



Board Meeting Agenda

Russ Baggerly, Director
Mary Bergen, Director
Bill Hicks, Director

Pete Kaiser, Director
James Word, Director

CASITAS MUNICIPAL WATER DISTRICT
Casitas Board Room
1055 Ventura Ave.
Oak View, CA 93022
November 28, 2018 @ 3:00 P.M.

Right to be heard: Members of the public have a right to address the Board directly on any item of interest to the public which is within the subject matter jurisdiction of the Board. The request to be heard should be made immediately before the Board's consideration of the item. No action shall be taken on any item not appearing on the agenda unless the action is otherwise authorized by subdivision (b) of ¶54954.2 of the Government Code and except that members of a legislative body or its staff may briefly respond to statements made or questions posed by persons exercising their public testimony rights under section 54954.3 of the Government Code.

1. Roll Call
2. Public comments (Items not on the agenda – three minute limit).
3. General Manager comments.
4. Board of Director comments.
5. Board of Director Verbal Reports on Meetings Attended.
6. Consent Agenda.
 - a. Minutes of the November 14, 2018 Special Meeting.
 - b. Minutes of the November 14, 2018 Board Meeting.
 - c. Minutes of the November 21, 2018 Board Meeting.

RECOMMENDED ACTION: Adopt Consent Agenda

7. Review of District Accounts Payable Report for the Period of 11/08/18 - 11/20/18.

RECOMMENDED ACTION: Motion approving report.

8. Recommend approval to enter an agreement with MKN Associates in the not to exceed amount of \$119,417 for the Robles Diversion Fish Screen Alternative Feasibility Study.

RECOMMENDED ACTION: Motion approving recommendation

9. Recommend approval of the Proposed Revision to the Water Allocation and Efficiency Program (WEAP) to Allow as Allocation Aggregation Variance by Agreement for All Qualifying Customers with Annual Allocations.

RECOMMENDED ACTION: Motion approving recommendation

10. Recommend approval to enter into an agreement for Professional GIS Services with ESRI, Inc. in the not to exceed amount of \$47,000

RECOMMENDED ACTION: Motion approving recommendation

11. Information Items:
 - a. Quagga Committee Minutes.
 - b. Letters from Supervisor Steve Bennett regarding emergency water supplies and the U.S. Forest Service Permit (FS299).
 - c. Investment Report.
12. Resolution of appreciation to Mary Bergen for her Eight Years of Service as a Director for Division 4 on the Casitas Board of Directors.

RECOMMENDED ACTION: Adopt Resolution

13. Resolution of appreciation to Bill Hicks for his Twenty-Seven Years of Service as a Director for Division 1 on the Casitas Board of Directors.

RECOMMENDED ACTION: Adopt Resolution

14. Adjournment.

If you require special accommodations for attendance at or participation in this meeting, please notify our office 24 hours in advance at (805) 649-2251, ext. 113. (Govt. Code Section 54954.1 and 54954.2(a)).



Minutes of the Casitas Municipal Water District
Special Board Meeting Held
November 14, 2018

A special meeting of the Board of Directors was held November 14, 2018 at the Casitas Municipal Water District located at 1055 Ventura Ave. in Oak View, California. The meeting was called to order at 1:30 p.m. President Word led the group in the flag salute.

1. Roll Call

Directors Baggerly, Kaiser, Bergen, Hicks and Word were present. Also present were Mike Flood, Interim General Manager, Rebekah Vieira, Clerk of the Board, and Attorney John Mathews. There were no staff members and no members of the public in attendance

2. Public comments (Items not on the agenda – three minute limit).

None

President Word moved the meeting to closed session at 1:31 p.m.

3. Closed Session

Conference with Legal Counsel -- Existing Litigation (Subdivision (a) of Section 54956.9, Government Code).

Name of Case: Casitas Municipal Water District v. United States. 05-168

President Word moved the meeting back to open session at 2:46 p.m. with Mr. Mathews stating that staff, Board and Counsel met with Special Counsel and there was no action taken.

4. Adjournment.

President Word adjourned the meeting at 2:47 p.m.

Mary Bergen, Secretary



Minutes of the Casitas Municipal Water District
Board Meeting Held
November 14, 2018

A meeting of the Board of Directors was held November 14, 2018 at the Casitas Municipal Water District located at 1055 Ventura Ave. in Oak View, California. The meeting was called to order at 3:00 p.m. President Word led the group in the flag salute.

1. Roll Call

Directors Baggerly, Kaiser, Bergen, Hicks and Word were present. Also present were Mike Flood, Interim General Manager, Rebekah Vieira, Clerk of the Board, and Attorney John Mathews. There were two staff members and five members of the public in attendance

2. Public comments (Items not on the agenda – three minute limit).

None

3. General Manager comments.

Mr. Flood reported that letters were sent to several elected officials and to Supervisor Bennett who then sent letter of support to the same elected officials. We hope to see some movement from the Forest Service. The BO committee is meeting and talking about issues including the critical drought protection measures and we hope then that the management committee will get together to get that document finalized. In talking about the diversion we did a frog survey yesterday and today. We are moving forward and will get that document submitted to NMFS and to Fish & Wildlife.

The next tour is on Saturday at 9:00 a.m. We are getting a 42 passenger bus this time. In the information items you will see an engineering progress report. It is a good document that will be presented once a month now.

4. Board of Director comments.

President Word reported attending the AWA tour yesterday at the Dam. He thanked staff for their excellent presentations. He also requested that another Board member attend the tour on the 17th. Director Kaiser expects to attend.

Director Baggerly congratulated the excellent staff reports stating he can't believe the amount of work that Julia is getting done. Director Baggerly suggested trying to reduce the Ojai Service area consumption to zero impact on the lake since the basin fills faster than the lake and we should use the groundwater as much as we can. Mr. Flood responded that we have projects we are looking at to reduce that to zero. Director Hicks reported he only used five units in the previous month.

5. Board of Director Verbal Reports on Meetings Attended.

President Word reported that he attended the water tours that we conducted from the district and felt they have been well received. People were appreciative of taking the tour. I also attended the AWA regular meeting and have the Waterwise event in the morning and our interim GM will be one of the presenters. I met with an incoming director and we have had the intertie state ad hoc meeting where we are going through procedures in place with the water fix commitment.

Director Bergen attended the Upper Ventura GSA meeting and they are mostly finalizing the grant and getting the staffing figured out. My term is up and it comes up earlier than our procedure for appointment new members so we will need to figure out how that works. There is a requirement that the board nominates someone. Pete is the alternate.

Director Hicks went on one of the tours and complimented Mr. Flood on putting those together. It gives the public an idea of what we are up against to get more water and how complicated our system is. Mr. Flood added that staff really helped out with that. President Word added staff has stepped up and done great and we appreciate their work in doing that. Staff is proud of what they are presenting.

6. Consent Agenda. APPROVED

- a. Minutes of the October 24, 2018 Board Meeting.

The consent agenda was offered by Director Hicks, seconded by Director Baggerly and approved by the following roll call vote:

AYES:	Directors:	Baggerly, Kaiser, Bergen, Hicks, Word
NOES:	Directors:	None
ABSENT:	Directors:	None

7. Review of District Accounts Payable Report for the Period of 10/18/18 - 11/07/18. APPROVED

On the motion of Director Hicks, seconded by Director Kaiser, the report was approved by the following roll call vote:

AYES:	Directors:	Baggerly, Kaiser, Bergen, Hicks, Word
NOES:	Directors:	None
ABSENT:	Directors:	None

8. Resolution scheduling a public hearing for December 12, 2018 for the consideration of declaring Stage 4 Water Supply Conditions at Lake Casitas. ADOPTED AS AMENDED

Director Bergen suggested holding the meeting at 6:00 p.m.

