, as well as a floodway encroachment analysis, to assist the client in submitting a Conditional Letter of Map Revision to FEMA for a mitigation bank design proposal.

Saluda River Evaluation of Flood Scenarios | Columbia, SC. 2016-present. For South Carolina Electric and Gas. Lake Murray, a reservoir on the Saluda River in South Carolina, was primarily impounded for the purpose of electricity generation. As a result of recent floods on the Saluda River, as well as upcoming relicensing activities with the Federal Energy Regulatory Commission, an analysis of flood impacts associated with different reservoir operational protocols was undertaken. Luke used HEC-HMS to model runoff in an ungagged tributary to the Saluda River to aid in the development of a hydraulic model, and evaluated reservoir operating procedures using HEC-ResSim and a custom mass-balance dam operations model developed using R.

College Lake BMP Services | Watsonville, CA. 2017-present. For Pajaro Valley Water Management Agency. College Lake is an ephemeral body of water near Watsonville, California, which is currently drained each year to provide land for cultivation. Pajaro Valley Water Management Agency, and others, are interested in the potential of the lake to provide flood control benefits, anadromous fish habitat, and water supply. Luke updated and calibrated an existing PRMS rainfall-runoff model to determine inflows to College Lake, updated an existing HEC-RAS hydraulic model to determine uncontrolled flow over existing and proposed weir geometries at the outlet of College Lake, and created a water budget model using Microsoft Excel to simulate College Lake storage throughout the year with respect to PRMS-derived inflows, losses due to evapotranspiration and infiltration, flow over the outlet weir, controlled fish passage releases, and water supply diversions.

Dry Creek Habitat Enhancement | Sonoma, CA. 2014-present. For Inter-fluve, inc. Luke used TUFLOW to model stage, velocity, bed shear stress, and fish habitat suitability associated with a range of flows on Dry Creek in response to proposed channel restoration modifications for fish habitat.

Suisun Creek Flow Monitoring | Suisun, CA. 2017. Luke assisted other cbec field staff with the collection of channel morphology, flow, and velocity data using an ADCP during the January 10, 2017 event.

# Appendix A | Resumes



#### Rafael Rodriguez, Technician

#### Education

B.S., 2013, Hydrology
 University of California - Davis, Davis, CA

#### Professional Experience

- 2013–Present, Technician cbec, inc., eco-engineering, Sacramento, CA Providing environmental consulting services to the water resources industry.
- 2012-2013, Research Assistant
   Department of Land, Air, and Water Resources,
   University of California Davis, Davis, CA
- 2011-2012, Laboratory Assistant
   Wastewater Treatment Plant
   University of California Davis, Davis, CA

Rafael Rodriguez has 5 years of experience in fluvial geomorphology, water quality, and hydrogeology. Rafael recently graduated from University of California, Davis with a B.S. in Hydrology where he was first introduced to GIS and 2D hydrodynamic models. Since then, he has continuously strived to increase his skillset to include field data collection, HEC-RAS 1D modeling, SRH-2D modeling through the SMS interface, HEC-EFM statistical analysis, and implementing Ground Penetrating Radar. He has applied his multidisciplinary background to investigate flood management practices, salmonoid habitat conservation, and surface-groundwater interactions. Rafael is eager apply his experience and strong work ethic to explore the intricate hydrologic sciences field as part of the cbec team.

#### Selected Projects

Coon Creek Watershed Assessment | Placer County. 2014- present. For a multi-disciplinary assessment of the Coon Creek watershed to support the development of the Placer County Conservation Plan, assess anthropogenic disturbances, and develop and prioritize restoration and conservation measures. cbec is characterizing hydrologic, geomorphic, and water quality conditions in the 112 square mile watershed. H.T. Harvey & Associates is supporting cbec by assessing riparian and aquatic habitat and fisheries. These analyses are being leveraged to evaluate anthropogenic impacts, assess the potential for recovery of physical processes and ecosystem health, and identify and prioritize future restoration project and management actions. Rafael installed and maintained stage, temperature, dissolved oxygen, and water quality sensors throughout the watershed. He also assisted with fluvial audits to assess reach level creek characteristics.

Sacramento River East Levee Erosion Control Design | Sacramento, CA. 2014-presdent. For .GEI. This project involves repair of levee erosion due to waves and fluvial processes. Bathymetric data analysis and single beam sonar surveying were performed as a basis for design work. Design of riprap revetment will be required, as well as biotechnical bank stabilization measures that incorporate habitat enhancing features. Rafael conducted several surveys and assisted with plans and figures.

Southport Early Implementation Project | West Sacramento, CA. 2013-present. This large levee setback project in West Sacramento is to perform historic and geomorphic assessments, 2-dimensional hydrodynamic and sediment transport modeling to assess the potential impacts and benefits to geomorphology of the proposed setback alignments, and for input into the ecological mitigation design for the project. Rafael surveyed riprap size, depths, and densities. He also surveyed vegetation along the levees to determine valuable habitat locations. He was responsible for collecting and replacing water level gauges.

Dry Creek Habitat Enhancement Project | Sonoma County, CA, 2013-present. For the Sonoma County Water Agency. This project will enhance up to 6 miles of Dry Creek below Warm Springs Dam through creation of in-channel and off-channel habitats to improve summer rearing and winter high-flow refuge for coho salmon and steelhead trout. Design elements include alcoves and side channels, inchannel riffle enhancement, large wood structures, biotechnical stabilization measures, and native revegetation. Working with Inter-Fluve, Inc., cbec supported the development of channel designs by performing detailed field surveys of the low flow channel and conducting 2D hydrodynamic model development and calibration using TUFLOW to evaluate the performance of the design features from low flows through the 100-year flood. Rafael surveyed the bathymetry of the channel and developed the 3D surface model.



Suisun Valley Hydrologic and Hydrodynamic Modeling

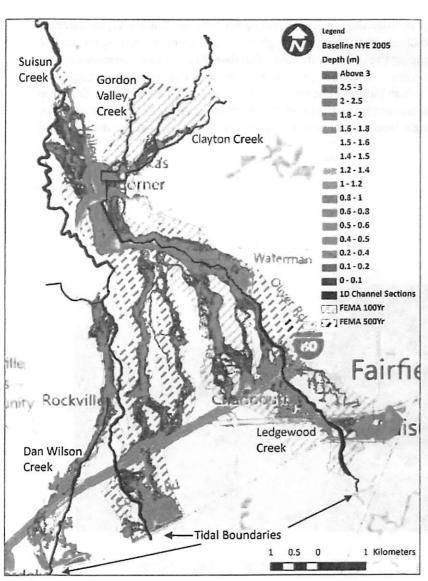
Client: Solano Transportation Agency

Date: 2009 - Present

The Suisun Valley floodplain modeling project was conceived to evaluate valley-wide flood impacts to existing infrastructure and formulate feasible alternatives to alleviate these impacts. Past floods have resulted in encroachment or overtopping of I80 causing road closures and hazardous driving conditions.

During Phase 1 of the project, cbec collected and reviewed existing data and previous studies, verified LiDAR mapping, and developed and implemented a hydrologic monitoring program. During Phase 2 of the project, cbec performed ground surveys, and developed/calibrated/validated valley-wide hydrologic and hydrodynamic models to support the analysis of proposed alternatives. Ground surveys were performed using traditional and RTK GPS techniques to characterize the creek geometry masked by dense vegetation and the hydraulic losses at all major creek crossings. Approximately 180 channel sections and 70 structures were surveyed. A valley-wide hydrologic model was developed and calibrated (using HEC-HMS) encompassing Suisun Creek, Ledgewood Creek and its tributaries (i.e., Gordon Valley Creek, Clayton Creek, and Rancho Solano Creek), and Dan Wilson Creek to inform the hydrodynamic model.

cbec developed the hydrodynamic model using MIKE FLOOD, a dynamically coupled 1D/2D (MIKE 11/MIKE 21FM) model. The model extended from the upstream limits of the FEMA FIS (i.e., just south of Napa County line) south to the Union Pacific RR tracks south of I80 and consisted of 25 miles of channels and approximately 11,000 acres of floodplain. The downstream boundary condition was derived from the measured tidal data. The hydrodynamic model was verified based on observed stage near gages at Putah South Canal and Cordelia Road and the anecdotal evidence provided by the Stakeholder agencies for the 2005 New Years Eve flood event. cbec is currently using the model to evaluate feasible alternatives to mitigate flood impacts to existing infrastructure.