The resolution was offered by Director Baggerly, seconded by Director Kaiser and approved by the following roll call vote:

AYES:	Directors:	Baggerly, Kaiser, Bergen, Hicks, Word
NOES:	Directors:	None
ABSENT:	Directors:	None

9. Recommend approval of a Water Service Agreement with Meiners Oaks Water District. APPROVED

On the motion of Director Baggerly, seconded by Director Bergen, the above recommendation was approved by the following roll call vote:

AYES:	Directors:	Baggerly, Kaiser, Bergen, Hicks, Word
NOES:	Directors:	None
ABSENT:	Directors:	None

10. Authorize the Request for Qualifications for Electrical Contractors for Rincon Pump Plant Electrical Upgrade project. APPROVED

On the motion of Director Baggerly, seconded by Director Kaiser, the above recommendation was approved by the following roll call vote:

AYES:	Directors:	Baggerly, Kaiser, Bergen, Hicks, Word
NOES:	Directors:	None
ABSENT:	Directors:	None

11. Presentation on the Ojai Water System Condition-Based Assessment and Water Master Plan.

Julia Aranda provided a presentation on the Ojai Water System Condition Based Assessment and water master plan.

12. Recommend authorizing the General Manager to sign Professional Services Agreement with WSC, Inc. in the not to exceed amount of \$89,000 for the Casitas Water System Hydraulic Model. APPROVED

On the motion of Director Kaiser, seconded by Director Bergen, the above recommendation was approved by the following roll call vote:

AYES: Directors: Baggerly, Kaiser, Bergen, Hicks, Word
NOES: Directors: None
ABSENT: Directors: None

13. Recommend authorizing the General Manager to sign Professional Services Agreement with Pueblo Water Resources, Inc. for On-Call Hydrogeologic Consulting Services. APPROVED

On the motion of Director Baggerly, seconded by Director Kaiser, the above recommendation was approved by the following roll call vote:

AYES: Directors: Baggerly, Kaiser, Bergen, Hicks, Word
NOES: Directors: None
ABSENT: Directors: None

14. Information Items:

- a. Lake Casitas Monthly Status Report for October, 2018.
- b. Water Resources Committee Minutes.
- c. Recreation Committee Minutes
- d. Executive Committee Minutes.
- e. Recreation Area Reports for September and October 2018.
- f. Monthly Engineering Status Report.
- g. Water Consumption Report.
- h. CFD No. 2013-1 (Ojai) Monthly Cost Analysis.
- i. Investment Report.

On the motion of Director Kaiser, seconded by Director Bergen, the Information Items were approved by the following roll call vote:

AYES: Directors: Baggerly, Kaiser, Bergen, Hicks, Word
NOES: Directors: None
ABSENT: Directors: None

15. Adjournment.

President Word adjourned the meeting at 3:45 p.m.

Mary Bergen, Secretary



Minutes of the Casitas Municipal Water District
Special Board Meeting Held
November 21, 2018

A special meeting of the Board of Directors was held November 21, 2018 at the Casitas Municipal Water District located at 1055 Ventura Ave. in Oak View, California. The meeting was called to order at 9:00 a.m. President Word led the group in the flag salute.

1. Roll Call

Directors Baggerly, Kaiser, Bergen, Hicks and Word were present. Also present were Rebekah Vieira, Clerk of the Board, and Attorney Robert Kwong. There were no staff members and no three members of the public in attendance

2. Public comments (Items not on the agenda – three minute limit).

None

President Word moved the meeting to closed session at 9:01 a.m.

3. Closed Session

a. PUBLIC EMPLOYMENT (Gov. Code §54957(b)(1))

Title: General Manager

b. Conference with Labor Negotiators (Govt. Code Sec. 54957.6)

Agency Designated Representatives: Rebekah Vieira, Draza Mrvichin

Employee Organization: Supervisory & Professional, General Unit and Recreation Unit.

President Word moved the meeting back to open session at 11:33 a.m. with Mr. Kwong stating that there was no action to report.

4. Adjournment.

President Word adjourned the meeting at 11:34 p.m.


Mary Bergen, Secretary

CASITAS MUNICIPAL WATER DISTRICT
Payable Fund Check Authorization
Checks Dated 11/08/18-11/20/18
Presented to the Board of Directors For Approval November 28, 2018

Check	Payee			Description	Amount
000846	Payables Fund Account	#	9759651478	Accounts Payable Batch 111418	\$211,297.98
000847	Payables Fund Account	#	9759651478	Accounts Payable Batch 112018	\$290,087.69
					\$501,385.67
000848	Payroll Fund Account	#	9469730919	Estimated Payroll 12/06/18	\$180,000.00
				Total	\$681,385.67

Publication of check register is in compliance with Section 53065.6 of the Government Code which requires the District to disclose reimbursements to employees and/or directors.

The above numbered checks, 000846-000848 have been duly audited is hereby certified as correct.

 11/20/18

 Denise Collin, Accounting Manager/Treasurer

 Signature

 Signature

 Signature

A/P Fund

Publication of check register is in compliance with Section 53065.6 of the Government Code which requires the District to disclose reimbursements to employees and/or directors.

000846	A/P Checks:	32020-32037
	A/P Draft to P.E.R.S.	
	A/P Draft to State of CA	
	A/P Draft to I.R.S.	
	Voids:	
000847	A/P Checks:	32038-32147
	A/P Draft to P.E.R.S.	000000
	A/P Draft to State of CA	000000
	A/P Draft to I.R.S.	000000
	Voids:	32091, 32098, 32099, 32139

 11/20/18
Denise Collin, Accounting Manager/Treasurer

Signature

Signature

Signature

CERTIFICATION

Payroll disbursements for the pay period ending 11/17/18
Pay Date of 11/21/18
have been duly audited and are
hereby certified as correct.

Signed: Denise Collin 11/19/18
Denise Collin

Signed: M. A. Lord 11/19/18
Signature

Signed: _____
Signature

Signed: _____
Signature

ENDOR SET: 01 Casitas Municipal Water D
ANK: * ALL BANKS
ATE RANGE: 11/08/2018 THRU 11/20/2018

ENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
C-CHECK	VOID CHECK	V	11/20/2018			032091		
C-CHECK	VOID CHECK	V	11/20/2018			032098		
C-CHECK	VOID CHECK	V	11/20/2018			032099		
C-CHECK	VOID CHECK	V	11/20/2018			032139		

* * T O T A L S * *

	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
REGULAR CHECKS:	0	0.00	0.00	0.00
HAND CHECKS:	0	0.00	0.00	0.00
DRAFTS:	0	0.00	0.00	0.00
EFT:	0	0.00	0.00	0.00
NON CHECKS:	0	0.00	0.00	0.00
VOID CHECKS:	4	VOID DEBITS 0.00		
		VOID CREDITS 0.00	0.00	0.00

TOTAL ERRORS: 0

VENDOR SET: 01 BANK:	TOTALS:	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
		4	0.00	0.00	0.00
BANK:	TOTALS:	4	0.00	0.00	0.00

ENDOR SET: 01 Casitas Municipal Water D
 BANK: AP ACCOUNTS PAYABLE
 DATE RANGE: 11/08/2018 THRU 11/20/2018

ENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
0049	STATE OF CALIFORNIA I-T2 201811191428 State Withholding	D	11/20/2018	10,755.24		000000		10,755.24
0128	INTERNAL REVENUE SERVICE I-T1 201811191428 Federal Withholding	D	11/20/2018	28,301.92		000000		
	I-T3 201811191428 FICA Withholding	D	11/20/2018	26,589.08		000000		
	I-T4 201811191428 Medicare Withholding	D	11/20/2018	7,691.48		000000		62,582.48
0187	CALPERS I-PBB201811191428 PERS BUY BACK	D	11/20/2018	150.08		000000		
	I-PBP201811191428 PERS BUY BACK	D	11/20/2018	161.96		000000		
	I-PEB201811191428 PEPRA EMPLOYEES PORTION	D	11/20/2018	5,690.22		000000		
	I-PEM201811191428 PERS EMPLOYEE PORTION MGMT	D	11/20/2018	2,122.28		000000		
	I-PER201811191428 PERS EMPLOYEE PORTION	D	11/20/2018	6,227.76		000000		
	I-PRB201811191428 PEBRA EMPLOYER PORTION	D	11/20/2018	6,229.14		000000		
	I-PRR201811191428 PERS EMPLOYER PORTION	D	11/20/2018	9,814.14		000000		30,395.58
0029	AMERICAN TOWER CORP I-2825116 Tower Rent-Red Mtn.Rincon Peak	R	11/14/2018	2,013.15		032020		2,013.15
1666	AT & T I-000012134386 Acct#9391064882	R	11/14/2018	1,037.31		032021		1,037.31
0021	AWA OF VENTURA COUNTY I-06-11233 CCWUC Luncheon 10/24/18	R	11/14/2018	35.00		032022		35.00
1153	RUSS BAGGERLY I-Oct 18 Reimburse Mileage 10/18	R	11/14/2018	129.17		032023		
	I-Sept 18 Reimburse Mileage 9/18	R	11/14/2018	53.41		032023		182.58
3857	David Baker I-700289 Camping Reduction - LCRA	R	11/14/2018	60.00		032024		60.00
3858	Mark Crawford I-759251 Camping Cancellation - LCRA	R	11/14/2018	109.00		032025		109.00
3859	Jerry Desoto I-752180 Camping Cancellation - LCRA	R	11/14/2018	95.00		032026		95.00
3860	Steve Goytia I-727644 Camping Cancellation - LCRA	R	11/14/2018	175.00		032027		175.00
3852	Scott Harris I-711184a Camping Cancellation - LCRA	R	11/14/2018	95.00		032028		95.00