Simulated Inundation for the 2005 New Years Eve Storm



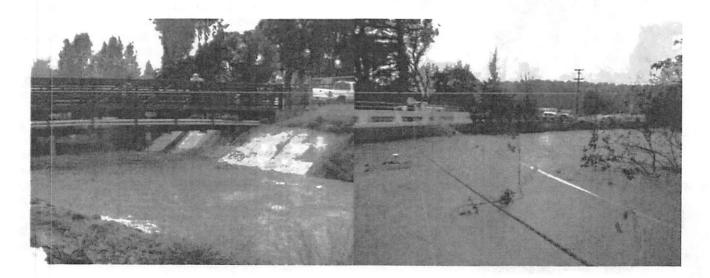
Hydrotoxy Hydronics Geomorphotogy Design Field Services

Suisun Valley Flow Monitoring Client: Solano County Water Agency

Date: 2015 to present

Contact: Jay Cuetara, 707-455-1110

cbec was contracted to perform flow measurements at 3 priority sites in Suisun Valley for Solonao County Water Agency, including Suisun Creek, Dan Wilson Creek and Ledgewood Creek. cbec conducted high flow measurements during an intense rain event January 2017 coinciding with Lake Curry overtopping the spillway utilizing a RDI RiverRay Asoustic Doppler Current Profiler (ADCP) integrated with RTK GPS for positional accuracy. This flow data will be used with the continuous stage data that SCWA manages to help build up the rating curves in Suisun Valley. cbec successfully measured flows in Suisun Creek up to 920 cfs but was having issues with the limitations of the equipment as the creek approached bankful. In the off-season we have adapted our equipment platform to integrate a single beam sonar unit to penetrate extremely sediment laden and debris rich high flow streams.



Flow Measurements at Ledgewood Creek

Flow Measurements at Suisun Creek



Hydrology Hydranlics Geamorphology Design Field Services

Yolo County Drainage and Water Infrastructure Improvement Study Funding Entity: Yolo County

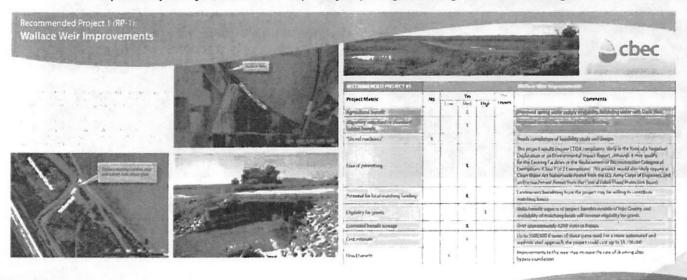
Client: Yolo County, via Consero Solutions

Budget: \$71,000 Duration: 2012-2014

This study identified drainage and water infrastructure improvements in the Yolo Bypass that benefit farmers and wetlands managers, as well as proposed actions to increase the availability and enhance the quality of data related to these improvements. Yolo County funded the study to address potential impacts on agriculture and wetlands of proposals by the California Natural Resources Agency and the U.S. Department of the Interior to increase the frequency and duration of inundation in the Yolo Bypass for seasonal fish habitat.

The study team, led by cbec, collected information and project ideas from the people who know the Yolo Bypass best: the farmers, landowners, wetlands managers, and water managers with many years of experience working in the Bypass. cbec prepared a comprehensive report including short-form project sheets for use in public dispersal. Some of these were presented to state and federal government to help ensure the successful continuation of farming and wetland management as Yolo Bypass fish habitat proposals are implemented. Three of these recommended projects were funded and are in the final design stages, under construction or being implemented (respectively): Yolo Bypass Wildlife Area Canal Reconfiguration, Operation & Maintenance Road Improvements, Wallace Weir Improvements, and Westside Tributary Monitoring.

Snapshot of one of twelve project sheets for recommended projects for the Yolo Bypass. Wallace Weir is currently being replaced by an inflatable weir to improve fish passage and irrigation water management.





Hydrotory Hydrania's Geomegatemaga Courps Field Services

Southport Early Implementation Project, West Sacramento, CA

Client: West Sacramento Area Flood Control Agency (WSAFCA) / HDR

Date: 2010 to present

Project Contact: Derek Larsen - (916) 437-7508

**Budget: Approximately \$800,000** 

The West Sacramento Flood control Agency (WSAFCA) is undertaking a project to set back parts of the Sacramento River levee through West Sacramento to provide 200-year level of flood protection while providing valuable ecological function on the restored floodplain and high recreational value.

cbec is providing geomorphic and hydrodynamic/ morphologic modeling services, as well as ecological habitat design for aquatic and terrestrial species to the project. Our role is to analyze hydraulic and geomorphic conditions at the site, assess the potential for levee and channel erosion / deposition, and estimate sedimentation impacts for the preferred design alternative. To accomplish this, we are using a combination of field geomorphic interpretation and two-dimensional hydraulic and sediment transport modeling. For this project, we developed a MIKE-21C hydrodynamic and sediment transport model for a 12-mile reach of the Sacramento River. Using the model and the geomorphic assessments, cbec is establishing how the sites evolved historically, informing the design of the setback levees relative to the sediment transport regime, and developing habitat restoration concepts to improve floodplain ecosystem function. Our findings are enabling the client to design flood management solutions that are geomorphically stable while restoring the floodplain's ecological function.



Sediment Sampling in Sacramento River



2D Sediment Transport Model Output



Hydrology Hydraulius Geomorphology Design Field Services

# CENTRAL VALLEY FLOOD PROTECTION PLAN- LOWER SACRAMENTO AND DELTA NORTH REGIONAL FLOOD MANAGEMENT PLAN

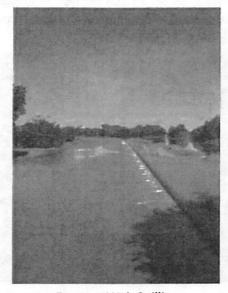
Client: FLOODSAFE/ West Sacramento Area Flood Control Agency

Date: 2013 to present

Project Contact: Paul Dirksen, Flood Protection Manager, (916) 617-4850

The California Department of Water Resources (DWR) is initiating a process to assist and work with public agencies within nine regions within the Central Valley to prepare Regional Flood Management Plans (RFMPs) as the first phase of implementing the Central Valley Flood Protection Plan (CVFPP). The goal of the regional planning process is to ensure that the RFMP accurately reflects the local vision for "a flood safe region" and describes strategies to achieve the region's flood risk reduction priorities over the next 25 years. cbec, as a subconsultant to Douglas Environmental, is supporting development of the RFMP (locally known as FloodProtect) for the Lower Sacramento and Delta North Regional Flood Management Planning Area.

The Lower Sacramento and Delta North RFMP will be developed to promote the goals of the CVFPP and advance the flood management priorities of the region. cbec's role for this project includes development of multi-objective flood control options, facilitation, and hydrodynamic modeling. Ultimately, the project will provide relevant input regarding environmental resources and other planning initiatives that may involve environmental resources within the RFMP planning area; identify projects that would contribute to the flood risk reduction objectives of the RFMP while providing other benefits, such as environmental mitigation and enhancement, preservation and enhancement of agricultural lands, and water supply reliability; participate in the stakeholder outreach process, which will be summarized in the RFMP report.