ENDOR SET: 01 Casitas Municipal Water D
 BANK: AP ACCOUNTS PAYABLE
 DATE RANGE: 11/08/2018 THRU 11/20/2018

ENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
0596 I-4974545	HOME DEPOT Trash Cans - TP	R	11/14/2018	135.96		032029		135.96
3861 I-763061	Jennifer Jouglet Camping Cancellation - LCRA	R	11/14/2018	147.00		032030		147.00
3862 I-698120 I-698166	Nick Karas Camping Cancellation - LCRA Camping Cancellation - LCRA	R R	11/14/2018 11/14/2018	115.00 55.00		032031 032031		170.00
3863 I-754798	Bettina Levesque Camping Cancellation - LCRA	R	11/14/2018	650.00		032032		650.00
0625 I-52137757	OfficeTeam Conservation Temp	R	11/14/2018	314.33		032033		314.33
0169 I-20748	OJAI VALLEY SANITARY DISTRICT Cust # 52921	R	11/14/2018	56.14		032034		56.14
0215 I-110818	SOUTHERN CALIFORNIA EDISON Acct#2397969643	R	11/14/2018	16,603.42		032035		16,603.42
0048 I-110118	STATE OF CALIFORNIA State Water Plan Payment	R	11/14/2018	189,022.00		032036		189,022.00
2643 I-8140438 I-8144853	Take Care by WageWorks Reimburse Med/Dep Care Reimburse Med/Dep Care	R R	11/14/2018 11/14/2018	264.21 132.88		032037 032037		397.09
0695 I-3161	AAA SERVICES CO. Pressure Washer Wands - LCRA	R	11/20/2018	555.26		032038		555.26
0010 I-9081940096	AIRGAS USA LLC Safety Glasses & Gloves - PL	R	11/20/2018	92.20		032039		92.20
0012 I-5665-645266	ALL-PHASE ELECTRIC SUPPLY CO. Radio Junction Boxes - EM	R	11/20/2018	424.34		032040		424.34
3044 C-1XD3-D6FY-R1JPb C-1YG1-CFXX-MX79b D-1XD3-D6FY-R1JPa D-1YG1-CFXX-MX79a I-1TG1-CFXX-MX79 I-1V96-9HR3-PKYG I-1XD3-D6FY-R1JP	Amazon Capital Services Accrue Use Tax Accrue Use Tax Accrue Use Tax Accrue Use Tax Battery Enclosure - LCRA Batteries & Camera - FISH Case & Keyboard Cover - FISH	R R R R R R R	11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018	9.57CR 9.06CR 9.57 9.06 125.00 396.65 131.94		032041 032041 032041 032041 032041 032041 032041		653.59

ENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
0836	I-29001748							
	AMERICAN RED CROSS Emergency Responder Kit - LCRA	R	11/20/2018	1,064.23		032042		1,064.23
0014	I-S11290759							
	AQUA-FLO SUPPLY Hammer & Fittings - MAINT	R	11/20/2018	28.26		032043		
	I-S11291391							
	Sand Bags & Cable - PL	R	11/20/2018	46.52		032043		
	I-S11292559							
	Regulator - LCRA	R	11/20/2018	8.12		032043		
	I-S11292567							
	Flags, Coupling, Shrubber -WP	R	11/20/2018	95.06		032043		177.96
1666	I-000012164997							
	AT & T Acct#9391051740	R	11/20/2018	1,044.66		032044		1,044.66
1666	I-000012173695							
	AT & T Local, Regional, Long Distance	R	11/20/2018	1,223.04		032045		1,223.04
0018	I-829434088X11142018							
	AT & T MOBILITY PT Wildlife Biol Monthly Cell	R	11/20/2018	6.54		032046		6.54
0030	I-1900921709							
	B&R TOOL AND SUPPLY CO Cutter, Flange, Sockets - PL	R	11/20/2018	225.20		032047		225.20
2283	I-Aug 18							
	Mary Bergen Reimburse Mileage 8/18	R	11/20/2018	16.13		032048		
	I-July 18							
	Reimburse Mileage 7/18	R	11/20/2018	4.03		032048		
	I-Sept 18							
	Reimburse Mileage 9/18	R	11/20/2018	25.18		032048		45.34
3865	I-719229							
	Kraig Blythe Camping Reduction - LCRA	R	11/20/2018	114.00		032049		114.00
3207	I-011507							
	BMI PacWest Inc. AC Repairs - WP	R	11/20/2018	1,060.34		032050		
	I-011574							
	AC Service DO 11/18	R	11/20/2018	559.00		032050		1,619.34
3059	I-BPI890611							
	Brenntag Pacific Inc. Chlorine for Ojai Sys. - TP	R	11/20/2018	1,830.92		032051		1,830.92
3801	I-703841							
	Carol Brown Camping Cancellation - LCRA	R	11/20/2018	223.00		032052		223.00
3453	I-703688							
	Laura Buchan Camping Reduction - LCRA	R	11/20/2018	76.00		032053		76.00
3866	I-729988							
	Mario Cardona Camping Cancellation - LCRA	R	11/20/2018	175.00		032054		175.00

ENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
3871	I-754764							
	Cathy Carolan Camping Cancellation - LCRA	R	11/20/2018	235.00		032055		235.00
9907								
	CARUS PHOSPHATES, INC. Blended Phosphate - TP	R	11/20/2018	1,424.30		032056		
	I-SLS10071120 Blended Phosphate - TP	R	11/20/2018	21,104.80		032056		22,529.10
0055								
	I-Oct 18 CASITAS BOAT RENTALS Gas for Boats - LCRA	R	11/20/2018	983.52		032057		983.52
3867								
	I-742369 Michael Catalano Camping Cancellation - LCRA	R	11/20/2018	175.00		032058		175.00
3021								
	I-181103147101 Central Communications Call Center 11/18	R	11/20/2018	237.11		032059		237.11
3868								
	I-758104 Francesca Claudy Camping Cancellation - LCRA	R	11/20/2018	230.00		032060		230.00
0061								
	I-SB02091205 COMPUWAVE Toners - ADM	R	11/20/2018	285.29		032061		285.29
0062								
	I-9009-781224 CONSOLIDATED ELECTRICAL Flex Modules - EM	R	11/20/2018	1,407.01		032062		
	I-9009-781556 Drill Bit & Connectors - TP	R	11/20/2018	256.76		032062		1,663.77
3869								
	I-727667 Charles Contreras Camping Cancellation - LCRA	R	11/20/2018	175.00		032063		175.00
3870								
	I-704241 Bill Cook Camping Cancellation - LCRA	R	11/20/2018	147.00		032064		147.00
0331								
	I-83214 COORDINATED WIRE ROPE Cable for Brush System - PL	R	11/20/2018	1,196.03		032065		1,196.03
1001								
	I-150410 CUSTOM PRINTING Business Cards - ENG	R	11/20/2018	171.92		032066		171.92
0095								
	I-212531 FAMCON PIPE & SUPPLY Fittings & Flanges - PL	R	11/20/2018	420.42		032067		
	I-212898 Adapters & Lug Kit - EM	R	11/20/2018	94.38		032067		
	I-213082 Clamps & Fittings - PL	R	11/20/2018	3,834.72		032067		
	I-213226 Fittings - WHS	R	11/20/2018	2,161.09		032067		
	I-213227 Brass Fittings - WHS	R	11/20/2018	1,018.61		032067		
	I-213628 Brass Fittings - WHS	R	11/20/2018	211.82		032067		7,741.04