Fremont Weir Spilling



Yolo Bypass

Environmentally sustainable solutions for the water resources, industri



Hydratery Hydraulius Geomorphology Chargo Field Services

Coon Creek Watershed Assessment

Client: County of Placer Date: 2014 to present

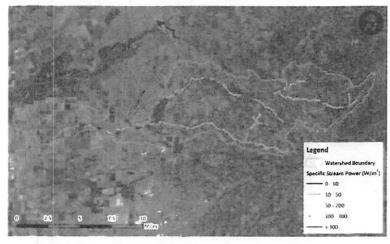
Project Contact: Jennifer Byous, Senior Planner, (530) 745-3008, jbyous@placer.ca.gov; Loren Clark, Assistant

Director, Community Development Resource Agency, 530.745.3084

cbec and HTH are performing a multi-disciplinary assessment of the Coon Creek watershed to support the development of the Placer County Conservation Plan, assess anthropogenic disturbances, and develop and prioritize restoration and conservation measures. As part of this project, cbec and HTH are characterizing hydrologic, geomorphic, water quality and ecological conditions in the 112 square mile watershed, starting at the headwaters near Auburn and continuing past the confluence of Coon Creek with the East Side Canal near the Feather River.

Given the large size of the watershed, cbec developed a spatially nested approach to characterize representative reaches a diversity of topographic, land use and flow management settings. Conducting the field-based fluvial audit supplemented with additional reconnaissance has provided cbec with a powerful understanding of physical processes operating at both reach and basin scales. Statistical analyses of hydrologic data coupled with hydrologic modeling will facilitate an understanding of the impacts of flow management and land development on the watershed's hydrologic regime. To characterize water quality conditions, particularly those vital for salmonids, cbec is performing a spatially and temporally distributed water quality monitoring effort utilizing long-term temperature monitoring, extended water quality sonde deployment and detailed laboratory sample analysis. To assess riparian and aquatic habitat, HTH is implementing a California Rapid Assessment Method (CRAM) program and providing a framework for the County to monitor changes through time. In addition, HTH is conducting surveys to identify fish passage barriers and determine the distribution and abundance of salmonids through the watershed.

These diverse analyses will be leveraged to develop multiple spatial data sets and to facilitate a layered GIS-analysis to assess the degree of anthropogenic disturbance and the potential for recovery of physical processes and ecosystem health. As an outcome of this project, the cbec and HTH team will provide the County with a prioritized grouping of restoration, conservation and management actions to facilitate improved ecological and physical health of the watershed.



Specific Stream Power analysis from the geomorphic assessment



Survey reach characterized by fluvial audit

#### SOLANO COUNTY WATER AGENCY

## AGREEMENT FOR PROFESSIONAL SERVICES

(Professional Services/Professional Liability/General Liability & Auto/with Additional Insured)

THIS AGREEMENT, effective November 9, 2017, 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 cbec, inc. eco engineering, hereinafter referred to as "Contractor".

The Agency requires services for Lower Cordelia Floodplain Study Reconnaissance; 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:

## I. SCOPE OF SERVICES

The Agency hereby engages the Contractor, and the Contractor agrees to perform the services for **Lower Cordelia Floodplain Reconnaissance Study**, 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 part of this Agreement, this Agreement shall control over any Exhibit.

# 2. <u>COMPENSATION</u>

Compensation for services shall be as follows: 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 \$38,694** 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 and allowed expenses incurred the prior month, however in no event shall the cumulative total paid pursuant to this agreement exceed the maximum amount provided for in paragraph 2 of this Agreement. Every invoice shall specify hours worked for each task identified in Exhibit A undertaken.

Each invoice shall be accompanied by a spreadsheet showing, by month, costs incurred to date for the project broken down by the Tasks identified in Exhibit A. The spreadsheet shall show, for each task, budget amounts, total expended and remaining amounts. The spreadsheet shall show a subtotal for each fiscal year covered by the contract. Any amendments to the

contract shall be listed and incorporated into spreadsheet. An example of a typical spreadsheet shall be provided by the Agency.

## 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, 2018** as directed by the Agency.

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

This Agreement may be terminated by the Agency at any time, without cause, upon written notification to the Contractor. The Contractor may terminate this Agreement 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.

## 6. PERMITS

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

# 7. INDEMNIFY AND HOLD HARMLESS

When the law establishes a professional standard of care for the Contractor's services, to the fullest extent permitted by law, Contractor will defend, indemnify and hold harmless the Agency, its directors, officers, employees, and authorized volunteers from all claims and demands of all persons that arise out of, pertain to, or relate to the Contractor's negligence, recklessness, or willful misconduct in the performance (or actual or alleged non-performance) of the work under this agreement. The Contractor shall defend itself against any and all liabilities, claims, losses, damages, and costs arising out of or alleged to arise out of Contractor's performance or non-performance of the work hereunder, and shall not tender such claims to Agency nor to its directors, officers, employees, or authorized volunteers, for defense or indemnity.

Other than in the performance of professional services, to the fullest extent permitted by law, Contractor will defend, indemnify and hold harmless the Agency, its directors, officers, employees and authorized volunteers from all claims and demands of all persons arising out of the performance of the work or 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.

# 8. 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 sub-contractors 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, a certificate of insurance satisfactory to the Agency evidencing professional liability coverage of not less than \$1,000,000 per claim and annual aggregate, requiring 30 days notice of cancellation (10 days for non-payment of premium) 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. 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. The retroactive date (if any) is to be no later than the effective date of this agreement. In the event that the Contractor employs other contractors (sub-contractors) as part of the work covered by this agreement, it shall be the Contractor's responsibility to require and confirm that each sub-contractor meets the minimum insurance requirements specified above.

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 non-payment 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 (sub-contractors) as part of the work covered by this agreement, it shall be the Contractor's responsibility to require and confirm that each sub-contractor 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.

## 9. 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.

## 10. RECORD RETENTION

Except for materials and records, delivered to the Agency, the Contractor shall retain all materials and records prepared or obtained in the performance of this Agreement, including financial records, for a period of at least three (3) years after the Contractor's receipt of the final payment under this Agreement. Upon request by the Agency, the Contractor shall make such materials and records available to the Agency at no additional charge and without restriction or limitation to State and federal governments at no additional charge.

# 11. OWNERSHIP OF DOCUMENTS

All materials and records of a finished nature, such as final plans, specifications, reports and maps, prepared or obtained in the performance of this Agreement, shall be delivered to and become the property of the Agency. All materials of a preliminary nature, such as survey notes, sketches, preliminary plans, computations and other data, prepared or obtained in the performance of this Agreement, shall be made available, upon request, to the Agency at no additional charge and without restriction or limitation on their use.

# 12. 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.

# 13. NONRENEWAL

The Contractor understands and agrees that there is no representation, implication, or understanding that the services provided by the Contractor under this Agreement will be purchased by the Agency under a new agreement following expiration or termination of this Agreement, and waives all rights or claims to notice or hearing respecting any failure to continue purchase of all or any such services from the Contractor.

# 14. 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	CONTRACTOR		
Roland Sanford, General Manager Solano County Water Agency 810 Vaca Valley Parkway, Suite 203 Vacaville, CA 95688	Chris Bowles cbec, inc. eco engineering 2544 Industrial Blvd. West Sacramento, CA 95691		
	ement the day and year first above written. If the must be provided that the person signing below for		
Solano County Water Agency a Public Agency	cbec, inc. eco engineering		
By: Roland Sanford General Manager	By: Chris Bowles President		
cbec_Lower Cordelia contract.docx			

## EXHIBIT A

## **SCOPE OF SERVICES**

# EXHIBIT B RATE OF COMPENSATION

# ACTION OF SOLANO COUNTY WATER AGENCY

DATE:	November 9, 2017				
SUBJECT:	Contract Amendment with Agrichem Services, Inc. for Nuisance Vegetation Managemen Services				
RECOMMEN	NDATION:				
	the Ulatis and Green Valley Flood Control Projects.				
FINANCIAL	IMPACT:				
Increase contr	ract amount by \$12,500 from \$33,376 to \$45,876.				
BACKGROU	<u>ND</u> :				
Valley Flood within the floor vegetation pro	gency has maintenance responsibility for the Ulatis Flood Control Project in Vacaville and the Green Control Project in Fairfield. Maintenance responsibility includes the control of nuisance vegetation od control channels and adjacent right-of-way. Due perhaps to the preceding wet winter, nuisance oliferated beyond expectations and according, additional weed control efforts are needed to prepare a flood control projects for the coming winter.				
RELEVANCE	E TO 2016-2025 SCWA STRATEGIC PLAN:				
Nuisance vege Recommende	etation spraying is consistent with Goal #3-A of the 2016-2025 Strategic Plan.  ed: Roland Sandord, General Manager				
	Approved as Other Continued on recommended (see below) next page				
I, Roland Sant foregoing acti	to Recommendation and/or other actions:  ford, General Manager and Secretary to the Solano County Water Agency, do hereby certify that the ion was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting in November 9, 2017 by the following vote.				
	ord ager & Secretary to the by Water Agency				

# SOLANO COUNTY WATER AGENCY

# AMENDMENT TO AGREEMENT FOR PROFESSIONAL SERVICES

AMENDMENT NUMBER:	1
CONTRACTOR:	Agrichem Services, Inc.
EFFECTIVE DATE:	November 9, 2017
PROJECT:	Nuisance Vegetation Management
DESCRIPTION OF AMEND	MENT:
1. Increase contrac	t amount by \$12,500 from \$33,376 to \$45,876.
SIGNATURES:	
Solano County Water a Public Agency	Agency, Agrichem Services, Inc.
By:Roland Sanfor General Manag	

AG-A-3.Agrichem-SCWA\_amd1

# ACTION OF

	SOLANO COUNTY WATER AGENCY
DATE:	November 9, 2017
SUBJECT:	Continuation of WaterWays School Education Program through FY 2017-2018
RECOMMEN	NDATION:
Authorize Ge WaterWays S	eneral Manager to execute \$66,000 contract with Putah Creek Council for continuation of School Education Program through FY 2017-2018.
FINANCIAL	IMPACT:
Sufficient fun	nding is available in the FY 2017-2018 Solano Project budget.
BACKGROU	IND:
Creek and wa these objective other sites aloo (PCDC), a co- interest along Urban Water for the Water	s a school outreach program designed to foster an appreciation for and stewardship of Putah ater resources in general. The program, which is intended for school aged youth, accomplishes wes through interactive and informative outdoor programs conducted at Lake Solano Park and one Putah Creek. The program was created by the Putah Creek Discovery Corridor Cooperative collaboration of agencies, non-profits, businesses, private landowners and educators with an at the inter-dam region of Putah Creek, and is operated in coordination with the Water Agency's Conservation Committee School Education Program. The Water Agency has provided funding Ways program in each of the last seven years. Additional information regarding the scope of the program is attached.
REEVANCE	TO 2016-2025 SCWA STRATEGIC PLAN:
Outreach), O	of the WaterWays School Education Program is consistent with Goa #5 (Education and Objective B (Evaluate, and where appropriate, coordinate public awareness of water-related oughout the County) of the 2016-2025 Strategic Plan  and By:  Roland Sanford, General Manager
	oved as Other Continued on next page
	to Recommendation and/or other actions:
, Roland San	of ford, General Manager and Secretary to the Solano County Water Agency, do hereby certify that action was regularly introduced, passed and adopted by said Board of Directors at a regular of held on November 9, 2017 by the following vote.
Ayes:	
Noes:	
Abstain:	

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

Absent:

Name of Project: WaterWays Education Program

## SOLANO COUNTY WATER AGENCY

#### AGREEMENT FOR PROFESSIONAL SERVICES

(Professional Services/Professional Liability/General Liability & Auto/no Additional Insured)

THIS AGREEMENT, effective November 10, 2017, 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 <u>Putah Creek Council.</u>, hereinafter referred to as "Contractor."

The Agency requires services for <u>Waterways Education Program</u>; 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 <u>Waterways Education Program</u>, 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 part of this Agreement, this Agreement shall control over any Exhibit.

# 2. COMPENSATION

Compensation for services shall be as follows: 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** §66,000 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 and allowed expenses incurred the prior month, however in no event shall the cumulative total paid pursuant to this agreement exceed the maximum amount provided for in paragraph 2 of this Agreement. Every invoice shall specify hours worked for each task identified in Exhibit A undertaken.

Each invoice shall be accompanied by a spreadsheet showing, by month, costs incurred to date for the project broken down by the Tasks identified in Exhibit A. The spreadsheet shall show, for each task, budget amounts, total expended and remaining amounts. The spreadsheet shall show a subtotal for each fiscal year covered by the contract. Any amendments to the contract shall be listed and incorporated into spreadsheet. An example of a typical spreadsheet shall be provided by the Agency.

## 4. <u>TIME OF PERFORMANCE</u>

This Agreement shall become effective as of the date it is executed and said services will take place between this date and <u>June 30, 2019</u> as directed by the Agency.

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

This Agreement may be terminated by the Agency at any time, without cause, upon written notification to the Contractor. The Contractor may terminate this Agreement 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.

## 6. **PERMITS**

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

# 7. <u>INDEMNIFY AND HOLD HARMLESS</u>

When the law establishes a professional standard of care for the Contractor's services, to the fullest extent permitted by law, Contractor will defend, indemnify and hold harmless the Agency, its directors, officers, employees, and authorized volunteers from all claims and demands of all persons that arise out of, pertain to, or relate to the Contractor's negligence, recklessness, or willful misconduct in the performance (or actual or alleged non-performance) of the work under this agreement. The Contractor shall defend itself against any and all liabilities, claims, losses, damages, and costs arising out of or alleged to arise out of Contractor's performance or non-performance of the work hereunder, and shall not tender such claims to Agency nor to its directors, officers, employees, or authorized volunteers, for defense or indemnity.

Other than in the performance of professional services, to the fullest extent permitted by law, Contractor will defend, indemnify and hold harmless the Agency, its directors, officers, employees and authorized volunteers from all claims and demands of all persons arising out of the performance of the work or 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.

# 8. **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 sub-contractors 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, a certificate of insurance satisfactory to the Agency evidencing professional liability coverage of not less than \$1,000,000 per claim and annual aggregate, requiring 30 days notice of cancellation (10 days for non-payment of premium) 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. 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. The retroactive date (if any) is to be no later than the effective date of this agreement. In the event that the Contractor employs other contractors (sub-contractors) as part of the work covered by this agreement, it shall be the Contractor's responsibility to require and confirm that each sub-contractor meets the minimum insurance requirements specified above.

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 non-payment 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. 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 (sub-contractors) as part of the work covered by this agreement, it shall be the Contractor's responsibility to require and confirm that each sub-contractor 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.

## 9. 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.

# 10. RECORD RETENTION

Except for materials and records, delivered to the Agency, the Contractor shall retain all materials and records prepared or obtained in the performance of this Agreement, including financial records, for a period of at least three years after the Contractor's receipt of the final payment under this Agreement. Upon request by the Agency, the Contractor shall make such materials and records available to the Agency at no additional charge and without restriction or limitation to State and federal governments at no additional charge.

# 11. OWNERSHIP OF DOCUMENTS

All materials and records of a finished nature, such as final plans, specifications, reports and maps, prepared or obtained in the performance of this Agreement, shall be delivered to and become the property of the Agency. All materials of a preliminary nature, such as survey notes, sketches, preliminary plans, computations and other data, prepared or obtained in the performance of this Agreement, shall be made available, upon request, to the Agency at no additional charge and without restriction or limitation on their use.

# 12. <u>SUBCONTRACT AND ASSIGNMENT</u>

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.

## 13. NONRENEWAL

The Contractor understands and agrees that there is no representation, implication, or understanding that the services provided by the Contractor under this Agreement will be purchased by the Agency under a new agreement following expiration or termination of this Agreement, and waives all rights or claims to notice or hearing respecting any failure to continue purchase of all or any such services from the Contractor.