ENDOR SET: 01 Casitas Municipal Water D
 BANK: AP ACCOUNTS PAYABLE
 DATE RANGE: 11/08/2018 THRU 11/20/2018

ENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
00575 I-410817	FENCE FACTORY - SATICOY Gate Posts - WP	R	11/20/2018	91.80		032068		91.80
00013 I-0652712	FERGUSON ENTERPRISES INC Vests & Hard Hats - PL	R	11/20/2018	133.83		032069		133.83
00099 I-813176A I-813177A I-813182A I-813183A I-813184A I-813486A I-814133A I-814134A	FGL ENVIRONMENTAL TCP Monitoring 10/2/18 Manganese Monitoring 10/2/18 DBP Monitoring 10/2/18 DBP Monitoring 10/1/18 TCP Monitoring 10/2/18 Nitrate Monitoring 10/9/18 Nitrate Monitoring 10/23/18 DBP Monitoring 10/21/18	R R R R R R R R	11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018	345.00 81.00 344.00 448.00 138.00 43.00 43.00 448.00		032070 032070 032070 032070 032070 032070 032070 032070		1,890.00
00101 I-6500101 I-7069972	FISHER SCIENTIFIC Gloves & Vials - LAB Agar - LAB	R R	11/20/2018 11/20/2018	311.97 35.57		032071 032071		347.54
03872 I-766876	Bill Flowers Day Use Refund - LCRA	R	11/20/2018	10.00		032072		10.00
00103 I-92536	FRANK'S ROOTER & PUMPING Remove Sludge from Vaults-LCRA	R	11/20/2018	380.00		032073		380.00
00104 I-112229 I-112537	FRED'S TIRE MAN Flat Repair - Unit 40 Trailer Tire - LCRA	R R	11/20/2018 11/20/2018	20.00 42.83		032074 032074		62.83
00106 I-F0240995 I-F0241512	FRONTIER PAINT Paint - WP Urethane - WP	R R	11/20/2018 11/20/2018	159.86 40.88		032075 032075		200.74
01280 I-7271854a I-7271854b I-7277065	FRY'S ELECTRONICS, INC. Switch & Hard Drive - FISH/LAB UPS & Mouse - TP Flash Drives - EM	R R R	11/20/2018 11/20/2018 11/20/2018	80.79 151.37 36.61		032076 032076 032076		268.77
03873 I-708271	Aurora Gonzalez Camping Cancellation - LCRA	R	11/20/2018	235.00		032077		235.00
03874 I-749669	Ernie Gonzalez Camping Cancellation - LCRA	R	11/20/2018	71.00		032078		71.00

ENDOR SET: 01 Casitas Municipal Water D
 BANK: AP ACCOUNTS PAYABLE
 DATE RANGE: 11/08/2018 THRU 11/20/2018

ENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
03875	Alex Govea Camping Cancellation - LCRA	R	11/20/2018	175.00		032079		175.00
0432	Government Finance Officers As GOFA Cert. of Achievement App.	R	11/20/2018	435.00		032080		435.00
0115	GRAINGER, INC Respirator & Ear Plugs - MAINT	R	11/20/2018	106.63		032081		106.63
2488	Graybar Electric Vinyl Tape - EM	R	11/20/2018	89.62		032082		89.62
2217	Greg Rents Cement Slurry - PL	R	11/20/2018	70.78		032083		70.78
0121	HACH COMPANY Reagents - LAB	R	11/20/2018	496.67		032084		639.80
	I-11209631 I-11209632 Reagent Set - LAB	R	11/20/2018	143.13		032084		
3700	HDR Engineering, Inc. Camp Chaffee Pipeline Phase 1	R	11/20/2018	5,044.25		032085		5,044.25
0596	HOME DEPOT Mini Fridge San Antonio - TP	R	11/20/2018	171.32		032086		230.58
	I-2011545 I-2011546 Concrete Patch - MAINT	R	11/20/2018	59.26		032086		
3876	Domenic Iadevaia Camping Reduction - LCRA	R	11/20/2018	120.00		032087		120.00
0125	IDEXX DISTRIBUTION CORP Vessels - LAB	R	11/20/2018	166.38		032088		166.38
0127	INDUSTRIAL BOLT & SUPPLY Hex Nuts - PL	R	11/20/2018	312.48		032089		312.48
9910	J.W. ENTERPRISES CT Pumping - AVE 1 PP	R	11/20/2018	76.50		032090		76.50
	I-304057 CT Pumping - VILLANOVA	R	11/20/2018	76.50		032090		
	I-304058 CT Pumping - FAIRWAY LN	R	11/20/2018	76.50		032090		
	I-304059 CT Pumping - 4M PP	R	11/20/2018	76.50		032090		
	I-304060 CT Pumping - GRAND AVE	R	11/20/2018	76.50		032090		
	I-304061 CT Pumping - 4M RES.	R	11/20/2018	76.50		032090		
	I-304062 CT Pumping - SAN ANTONIO	R	11/20/2018	153.00		032090		
	I-304063 CT Pumping - UPPER OJAI	R	11/20/2018	76.50		032090		
	I-304064 CT Pumping - 3M PUMP	R	11/20/2018	76.50		032090		
	I-304065 CT Pumping - SIGNAL RES.	R	11/20/2018	76.50		032090		
	I-304066 CT Pumping - FAIRVIEW RES.	R	11/20/2018	76.50		032090		
	I-304067 CT Pumping - CASITAS DAM	R	11/20/2018	76.50		032090		

ENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
I-304068	CT Pumping - RINCON TANK	R	11/20/2018	76.50		032090		
I-304069	CT Pumping - BATES RD.	R	11/20/2018	76.50		032090		1,147.50
0131	JCI JONES CHEMICALS, INC							
I-774507	Chlorine - TP, CM 774517	R	11/20/2018	1,650.00		032092		1,650.00
3877	Christy Jensen							
I-719573	Camping Cancellation - LCRA	R	11/20/2018	235.00		032093		235.00
3878	Michelle Kinnun							
I-703669	Camping Cancellation - LCRA	R	11/20/2018	195.00		032094		195.00
0328	LIGHTNING RIDGE							
I-10091806	Polo Shirts for Rangers - LCRA	R	11/20/2018	1,051.25		032095		1,051.25
3879	Robert Lopez							
I-727310	Camping Cancellation - LCRA	R	11/20/2018	175.00		032096		175.00
0151	MEINERS OAKS ACE HARDWARE							
I-848664	Nylon Rope - TP	R	11/20/2018	214.50		032097		
I-850277	Mouse Traps, Tee, Hose - LCRA	R	11/20/2018	105.88		032097		
I-850282	Paint - LCRA	R	11/20/2018	150.49		032097		
I-850298	Broom & Scoop - UT	R	11/20/2018	78.05		032097		
I-850796	Pine - LCRA	R	11/20/2018	86.51		032097		
I-850904	Batteries - PL	R	11/20/2018	75.56		032097		
I-850968	Bags, Staples, Socket Set-LCRA	R	11/20/2018	319.39		032097		
I-851376	Vanity & Top - LCRA	R	11/20/2018	156.94		032097		
I-851608	Trowls - MAINT	R	11/20/2018	28.27		032097		
I-851675	Bolts & Screws - EM	R	11/20/2018	6.44		032097		
I-851687	Valve Box & Ball - LCRA	R	11/20/2018	49.74		032097		
I-851758	Drywall, Valves, Paint - LCRA	R	11/20/2018	71.73		032097		
I-851851	Elbows - LCRA	R	11/20/2018	9.74		032097		
I-851896	Pine - LCRA	R	11/20/2018	40.08		032097		
I-851959	Gloves, Bolts, Screws - PL	R	11/20/2018	54.31		032097		
I-851993	Hose & Bulbs - TP	R	11/20/2018	21.45		032097		
I-852090	Pail & Scraper - LCRA	R	11/20/2018	30.12		032097		
I-852165	Adapters, Spraypaint - FISH	R	11/20/2018	17.22		032097		
I-852172	Spraypaint & Sand belt - LCRA	R	11/20/2018	134.89		032097		
I-852187	Sheet Metal - FISH	R	11/20/2018	16.17		032097		
I-852200	Thread, Bolts, & Screws - WP	R	11/20/2018	18.98		032097		
I-852261	Paint, Rebar, Mats - LCRA	R	11/20/2018	116.98		032097		
I-852308	Silicone, Nozzle, Hose - PL	R	11/20/2018	69.19		032097		
I-852393	Cable Ties - LCRA	R	11/20/2018	36.08		032097		
I-852781	Gloves & Rake - WP	R	11/20/2018	82.91		032097		
I-852810	Wire Brush - FISH	R	11/20/2018	15.60		032097		
I-852850	Nails, Bolts, Screws - LCRA	R	11/20/2018	189.92		032097		
I-853078	Hose & Fast Set - PL	R	11/20/2018	43.38		032097		
I-853099	Blade & Texture - LCRA	R	11/20/2018	28.78		032097		
I-853151	Plywood & Gaskets - LCRA	R	11/20/2018	41.54		032097		2,310.84