# 14. NOTICE

General Manager

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:

<u>AGENCY</u>	<u>CONTRACTOR</u>		
Roland Sanford, General Manager	Putah Creek Council		
Solano County Water Agency	106 Main St. #C		
810 Vaca Valley Parkway, Suite 203	Winters, CA 95694		
Vacaville, CA 95688	•		
=	Agreement the day and year first above written. If the ation must be provided that the person signing below for so.		
Solano County Water Agency			
a Public Agency			
By:	By:		
Roland Sanford	Putah Creek Council		

# **EXHIBIT A**

# SCOPE OF SERVICES

(See attached "2017-2018 WaterWays Education Program Scope of Services and Timeline)

# **EXHIBIT B**

# **RATE OF COMPENSATION**

(See attached "2017-2018 WaterWays Education Program Scope of Services and Timeline)

# 2017-2018 WaterWays Education Program

# **Scope of Services and Timeline**

#### **Background**

The WaterWays education program, which has been supported by Solano County Water Agency with funds provided by the Urban Water Conservation Committee, has served thousands of students in Solano County with water conservation programs since 2004. During 2014 and 2015, the WaterWays program fiscal agent at UC Davis retired and the Program Coordinator moved out of the area. To continue this wonderful educational effort into the future, WaterWays staff designed and implemented a sustainable water education program using technology and local partnerships. The highlight of the WaterWays program continues to be a popular and robust, science-based, outdoor education field trip program at Lake Solano Park.

Putah Creek Council took over fiscal administration and program coordination of the *WaterWays* outdoor education program in the 2015-2016 school year. During fall 2015, The Council's Education Coordinator reviewed all the program material and reports, coordinated with WaterWays program partners, and inventoried all the supplies in preparation for taking over the *WaterWays* program. During winter quarter 2016, she contacted teachers in Solano County and participated in UC Davis' Science Education Outreach Program (SEOP) to recruit and train *WaterWays* field trip leaders. Fourteen field trips were conducted between April and May, 2016. Program evaluation and reporting occurred in June and a final summary was issued.

For the 2017-2018 fiscal and school year, Putah Creek Council would like to continue the *WaterWays* program as currently conceived, with lessons learned from 2015-2016 incorporated into the program for future years once the evaluation has been completed this year. We propose to continue with the following:

#### **Tasks**

## > Task 1 - Manage and coordinate the WaterWays Outdoor Education Program

- Act as fiscal agent for the program. Administer contracts and subcontracts, provide payroll service, pay vendor invoices, and prepare invoices.
- Coordinate participation of the key *WaterWays* partners: UC Davis Science Education Outreach Program (SEOP), Bureau of Reclamation (BOR), Solano County Parks (Lake Solano Park), and Solano Resource Conservation District School Water Education Program (SWEP).
- Recruit and train WaterWays field trip leaders
- Set field trip schedule
- Plan field trip activities and stations
- Bus contracting if needed

- ➤ Task 2 Train and supervise UC Davis undergraduate students for *WaterWays* internships through SEOP
  - Participate in SEOP during winter term and train interns in outdoor education and outreach skills to be used during *WaterWays* field trips in the spring.
- ➤ Task 3 Recruit, train and supervise Lake Solano Docents, Putah Creek Council Stewardship Team members and UC Davis EDU 142\* students for participation in WaterWays field trips
- > Task 4 Contact teachers for field trip scheduling
- > Task 5 Conduct up to sixteen (16) WaterWays field trips
- > Task 6 Expand program scope and reach to include 6 additional schools not currently served by the program, for a total of 24 field trips.
- > Task 7 Program evaluation and reporting
- \*EDU 142 Introduction to Environmental Education (Asst. Prof. Heidi Ballard)

Additional programmatic opportunities exist to increase the impact and scope of the Waterways program for the 2017-2018 program year, including expanded use of Lake Solano Park and the Lake Solano Nature Center, the latter of which Putah Creek Council is expecting to take management responsibility in early 2018. These increased opportunities include the development of expansive and interactive educational exhibits and interpretive resources that will focus on areas of watershed education, healthy aquatic ecosystems and aquatic organisms, along with the integration of artifacts, bio-facts and living organisms as part of the Lake Solano Nature Center animal collection. Hands-on, interactive, multidisciplinary activities, interactions with living organisms, real-world experiences and personal, direct, place-based learning opportunities will help to turn students participating in Waterways programming into future watershed stewards and informed, conservation-minded citizens.

# <u>Timeline</u>

Task	Timeline
Task 1 - Manage and coordinate the <i>WaterWays</i> Outdoor Education Program	July 2017 – June 2018
Task 2 – Train and supervise UC Davis undergraduate students for WaterWays internships through SEOP	November 2017 – May 2018
Task 3 – Recruit, train and supervise Lake Solano Docents, Putah Creek Council Stewardship Team members and UC Davis EDU 142* students for participation in <i>WaterWays</i> field trips	March – May 2018
Task 4 – Contact teachers for field trip scheduling	January – March 2018
Task 5 – Conduct up to eight (8) WaterWays field trips	April – May 2018
Task 6 – Program evaluation and reporting	May – June 2018

# 2016-2017 Budget and Rate of Compensation

DESCRIPTION	RATE OR UNIT COST	HOURS OR # UNITS	AMOUNT	IN-KIND
Putah Creek Council Personnel Labor				
Executive Director	\$75.00	40	\$3,000.00	
Education Coordinator	\$65.00	600	\$39,000.00	
Education Assistant	\$20.00	300	\$6,000.00	
Education Intern	\$28.46	100		\$2,846.00
Board	\$28.46	100		\$2,846.00
Salmonid Program Staff	\$28.46	150		\$4,269.00
Volunteer Labor				
Partner Labor (BOR, Lake Solano Rangers)	\$45.00	200		\$9,000.00
Lake Solano Docents and Stewardship Team Members	\$27.00	400		\$10,800.00
UC Davis Interns	\$15.00	400		\$6,000.00
Materials and Supplies				
Education Materials and Supplies			\$5,000.00	
Intern Stipends	\$500.00	6	\$3,000.00	
Transportation				
Buses for field trips	\$500.00	8	\$8,500.00	
Vehicle Mileage			\$1,000.00	
PROGRAM TOTALS			\$65,500.00	\$ 36,121.00

# ACTION OF SOLANO COUNTY WATER AGENCY

DATE:	November 9, 2017
SUBJECT:	Contract Amendment for development of Putah Creek Soil Assessment Protocol in support of Lower Putah Creek Coordinating Committee habitat enhancement projects
RECOMMEN	IDATION:
Authorize Ger Assessment Pr	neral Manager to execute \$94,978 contract amendment with UC Davis for development of Rapid Soil rotocol in support of Lower Putah Creek Coordinating Committee habitat enhancement projects.
FINANCIAL :	IMPACT:
	icient funding for development of the Soil Assessment Protocol has been included in the Water 2017-2018 budget.
BACKGROU	ND:
implement a vareestablishment have been succentributing first to gather addevelop soil asfor different public Claassen, restoration of Creek drainag would be under contract with	e Lower Putah Creek Coordinating Committee has raised \$14 million in grant funding to variety of Lower Putah Creek habitat enhancement projects, many of which involve the nt of native vegetation on highly disturbed sites. For the most part, these revegetation projects accessful. In those instances where revegetation projects have done poorly, a significant actor appears to be insufficient information regarding soil conditions. The purpose of this project ditional information regarding soil conditions along the Lower Putah Creek corridor and to assessment protocols specific to Lower Putah Creek – protocols for predicting the viability of soils plant communities and formulating remedial soil treatments as necessary.  The principal investigator for this project, is a UC Davis research professor who specializes in the Central Valley riparian habitats, from a soils perspective. In addition to his past work in the Putah et, he has also worked extensively in the adjacent Cache Creek drainage. The proposed work er the direction of the Putah Creek Streamkeeper and conducted as an "added task" to the existing UC Davis for the ongoing LPCCC Terrestrial Wildlife Monitoring program. Pursuant to the terms et, all UC Davis overhead charges are waived.  Roland Sanford, General Manager
	Approved as recommended Other Continued on next page
Modification t	to Recommendation and/or other actions:
foregoing action	ford, General Manager and Secretary to the Solano County Water Agency, do hereby certify that the on was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting in November 9, 2017 by the following vote.
Ayes:	
Noes:	
Abstain:	
Absent:	!
2 10 0	•