ENDOR SET: 01 Casitas Municipal Water D
 BANK: AP ACCOUNTS PAYABLE
 DATE RANGE: 11/08/2018 THRU 11/20/2018

ENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
3444	Mission Linen Supply							
I-508579253	Uniform Pants - TP	R	11/20/2018	20.00		032100		
I-508635316	Uniform Pants - TP	R	11/20/2018	28.43		032100		48.43
2185	Oasis Technology Inc.							
I-110218-1	Scada Support 10/22-11/4	R	11/20/2018	7,000.00		032101		7,000.00
0625	OfficeTeam							
I-52201406	Conservation Temp	R	11/20/2018	560.07		032102		
I-52201430	Admin Temp	R	11/20/2018	1,020.00		032102		1,580.07
1570	Ojai Auto Supply							
I-445494	Grease - PL	R	11/20/2018	124.62		032103		124.62
0165	OJAI LUMBER CO, INC							
I-1810-898974	Lumber & Shingles - LCRA	R	11/20/2018	140.14		032104		
I-1811-899132	Plywood & Shingles - LCRA	R	11/20/2018	288.11		032104		
I-1811-900050	Lumber - LCRA	R	11/20/2018	49.60		032104		
I-1811-900052	Lumber - LCRA	R	11/20/2018	49.60		032104		
I-1811-901048	Brick & Gravel - UT	R	11/20/2018	7.67		032104		535.12
0602	OJAI TRUE VALUE							
I-52079	Gloves & Wrench - LAB	R	11/20/2018	21.42		032105		21.42
0383	ON DUTY UNIFORMS & EQUIPMENT							
I-1598	Ballistic Vests - LCRA	R	11/20/2018	835.06		032106		835.06
2495	Pacific Marine Repair Inc.							
I-737939	Honda Boat Motor Service - TP	R	11/20/2018	611.20		032107		611.20
3449	Graham Peace							
I-703937	Camping Cancellation - LCRA	R	11/20/2018	223.00		032108		
I-761444	Camping Cancellation - LCRA	R	11/20/2018	109.00		032108		332.00
3880	Francisco Perez							
I-738259	Camping Cancellation - LCRA	R	11/20/2018	71.00		032109		71.00
2849	Phenova							
I-144263	Performance Eval Samples - LAB	R	11/20/2018	1,008.51		032110		1,008.51
0823	POLYDYNE, INC.							
I-1295122	Cationic Polymer - TP	R	11/20/2018	15,229.40		032111		15,229.40

ENDOR SET: 01 Casitas Municipal Water D
 BANK: AP ACCOUNTS PAYABLE
 DATE RANGE: 11/08/2018 THRU 11/20/2018

ENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
3287 I-283373	Porta-Stor Storage Container 10/8-11/7	R	11/20/2018	110.00		032112		110.00
1439 I-2426	PRECISION POWER EQUIPMENT Bar & Chain - MAINT	R	11/20/2018	70.23		032113		70.23
0042 I-8991 I-8992	PSR ENVIRONMENTAL SERVICE, INC Gas Tank Inspection - DO Gas Tank Inspection - LCRA	R R	11/20/2018 11/20/2018	220.00 220.00		032114 032114		440.00
0732 I-07285801 I-07285802	QUINN RENTAL SERVICES Dozer Rental - PL Dozer Rental - PL	R R	11/20/2018 11/20/2018	8,153.49 125.00		032115 032115		8,278.49
3276 I-20181110056790	Red Wing Shoes Safety Boots - OM	R	11/20/2018	170.00		032116		170.00
0313 I-25135	ROCK LONG'S AUTOMOTIVE Service & Repair - Unit 29	R	11/20/2018	3,080.03		032117		3,080.03
3881 I-761618	Alex Rodriguez Camping Cancellation - LCRA	R	11/20/2018	115.00		032118		115.00
1109 I-12018 I-12019 I-15356 I-15358 I-15360 I-15693 I-15695 I-15696 I-15697 I-15699 I-15711	SALVADOR LOERA TRANSPORTATION Rock - PL Rock - PL Base - PL Base - PL Base - PL Base - PL Base - PL Base - PL Base - PL Base - PL Base - PL Base - PL	R R R R R R R R R R R R	11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018 11/20/2018	725.00 725.00 508.55 507.42 503.62 504.99 1,013.13 1,011.60 504.51 506.12 506.88		032119 032119 032119 032119 032119 032119 032119 032119 032119 032119 032119		7,016.82
2756 I-1291837-IN I-1299525-IN	SC Fuels Gas & Diesel - LCRA Gas & Diesel - DO	R R	11/20/2018 11/20/2018	3,273.05 4,664.75		032120 032120		7,937.80
0725 I-060400	SMART & FINAL Coffee, Cups, Vinegar -MGMT/TP	R	11/20/2018	79.30		032121		79.30

PAYOR SET: 01 Casitas Municipal Water D
BANK: AP ACCOUNTS PAYABLE
DATE RANGE: 11/08/2018 THRU 11/20/2018

ENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
02770 I-1486	Stoner's One Off Customs Filter Service - Unit 105	R	11/20/2018	395.30		032122		395.30
0215 I-112018a I-112018b	SOUTHERN CALIFORNIA EDISON Acct#2157697889 Acct#2266156405	R R	11/20/2018 11/20/2018	692.49 127.91		032123 032123		820.40
02202 I-095567	Stanley Pest Control Monthly Pest Control - WP	R	11/20/2018	170.00		032124		170.00
02731 I-43223	Superior AED AED Electrode - SAF	R	11/20/2018	82.53		032125		82.53
02643 I-8186774	Take Care by WageWorks Reimburse Med/Dep Care	R	11/20/2018	69.65		032126		69.65
01959 I-110118	The Wharf Safety Boots - OM	R	11/20/2018	678.61		032127		678.61
03180 I-111318	Cameron Tindle Event Area Deposit Return	R	11/20/2018	500.00		032128		500.00
01173 C-0178472-INb D-0178472-INa I-0178472-IN	TOICO INDUSTRIES, INC. Accrue Use Tax Accrue Use Tax Pumper Accessories - LCRA	R R R	11/20/2018 11/20/2018 11/20/2018	9.83CR 9.83 156.61		032129 032129 032129		156.61
0243 I-111518	VALLEY EQUIPMENT Propane - Unit 287	R	11/20/2018	38.61		032130		38.61
01048 I-026003	VAUGHAN'S INDUSTRIAL REPAIR CO Vertical Pump Repair - EM	R	11/20/2018	14,312.63		032131		14,312.63
0258 I-214942	VENTURA STEEL, INC Steel Bar - PL	R	11/20/2018	146.83		032132		146.83
03864 I-042971	County of Ventura Resource Man Code Compliance Staff Time-ENG	R	11/20/2018	72.55		032133		72.55
01283 I-9817716209 I-9817716714	Verizon Wireless Monthly Cell Charges - DO Monthly Cell Charges - LCRA	R R	11/20/2018 11/20/2018	4,135.14 949.31		032134 032134		5,084.45

VENDOR SET: 01 Casitas Municipal Water D
BANK: AP ACCOUNTS PAYABLE
DATE RANGE: 11/08/2018 THRU 11/20/2018

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
02583	I-INV1041298 WageWorks FSA Monthly Admin Fee	R	11/20/2018	175.00		032135		175.00
02854	I-9208 Water Works Engineers, LLC WestEast Ojai Ave Pipeline-ENG	R	11/20/2018	24,932.50		032136		24,932.50
00663	I-77848076 WAXIE SANITARY SUPPLY Clear Liners - DO	R	11/20/2018	19.29		032137		19.29
00270	I-110918a Wells Fargo Bank Recruiting Handouts - WP	R	11/20/2018	165.93		032138		
	I-110918b Transceiver, Receiver, Mic- CONS	R	11/20/2018	1,078.78		032138		
	I-110918c Cleaning Brush - MAINT	R	11/20/2018	24.15		032138		
	I-110918d Phones - OM/MGMT	R	11/20/2018	158.00		032138		
	I-110918e Fire Hose & Fittings - TP	R	11/20/2018	1,520.76		032138		
	I-110918f Bus for Tour 10/23 - CONS	R	11/20/2018	632.50		032138		
	I-110918g Bus for Tour 10/25 - CONS	R	11/20/2018	632.50		032138		
	I-110918h Weather Sne	R	11/20/2018	95.67		032138		
	I-110918i TNI Workshop - LAB	R	11/20/2018	140.00		032138		
	I-110918j Steelhead Summit - ENG	R	11/20/2018	200.00		032138		
	I-110918k Toners - BOARD	R	11/20/2018	450.21		032138		
	I-110918l Breakroom Supplies - MGMT	R	11/20/2018	123.99		032138		
	I-110918m Energy Mate RV Pedestals -LCRA	R	11/20/2018	4,231.69		032138		9,454.18
00330	I-10009630739 WHITE CAP CONSTRUCTION SUPPLY Paint & Cut Wheels - PL	R	11/20/2018	513.69		032140		513.69
03882	I-703967 Emily Wilson Camping Cancellation - LCRA	R	11/20/2018	185.00		032141		185.00
03883	I-755057 Angelika Winkler Camping Cancellation - LCRA	R	11/20/2018	235.00		032142		235.00
03884	I-760280 Esteban Zapata Camping Cancellation - LCRA	R	11/20/2018	55.00		032143		55.00
00102	I-G03201811191428 FRANCHISE TAX BOARD Payroll Deduction	R	11/20/2018	719.43		032144		719.43
00124	I-DCI201811191428 ICMA RETIREMENT TRUST - 457 DEFERRED COMP FLAT	R	11/20/2018	550.00		032145		
	I-DI%201811191428 DEFERRED COMP PERCENT	R	11/20/2018	282.89		032145		832.89

ENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
0985	NATIONWIDE RETIREMENT SOLUTION							
I-CUN201811191428	457 CATCH UP	R	11/20/2018	230.77		032146		
I-DCN201811191428	DEFERRED COMP FLAT	R	11/20/2018	5,265.39		032146		
I-DN%201811191428	DEFERRED COMP PERCENT	R	11/20/2018	2,496.06		032146		7,992.22
0180	S.E.I.U. - LOCAL 721							
I-COP201811191428	SEIU 721 COPE	R	11/20/2018	42.00		032147		
I-UND201811191428	UNION DUES	R	11/20/2018	808.50		032147		850.50

* * T O T A L S * *	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
REGULAR CHECKS:	124	397,652.37	0.00	397,652.37
HAND CHECKS:	0	0.00	0.00	0.00
DRAFTS:	3	103,733.30	0.00	103,733.30
EFT:	0	0.00	0.00	0.00
NON CHECKS:	0	0.00	0.00	0.00
VOID CHECKS:	0	VOID DEBITS	0.00	
		VOID CREDITS	0.00	
			0.00	

TOTAL ERRORS: 0

VENDOR SET: 01	BANK: AP	TOTALS:	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
			127	501,385.67	0.00	501,385.67
BANK: AP	TOTALS:		127	501,385.67	0.00	501,385.67
REPORT TOTALS:			127	501,385.67	0.00	501,385.67

**CASITAS MUNICIPAL WATER DISTRICT
INTEROFFICE MEMORANDUM**

TO: MICHAEL FLOOD, INTERIM GENERAL MANAGER

FROM: JULIA ARANDA, ENGINEERING MANAGER

SUBJECT: PROFESSIONAL ENGINEERING SERVICES FOR THE ROBLES
DIVERSION FISH SCREEN ALTERNATIVES FEASIBILITY STUDY

DATE: 11/28/2018

RECOMMENDATION:

Authorize the Interim General Manager to enter and agreement with MKN Associates for the Robles Diversion Fish Screen Alternative Feasibility Study in an amount not to exceed \$119,417.00.

BACKGROUND AND DISCUSSION:

Casitas operates the Robles Diversion Dam on the Ventura River, including the Fish Passage and Screen. The Fish Passage and Screen were installed in 2003. The wedge-wire fish screens are cleaned using a traveling brush system.

Flows in the Ventura River can reach over 10,000 cubic feet per second (cfs). The fish passage facilities were designed to screen up to 671 cfs of flow diverted from the river when flows. Under normal conditions, the fish screens become clogged and the cleaning process is slow and inefficient. On a regular basis, the screens must be cleaned manually. Silt from the recent Thomas Fire has exacerbated this issue as the high volume of silt and debris clogs the screens even faster.

Casitas is interested in evaluating alternatives to replace the fish screens so the full diversion can be achieved across the greatest range of flows. A Request for Proposal (RFP) was distributed to two of the firms on the on-call engineering services list who have fish passage expertise on their team, HDR, Inc. and MKN and Associates with Alden as a subconsultant. Both firms submitted proposals and staff met to discuss the merits of each. Based on staff's evaluation, the proposal from MKN and Associates is recommended for authorization.

The scope of work includes:

- Project Management, including meetings and project coordination
- Presentations to Water Resources Committee and Board of Directors
- Review of background information and record drawings
- Preliminary screening of alternatives and rating/ranking

- Development of up to four alternatives to conceptual design level with associated hydraulic analysis, constraints, constructability, impacts to diversion operations, permitting issues, estimated costs, and anticipated timeline for implementation

Significant milestones include:

Kickoff meeting/Site Visit	December 20, 2018
Technical Memo on Screening Alternatives	February 2019
Final Feasibility Study	March 2019

BUDGET IMPACT:

This item was not included in the fiscal year 2018-19 budget and a budget authorization is requested.

Attachment: MKN and Associates Proposal for Robles Diversion Fish Screen Alternatives Feasibility Study

Ms. Julia Aranda, PE
 Engineering Manager
 Casitas Municipal Water District
 1055 Ventura Ave
 Oak View, CA 93022

Subject: **Proposal for Robles Diversion Fish Screen Alternatives Feasibility Study
 for Casitas Municipal Water District**

Dear Julia,

MKN & Associates, Inc. (MKN) is pleased to submit this proposal to provide engineering services associated with the Robles Diversion Fish Screen Alternatives Feasibility Study.

Introduction

It is our understanding the fish passage and screen for the Robles Diversion were installed in 2003. The facilities were designed to screen up to 671 cfs of flow diverted from the river. The screens become clogged and the traveling brush system does not efficiently clean them under normal conditions. Silt from the Thomas Fire (December 2017) which impacted over 280,000 acres in Ventura and Santa Barbara Counties has resulted in higher volumes of silt and debris, clogging the screens even faster.

Casitas Municipal Water District (or "District") has issued a Request for Proposal to develop alternatives for replacing the fish screens to improve screening performance and achieve full diversion across a greater range of flow conditions. MKN and our subconsultants (Alden and Rincon Consultants) are excited to propose on this work.