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

# SOLANO COUNTY WATER AGENCY

# AMENDMENT TO AGREEMENT FOR PROFESSIONAL SERVICES

AMENDMENT NUMBER:	13	
CONTRACTOR:	UC Davis Contract #02-00846 IC	
EFFECTIVE DATE:	November 10, 2017	
PROJECT:	LPCCC Terrestrial Wildlife Monitoring – Soil Assessment Protocol For Revegetation and Habitat Enhancement	
DESCRIPTION OF AMEND	MENT:	
<ol> <li>Compensation i</li> <li>Scope is amende</li> </ol>	s increased by \$94,798 from \$3,676,820 to \$3,771,618. ed per Exhibit A.	
SIGNATURES:		
Solano County Water a Public Agency	Agency, The Regents of the University of California.	
By:Roland Sanfor General Mana		
M:\A30BG-UCD.Amendment	13.doc	

# **EXHIBIT A**

#### Soil Evaluation Proposal for Solano County Water Agency Jan - June 2018

Vic Claassen

530-902-4622, vpclaassen@gmail.com

## 1) Contract for UCD Museum of Wildlife and Fish Biology from Rich Marovich

2) Budget

Lower Putah Creek Soil	Evaluation P	osition		Proposal period January 1, 2018 to June 30, 2018
Vic Claassen, Principal In	vestigator (P	1)		
Museum Wildlife and Fis	h Biology, U	CD		
<u>Personnel</u>	per mo	# mo	subtotal	description
PI salary Win, Spr 2018	9233	6	55398	Principal Investigator salary for 2017-2018 with annual increase as indicated in Ref Rate
PI benef	3619	6	21716	benefits calculated at 39.2 % of salary
clerical position	5034	0.75	3776	Financial Analyst II (0.75 months time is 0.0625 FTE on a yearly basis)
clerical benefits	2567	0.75	1926	benefits calculated at 35 % of salary
subtotal personnel		-	82815	
Expenses				
<u>mileage</u>	unit rate	# units	cost	
3 trips each of 25 wks	0.535	2025	1083	RT mileage to field sites from Davis
RT is 27 miles				
100 soil samp @ \$49 ea	49	100	4900	A&L Western Ag Labs, Modesto CA, S3C suite soil tests plus texture analysis
misc hardware and supp	lies		6000	field monitoring supplies, tractor fuel, lab computer, soil probe repair/replacement, amendments
subtotal expenses		-	11983	
		_		
position total		Ś	94798	

## 3) Time allocation of Principal Investigator

40 % field soil evaluation

soil evaluation for sustainable growth of field sites along the Lower Putah Creek Corridor, whether oncall issues, inventory of future planting sites and / or generation of treatment specifications

#### 40 % methods development

field trials and laboratory tests to improve revegetation on impacted sites, including regeneration of soil aggregates, improved organic matter amendments, water use budgets by plants, soil fertility thresholds

#### 20 % outreach

specification and planning for habitat regeneration of LPC corridor, guidance for field practitioners, workshops, publication of findings for revegetation-oriented journals, develop expert system for use by non-soils specialists.

#### 4) Proposal and Scope of Activities

#### **Problem**

Regeneration of natural habitats along the Lower Putah Creek corridor depends on sustained and vigorous growth of native plants. Widespread gravel mining, agricultural production and construction activity as well as an altered flow pattern has left many areas with degraded soils. These areas may have one or more deficiencies that limit plant growth and reduce the effectiveness of revegetation projects.

For example, soils or substrates that were compacted by previous agricultural or construction activity have reduced rooting depths that lead to increased drought stress on plants. Some sites have been disconnected from the stream base flow by differences in elevation (from stream downcutting) or by compaction between the planting site and the creek, or by layers of dry coarse sandy materials that restrict root growth. Weed pressure resulting from disturbance and enhanced fertility from nearby agricultural production creates significant competition for establishment of young native plants. It is critical to expand rooting depths so that native plants can root extensively and continue to grow actively through the rainless summer in order to compete with winter annual weeds.

#### Proposed Approach

To effectively identify and treat the critical limiting growth conditions on degraded soils, a rapid soil evaluation system has been developed. It combines field evaluation with laboratory analysis and modeling. It focuses on providing adequate soil function rather than on measurement of exact nutrients or moisture levels. After growth limiting conditions are identified, targeted, constructible treatments are selected or developed to regenerate adequate soil function. This type of applied soil regeneration has been developed over the last decade for several other state and federal projects in the Interior North Coast Range of California. It can now be adapted to the specific conditions of the Lower Putah Creek Riparian Corridor, for the purpose of regenerating sustainable plant communities and habitat.

The process starts with identification of a reference site that provides a real-world example of what the project site can become. To attain this level of growth on the project site, each soil characteristic will be regenerated as needed. The amount of available moisture from rainfall or stream base flow seepage is identified from existing data or field measurements. The target rate of soil infiltration and depth that controls surface erosion is estimated from local weather data and field-measured soil infiltration tests. Adequate moisture for growth of native plants through the dry summer is estimated from local weather evapotranspiration data. Adequate fertility to regenerate a wildlands plant community is determined using conventional agricultural tests, but with interpretation for wildlands species and conditions (meaning, no on-going irrigation, nutrient cycling rather than nutrient export, microbial activity, carbon stabilization). Any measured soil properties on the project site that do not meet thresholds for sustainable plant growth are regenerated using amendments applied with conventional construction or agricultural equipment. Interpretation of the test results is reviewed by measuring plant growth in the field. The threshold for treatment is adjusted according to what the plants consider 'adequate'.

#### Outcome

Based on plant growth outcomes, the results will be adapted for other sites with different conditions. Modifications will be based on field data and growth response rather than guesswork. Minimal modification to standard construction equipment is needed. This system provides guidance for operators that are already fully skilled. The accumulated information is expected to be compiled into guides for practitioners from other projects and presentation to restoration groups such as Putah Creek Council, volunteer groups, California Native Grasslands Association, or Society for Ecological Restoration.

## Solano County Water Agency

#### **MEMORANDUM**

TO:

**Board of Directors** 

FROM:

Roland Sanford, General Manager

DATE:

**November 5, 2017** 

SUBJECT:

November 2017 General Manager's Report

#### WaterSupply Outlook for 2018

The early weather prognostications are mixed – could be a wet year, then again maybe not. Either way, Lake Berryessa, which as of this writing holds approximately 1,375,000 acre-feet, is likely to spill this coming winter. Full water supply allocations are anticipated in 2018.

The Department of Water Resources (DWR) has yet to release the initial water supply forecasts for the State Water Project. Lake Oroville storage was drawn down this summer as a hedge against a possible wet year - if at all possible, DWR would prefer not to use the partially reconstructed spillway this winter. Given the circumstances, drawing down Lake Oroville makes sense. However, it does pose a water supply risk, should California reenter another extended drought. Stay tuned.

#### Water Awareness Video Contest -"Imagine a Day Without Water"

The Water Agency and local water purveyors are once again sponsoring a water awareness video contest for Solano County middle and high school students and their teachers (see attached flyer). As in past years, students are being asked to create 60-second public service announcement videos. This year's theme is "Image a Day Without Water". The contest has become very popular and typically draws over 100 entrants. Additional information is available at www.solanosaveswater.org.



Time Period Covered: OCTOBER 2017

# 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)** 

A & L Services – Channel Flood Repair - \$29,000 Stantec Consulting Services – Treatment Cost Study for North Bay Aqueduct Water Suppliers - \$24,000 Non-Professional Service Agreements (\$30,000 and less) – none

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.