Our project team offers the following advantages:

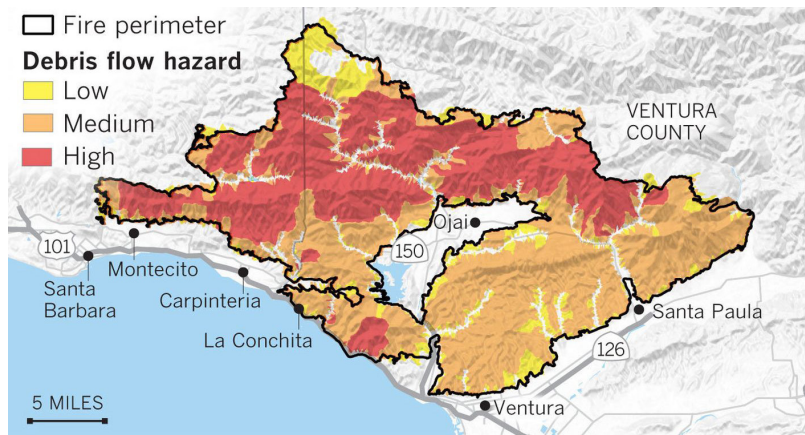
- **Alden's expertise in fish screens and flow structures throughout the western United States** - Alden is a trusted advisor to engineering firms and public agencies along the west coast.
- **MKN's responsiveness and local presence** - We have a Ventura field office and full-service production teams in Bakersfield and Arroyo Grande with active projects for the District, City of Santa Paula, Calleguas Municipal Water District, and other agencies in Ventura County.
- **Local permitting expertise and "fatal flaw" analysis** - As an optional task, Rincon Consultants can apply their expertise to identify regulatory hurdles early in the evaluation process.
- **Understanding of the Project Goals** - Our project team is committed to meet or exceed the District's goals and schedule.

We have prepared the following to demonstrate our understanding of the project, our proposed approach, and to share additional information about MKN and our project team.

Project Approach

The staff assigned to this project have considerable practical experience performing feasibility studies and completing designs for fish screening and screen cleaning systems, and work in watersheds with similar sediment and debris loading. The alternatives development and evaluation will draw from Alden's recent experience on projects such as:

- Freeman Diversion roughened fish passage ramp design for United Water Conservation District: Hydraulic design for a new fish passage facility in a river with heavy sediment and arundo load in a nearby river; sediment



and debris sluicing facilities are being incorporated into the design.

- White River Diversion Screen System Re-Commissioning: Hydraulic analysis, field start-up and development of an Operation, Maintenance and Repair Plan for a V-screen system that was re-purposed from a powerplant supply canal to a municipal water diversion in a river with heavy sediment load.
- Green River Intake for Tacoma Water Utilities: Design of modifications to address sediment collection basin infilling and plugging fish screens in a mountainous river with heavy sediment load. Modifications include flow vane array to improve sedimentation basin performance, sparger system to keep sediment suspended in vicinity of screens, and eductor system to remove sediment from basin downstream from screens. These have been implemented and are working well.
- Cochrane Reservoir Sediment Control Measures for Northwestern Energy: Feasibility study of sediment and debris management designs/techniques for a power intake that becomes flow-limited due to blockage by sediment and woody debris in a watershed with high sediment load.
- Mud Mountain Diversion Dam Care and Diversion Plan: Analysis and design to maintain water diversion and fish passage while portions of the river are isolated during construction of a new diversion dam and fish passage facilities on a river with high sediment load.
- Feasibility studies, field startup and troubleshooting of numerous types of fish screening systems using a variety of cleaner types including traveling screens, brush bar systems, vacuum and backflush systems.

The execution of the proposed work will follow the specified scope of work in terms of tasks and deliverables. The following sections provide additional detail about our plan to execute the work, which is guided by our experience completing similar feasibility studies.

Review Background Information

The Project Team will review the provided background materials prior to the Kick-off Meeting and Site Visit. Based on this review, the team will prepare a list of questions, discussion topics, items/dimensions to field verify and to identify additional data needs. The advanced planning will help us to efficiently use our time at the site, ensure that the needed data are obtained, and effectively communicate with District staff to understand the realities of the project operations and constraints.

In 2007, MWH generated a number of concepts to improve debris management at the Robles Diversion. At this time, we do not know which of the concepts were implemented or the efficacy of the implemented alternatives. However, the 2007 MWH report could be a valuable starting point for the analysis, and the field-observed response to changes made will enhance our understanding of the problem. We will request that the District provide a summary of the implemented concepts and the associated performance as part of the background data.

Kick-off Meeting and Site Visit

Prior to the Kick-Off Meeting and Site Visit the Project Team will prepare a preliminary list of potential methods to address the problems of debris accumulation and inefficient cleaning. Approaches to solve the problem may include, but are not limited to: modification of existing equipment; management of debris upstream from the facility; changes in operational and cleaning procedures; and total replacement of part or all of the screens and cleaner systems. We expect that there may be several alternatives to consider within each of these approaches. The team will draw upon our directly applicable, on-going and recent experience in similar watersheds with extreme sediment and debris loading to generate a wide range of preliminary alternatives.

During the Kick-off Meeting and Site Visit we will facilitate a brainstorming workshop with District staff to expand the preliminary list of alternatives and obtain initial feedback on the benefits and challenges of each. We will also verify our understanding of the problems with the system, and make sure that all of the deficiencies are identified. We envision that the general progression of the Kick-off Meeting and Site Visit will be: 1) Kick-off Meeting to establish overall project goals and protocols; 2) Site visit to obtain first-hand knowledge of the facility and to field verify its existing condition; 3) Brainstorming workshop to obtain District input on potential alternatives and evaluation criteria; 4) Return to site (if needed) to validate or verify conditions that may affect the feasibility of alternatives generated during the brainstorming.

Alden has developed a spreadsheet-based alternatives screening tool that can be used to generate weighted rankings of alternatives, and which we have successfully applied on several other projects. The tool is very effective for identifying the most promising alternatives and focusing discussions of the relative merits of each. At the heart of the screening tool are a worksheet for developing and weighting evaluation criteria, and a worksheet for scoring the relative performance of the alternatives. The team will prepare a strawman alternatives screening matrix in advance of the brainstorming workshop with a preliminary set of alternatives that we will generate in-house based on our review of the available data. During the workshop we will expand or refine the preliminary list of alternatives and evaluation criteria in the strawman with input from District staff. We will also assign the criteria weightings in real-time, with District input, using the simple comparative weighting tool that is included in the spreadsheet tool. This work will form the foundation of the screening exercise to identify alternatives that have the potential to achieve the desired outcome.

Screen Alternatives

After the workshop and brainstorming session, Alden will refine the preliminary screening of available alternatives for both debris and sediment issues. This screening phase will evaluate the universe of potential options and eliminate those that are either technically infeasible, determined to be ineffective, or have other objectionable features such as permitting challenges or excessive cost. The alternatives matrix will be used to help identify the top contenders. During the screening phase, the evaluation and scoring of the alternatives will be based on experience, engineering judgement and qualitative cost ranking. Calculations and quantitative cost estimates are not envisioned in this initial alternatives screening phase. Using a combination of the results from the screening matrix, discussion with the District, and experience on similar projects, Alden will evaluate the advantages, disadvantages, and fatal flaws (if any) for each alternative and will select up to four alternatives to advance to the feasibility study phase of the work.

The results of the screening study will be shared with the District during a progress meeting, and after initial concurrence with the findings, the screening analysis will be documented in a technical memo. The technical memo will present the problem to be solved, briefly describe the characteristics of each alternative, define the evaluation criteria, and summarize the analysis and recommendations. The evaluation factors that lead to the removal of an alternative from further screening will be clearly documented to make the screening process as transparent as possible.

Optional Tasks: The MKN team proposes to include Rincon Consultants, who will perform a fatal flaw analysis, regulatory review, and will prepare an environmental constraints analysis which will inform the alternatives evaluation.

Feasibility Study

The feasibility study component of the work seeks to develop conceptual designs for up to four alternatives. The conceptual design will include plan and section drawings to define the general layout; one-dimensional screen and/or river hydraulic analysis (as appropriate) to define the hydraulic profile through the system; and a high-level review of the structural feasibility/constructability of each alternative. An AACE Class 4 cost estimate and anticipated timeline for design and construction will be prepared for each alternative. In addition, the conceptual design will identify specialty maintenance needs, impacts to diversion operations, and permitting constraints (if the optional tasks are included).