## THE REPORTER

## News

# Solano County Water Agency sponsors student video contest

By Reporter Staff

Posted: 10/25/17, 6:11 PM PDT | Updated: 4 days ago

#### 0 Comments

Solano County middle and high school students and their teachers can win up to \$1,500 in cash by entering the 2018 Water Awareness Video Contest, sponsored by the Solano County Water Agency and local water utilities.

The contest asks students to create "compelling and original" 60-second public service announcement videos on a select water efficiency topic. The theme is: "Imagine a Day Without Water."

"It's easy to take the water systems that bring clean water to and from our homes and businesses for granted," Andy Florendo, water conservation coordinator for Solano County Water Agency, said in a press release Wednesday. "This year's contest asks students to imagine what it would be like without water — for brushing teeth, flushing the toilet, putting out fires, growing food and more — and to highlight all of the things we can be doing every day to use water wisely."

The contest is open to middle school and high school students countywide.

Winners and their sponsoring teacher will receive cash prizes.

The contest also offers Solano County teachers Amazon gift cards as a special incentive prize for sponsoring more than one student.

The deadline to enter is April 11.

Judging will be based on entertainment value and originality, videography, style and organization, audio/sound, and movie content and accuracy.

For more information about the contest, including rules, guidelines and entry forms, or for tips on using water efficiently, visit www.solanosaveswater.org.



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## Salmon Festival celebrates return of fish to Putah Creek

By Enterprise staff

Community News

From page A7 | November 01, 2017

The Winters Salmon Festival returns from II a.m. to 4 p.m. Saturday, Nov. 4, at Rotary Park in downtown Winters.

The event promises plenty of free family fun, including live music — by Muddy Waders, Sourdough Slim, Putah Creek Crawdads and Tribal Calling — a parade and an art contest. Food trucks will be on site.

The festival was inaugurated last year to celebrate the return of salmon in the lower reaches of Putah Creek. The numbers of fall-run Chinook salmon have tripled in each of the past three years.

"We are eager to see if the trend continues this year," said Rich Marovich, streamkeeper for the Solano County Water Agency. The increase in salmon follows enhancement of spawning habitat by the water agency and its partners.

"We are thrilled to welcome salmon back to the area, thanks to the ongoing and extensive restoration efforts in Lower Putah Creek," Marovich said. "We look forward to celebrating their return with the community at this festival."

Marovich said last year's salmon were late to the party — arriving a few weeks after the inaugural event.

"This year we will adjust the fall attraction flow to better coordinate with the timing of the festival," he said.

In addition to ongoing restoration efforts, the Solano County Water Agency funds a study of salmon by Peter Moyle, a professor emeritus at UC Davis. This study aims to determine whether a self-sustaining salmon population is being established in Lower Putah Creek.

The festival is sponsored by the Solano County Water Agency, the city of Winters, the federal Department of the Interior, the Putah Creek Council, Creek Works, Solano County Parks, Putah Creek Trout and the California Department of Fish and Wildlife.



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Corin Shields first started playing golf seriously roughly three years ago through Team Davis, a loc

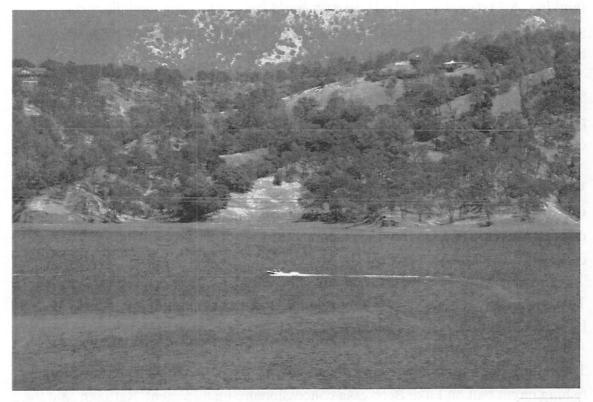
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TOP STORY

#### Recreation

# Napa County's Lake Berryessa marketing effort underway

BARRY EBERLING beberling@napanews.com 2 hrs ago



A boater out on Lake Berryessa. Maria Sestito, Register file photo **BUY NOW** 

Napa County is fishing for companies to redevelop and operate five Lake Berryessa resorts and it's using a slick brochure as bait.

SUPER

The Napa Valley Register's its the test time to soloute first active receive funders of takes of the best noted by deals, coupors and shopping information indices best offers of the year!! our bayest specially deals, coupors and shopping information indices best offers of the year!!



HURRY LIMITED TIME OFFER! hop significant savings off the newsstand prio Offer valid October 23 - 29, 2017



About 10 million people live within 100 miles of Lake Berryessa and many of them like outdoor recreation. The region is one of the nation's most prosperous, the brochure says.

Yet, despite the presence of outdoor lovers with money to spend, the brochure contends that the supply of high-quality lake resorts greatly lags demand.

Then comes the hook: "Lake Berryessa could represent one of the most untapped opportunities for quality, lake-orientated resort development in all of California."

Redeveloped resorts would have marinas, campsites, picnic sites and RV areas. Those were standbys at the old resorts conceived and built in the late 1950s and early 1960s.

But the brochure encourages would-be developers to go beyond old-school thinking. A 21st-century Lake Berryessa could have hotels, an amphitheater, glamping, a nine-hole golf course, a safari park, night entertainment, a sports academy, wedding venues, cottages and a zip line.

The county is working with Ragatz Realty, an international firm that focuses on the resort industry. Deputy County Executive Officer Molly Rattigan said Ragatz sent out the Lake Berryessa marketing materials to more than 10,000 contacts.

Would-be developers will tour the five targeted Lake Berryessa resort sites – Putah Canyon, Monticello Shores, Berryessa Point, Spanish Flat and Steele Canyon. The original tour date of Oct. 18 was postponed because of the worst wildfire disaster in county history and will take place in November.

Those who like what they see will have until Dec. 14 to submit request-for-information-and-interest applications.

The county Board of Supervisors will use the results to decide whether to continue fishing or cut bait on Lake Berryessa concessionaire management. Rattigan said the Berryessa issue could come before supervisors early next year.

Supervisors will weigh whether the county can succeed where the U.S. Bureau of Reclamation has failed over the past decade. They will decide whether Napa County enters into a partner agreement with the federal agency, which oversees the

If Napa County and the Bureau of Reclamation agree to terms, the county would take over the stalled resort redevelopment effort. The county would return to the interested concessionaires and ask for formal redevelopment and operation proposals.

"Lake Berryessa has great potential," county Supervisor Alfredo Pedroza said. "But we haven't had the terms or structure that have allowed true success to happen from the development side."

Unlike the Bureau of Reclamation, the county can market the lake to potential developers/operators using a firm such as Ragatz Realty. The Bureau has had trouble finding concessionaires to its liking by simply releasing requests for proposals.

The brochure anticipates some apprehensions that resort developers might have about Lake Berryessa. Perhaps they fear high land prices, the prospect of lengthy environmental studies, costly zoning battles and the threat of litigation from environmental groups.

"Napa County, like most prime resort destinations in California, is a challenging place to pursue new development," the brochure says.

But at Lake Berryessa resort sites, no rezoning or county general plan amendments are required. The Bureau of Reclamation has started environmental studies. Napa County officials support proper resort development. The county might be willing to offer a variety of financial incentives, the brochure says.

"Lake Berryessa is one of the largest and most attractive freshwater lakes in California," it says.

Rattigan said the county has talked to several interested developers/operators. It is meeting with Bureau of Reclamation officials on a regular basis.

"This is the opportunity for the county to market the Berryessa opportunity," Rattigan said.

The federal reservoir in eastern Napa County has seven resorts. Only Markley Cove and Pleasure Cove are operating at full strength

SUPER

The Napa Valley Register's its the test one to subsorted but in time to receive business of the best building deals, coupons and shopping information was been offers of the year! our business coupon of the year packed with Black Friday savingst

The other five have been caught in limbo for almost a decade after previous concessionaire contracts expired. The Bureau of Reclamation cleared infrastructure so the sites could be redeveloped.

Spanish Flat, Steele Canyon and Putah Canyon are operating in stripped-down fashion on interim contracts. Berryessa Point and Monticello Shores are closed. All five are awaiting their long-stalled rebirths.

#### **Barry Eberling**

Barry Eberling covers Napa County government, transportation, the environment and general assignments. He was worked for the Napa Valley Register since fall 2014 and previously worked 27 years for the Daily Republic of Fairfield. He is a graduate of UC Sa

#### Solano Water Advisory Commission Meeting Minutes September 27, 2017

Present:

Roland Sanford, Chris Lee and Alex Rabidoux, Solano County Water Agency; Felix Riesenberg, Fairfield; Royce Cunningham, Steve Sawyer and Justen Cole, Vacaville; Kevin King, Solano Irrigation District; Bryan Busch, RD 2068; Michael Malone and Richard Wilson, Vallejo; Misty Kaltreider, Solano County; Don Holdener, Maine Prairie Water District; John Curry, Dixon RCD; David Melilli, Rio Vista; and Rick Wood.

The meeting was called to order at 12:37 PM.

#### 1. Approval of Minutes

The minutes of the August 23, 2017 meeting were approved.

#### 2. SCWA General Manager's Report

Roland gave a brief update on the Ulatis Working Group. The group met for a second time, with the goal of trying to understand each user's role in the Ulatis System. Roland would like to see a regional plan developed for the Ulatis System.

For future Board items, the Agency will be seeking approval for the UC Davis Cache Slough fisheries study. The scope of work has been revised to reflect more relevant issues to the Water Agency, and the cost of the study has decreased. The Agency will also be discussing with the Napa NBA users, the potential for cost-sharing the study.

On the NBA Water Quality Treatment study, Rick Wood provided a brief update. Rick has received all of the appropriate NBA contacts for the study, and will be the project lead. The project timeline is 4-6 months. The Commission suggested the inclusion of Capital Improvement Costs, whereas the current scope only includes the Chemical Treatment Costs. Rick indicated that he would like to think about the Commission's suggestion and how this may change the scope of work. On other NBA issues, Benicia is interested in trading approximately 5,000-AF of NBA water. The State Water Contractors also met with the new DWR Director, Grant Davis, and the highest priority for DWR is the scheduled completion of Lake Oroville. However, the new director is open and interested in the NBA Alternate Intake project.

In regards to Bay-Delta Planning, Roland met with Chuck Bonham, the Director of CA DFWS. The Governor is currently pushing for watershed negotiations for the Bay-Delta Plan. For the Flow vs Habitat negotiations, salmon recovery is one of the key factors in the negotiations. For watersheds like Cache and Putah Creek, it is unclear how this would be used, as these systems have not historically supported significant salmon populations. Currently, negotiations on the San Joaquin River have not been successful.

For Flood Management, the Water Policy Commission has not made significant progress, and is instead moving forward in small steps.

#### 3. Groundwater Planning

For SGMA, a MOU has been developed between the various Solano subbasin GSAs. The group is currently working on a grant application to start work on the GSP. The grant application is due by the second week of November.

#### 4. Solano County Report

None

#### 5. PSC/NBA Maintenance

On the NBA, all of the scheduled PG&E outages are complete. PG&E would like to conduct one additional outage in November, which the Agency is looking to cancel, because of the annual PSC cleanout. There is a PSC Users Meeting scheduled for October 12 to discuss the PSC cleanout schedule.

#### 6. Solano Water Authority Report

None

#### 7. Water Conservation

None

#### 8. <u>Legislative/Initiative/Court Decision Issues Not Discussed Above</u>

Several legislative bills have been pushed into two year bills, including legislation on water conservation and funding low income water projects on all of the rate payers across the state. The Legislative Committee will meet next week.

#### 9. New Business

None

#### 10. Public Comments

None

The next meeting will be October 25, 2017 at 12:30 PM.

The meeting adjourned at 1:30 PM.

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## ACTION OF SOLANO COUNTY WATER AGENCY

DATE:	November 9, 2017
SUBJECT:	Increase Putah Creek Streamkeeper Position to Full-Time Employment Status
RECOMMEN	NDATION:
Increase Putal hours/week).	h Creek Streamkeeper position from part-time (32 hours/week) to full-time employment status (40
FINANCIAL	IMPACT:
\$95,640 to \$1	emains unchanged, increase in hours worked – additional 8 hours/week – increases annual salary from 19,550 (assuming full-time for the entire 2017-2018 fiscal year). Sufficient funds are available in the 8 Lower Putah Creek Coordinating Committee budget (grant funds) and Water Agency on budget.
BACKGROU	IND:
The Putah Cr and Stipulation Cities of Vacathe University Pursuant to the Lower Putah	eck Streamkeeper position was created by and is an integral component of the "Settlement Agreement on Among Solano County Water Agency, Solano Irrigation District, Maine Prairie Water District, aville, Fairfield, Vallejo and Suisun City; and Putah Creek Council, City of Davis and the Regents of y of California", dated May 23, 2000 – or as more commonly known, the "Putah Creek Accord". he Putah Creek Accord, the Streamkeeper is employed by the Water Agency but under the direction of Creek Coordinating Committee (LPCCC) – a committee consisting of ten members; five from Yolo from Solano County.  Act:  Roland Sanford, General Manager
	Approved as recommended Other (see below) Continued on next page
Modification	to Recommendation and/or other actions:
foregoing act	aford, General Manager and Secretary to the Solano County Water Agency, do hereby certify that the ion was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting on November 9, 2017 by the following vote.
Ayes:	
Noes:	
Abstain:	
Absent:	
<del></del>	<del></del>

Roland Sanford General Manager & Secretary to the Solano County Water Agency The Putah Creek Accord was preceded by ten years of contentious litigation and was signed in an environment of limited trust and considerable skepticism. Much has changed. Lower Putah Creek has been transformed from what many described as an agricultural drainage ditch to a perennial stream that has been identified as a model for the management of other California streams subject to regulated stream flows. The transformation of Lower Putah Creek reflects well on all parties, including the Water Agency.

#### Streamkeepe Responsibilities

The Streamkeeper's responsibilities, like nearly all aspects of the Putah Creek Accord, have evolved over time. Initially, the primary focus of the Streamkeeper was streamflow compliance monitoring – ensuring minimum stream flow requirements were met at various locations downstream of the Putah Diversion Dam. This role quickly expanded to include removal of garbage at legacy dump sites and later, relatively small scale habitat improvement projects followed by more ambitious large scale restoration projects such as the removal of the derelict Winters Percolation Dam. Under present conditions a significant portion of the Streamkeeper's time is spent submitting grant proposals for restoration planning and project implementation, and managing grant funded projects. Over the last 15 years the Streamkeeper in concert with restoration partners has obtained over 14 million dollars for restoration activities. The Streamkeeper currently manages an annual operating budget of approximately 1 million dollars.

The scope and complexity of the Streamkeeper's activities is projected to increase further. When the Putah Creek Accord was signed in 2000 the restoration activities that were contemplated then were relatively modest and not viewed or planned in the context of the large regional restoration efforts – Yolo Bypass, Bay-Delta Plan Update – now underway by State and Federal entities. Increasingly, it is in the best interests if not essential for the parties to the Putah Creek Accord, particularly the Water Agency, to coordinate the activities undertaken pursuant to the Putah Creek Accord with the restoration and regulatory activities occurring in the surrounding region. The Streamkeeper's position is at the center of these coordination efforts. In view of the current and emerging responsibilities it is no longer practical or desirable for the Streamkeeper to be limited to a part-time role.

#### RELEVANCE TO 2016-2025 SCWA STRATEGIC PLAN:

Increasing the Streamkeeper position to full-time employment status is consistent with Goal #7 (Natural Resources Stewardship), Objective B (Support and promote Lower Putah Creek Coordinating Committee programs and projects)