The evaluation matrix will be updated for the four alternatives to account for the improved understanding of function, cost, constructability, and other factors. The matrix will be used to supplement the discussion of the relative merits of the four conceptual design alternatives. The results of the conceptual design phase will be reviewed with the District and recommendations for “next steps” will be provided.

The findings of the feasibility study will be documented in a feasibility study report. The report will include a problem statement, description of the alternatives, analysis methodology and a summary of results and recommendations. After the draft report has been submitted, the Project Team will present findings to the District during a progress meeting/workshop, during which time we will address questions and receive feedback from the District. After receiving written comments from the District, the team will finalize the report.

Scope of Services

We intend to complete the scope of work as defined in the RFP, with the following exceptions and clarifications:

Task Group 100 Project Management, Meetings, and QA/QC

Note the following clarifications and assumptions regarding the specified meetings:

- Project kick-off meeting and site visit
 - The kick-off meeting and site visit will be attended in person by MKN staff and two Alden staff.
 - The kick-off meeting and site visit will be completed in one day.
- Two progress meetings/workshops
 - The progress meetings/workshops will be attended in person by MKN staff; two Alden staff will participate by web meeting.
 - The progress meetings are assumed to each last two hours.
 - Alden will prepare a PowerPoint presentation for each meeting to facilitate information exchange.
- Presentation to Water Resources committee
 - The presentation to the Water Resources Committee will be attended in person by MKN staff and one Alden staff. An additional Alden staff person will participate by phone.
 - The presentation to the Water Resources Committee is assumed to take two hours.
 - The Project Team will prepare a PowerPoint presentation for the meeting.
- Presentation to Board of Directors
 - The presentation to the Board of Directors will be attended in person by MKN staff and one Alden staff. An additional Alden staff person will participate by phone.
 - The presentation to the Board of Directors is assumed to take two hours.
 - The Project Team will prepare a PowerPoint presentation for the meeting.
 - Travel costs are based on the assumption that the presentation to the Water Resources Committee and the presentation to the Board of Directors will take place on consecutive days.

Task Group 200 Review Background Information

We assume that the primary background information will be provided at the time of project award.

Task Group 300 Evaluate Feasibility Alternatives

Note the following clarifications and assumptions:

- This task is assumed to include generation of a thorough list of potential alternatives and a screening-level analysis of them, leading to selection of up to 4 alternatives to advance to conceptual design.
- The screening evaluation will be completed on the basis of experience, engineering judgement, and input from District staff. Drawings/sketches, calculations and cost estimates will not be prepared at this phase.
- Deliverables will be provided in electronic format (PDF and MS Word).

The Project Team proposes to include the following tasks to review regulatory constraints associated with the project alternatives:

Optional Task: Fatal Flaw Analysis and Regulatory Review of Fish Screen Alternatives

Rincon will assist the engineering team during the evaluation of fish screen alternatives and fatal flaw analyses. Rincon will work with the engineering team to ensure the latest federal and state fish screen criteria are used during the alternatives feasibility assessment, provide a biological perspective to each alternative, and provide insight to the engineering team. Senior fisheries biologist Steve Howard will attend the project kickoff meeting and site visit, assist the team with preparing for two progress meetings and development of presentations to the Water Resources Committee and Board of Directors. Mr. Howard will assist in the background review and with the alternatives evaluation to ensure all biological concerns are addressed to satisfy federal and state screening criteria and policies.

Optional Task: Environmental Considerations and Constraints Report

This effort will include a review and comparison of the various environmental documentation considerations and constraints associated with the alternative under consideration, as well as an evaluation of major and minor environmental constraints to inform project design selection and outline the expected regulatory pathway for environmental compliance. Several avenues of research will be pursued to document environmental constraints in the project area, including: 1)

field biological reconnaissance survey; 2) review of existing project information; and 3) review of existing environmental records and literature relevant to the project.

The Environmental Considerations and Constraints Analysis will include the following components, with the focus being a preliminary description and evaluation of the issues identified below. The preliminary description will include both estimated timing and cost information associated with potential survey requirements, mitigation needs, permitting pathways, etc.

- Summary of biological resources identifying sensitive species occurrences and sensitive habitats, based on a literature review and use of readily available mapping, as well as a reconnaissance-level survey of the site
- Identification of biological survey requirements (both general and protocol-level) and the impact on timing due to seasonal surveys
- Identification of potential state and/or federal regulatory and coordination requirements
- Identification of general mitigation requirements and opportunities

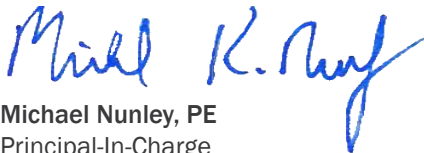
Deliverable: Draft and Final Screening Analysis Tech Memo

Task Group 400 - Prepare Draft and Final Feasibility Study

Note the following clarifications and assumptions regarding the draft and final study:

- This task is assumed to include the conceptual design and feasibility evaluation of up to four alternatives.
- A detailed calculation appendix is not required for the feasibility study report.
- Deliverables will be provided in electronic format (PDF and MS Word).

The MKN Project Team is excited to assist the District with this project. We offer a comprehensive approach that addresses hydraulic, biological resource, permitting, and constructability concerns in development of an implementable, effective solution to a major water supply challenge. However, we are open to modifying our approach and would be happy to work with the District to develop a strategy that better meets your needs. Please contact me if you have any questions or comments. I will be back in the office on November 26, 2018.



Michael Nunley, PE
Principal-In-Charge
mnunley@mknassociates.us
(805) 904-6530 ext 102

PROPOSED BUDGET

Robles Diversion Fish Screen Alternatives Feasibility Study										
	Principal Engineer	Assistant Engineer	Drafter	Administrative Assista	Total Hours (MKN)	Subtotal Labor (MKN)	ODCs (MKN)	Alden (Subconsultant)	Rincon (Subconsultant)	Total Cost
Task Group 100 Project Management, Meetings, and QA/QC										
Project Management	4				4	\$ 720	\$ 200	\$ 2,420		\$ 3,340
Kickoff Meeting/Site Visit	4				4	\$ 720	\$ 200	\$ 9,790		\$ 10,710
Progress Review Meetings/ Workshops (2)	6				6	\$ 1,080	\$ 800	\$ 2,750		\$ 4,630
WRC Presentation	4				4	\$ 720	\$ 200	\$ 2,750		\$ 3,670
Board of Directors Presentation	4				4	\$ 720	\$ 200	\$ 2,750		\$ 3,670
QA/QC	4				4	\$ 720		\$ 3,300		\$ 4,020
Task Group 100 Subtotal	26	0	0	0	26	\$ 4,680	\$ 1,600	\$ 23,760	\$ -	\$ 30,040
Task Group 200 Review Background Information										
Review Background Information	2				2	\$ 360		\$ 6,600		\$ 6,960
Task Group 200 Subtotal	2	0	0	0	2	\$ 360	\$ -	\$ 6,600		\$ 6,960
Task Group 300 Evaluate Feasible Alternatives										
Define Potential Alternatives					0	\$ -		\$ 7,370		\$ 7,370
Screen Alternatives						\$ -		\$ 2,750		\$ 2,750
Draft Technical Memorandum	4					\$ 720		\$ 3,630		\$ 4,350
Finalize Technical Memorandum	4					\$ 720		\$ 770		\$ 1,490
Task Group 300 Subtotal	8	0	0	0	0	\$ 1,440	\$ -	\$ 14,520	\$ -	\$ 15,960
Task Group 400 Prepare Draft and Final Feasibility Study										
Prepare Drawings	2	4	48		54	\$ 5,524		\$ 11,330		\$ 16,854
Perform Analyses						\$ -		\$ 10,780		\$ 10,780
Prepare Time and Cost Estimates	16	16				\$ 4,912		\$ 770		\$ 5,682
Draft Feasibility Report	4					\$ 720		\$ 11,550		\$ 12,270
Finalize Feasibility Report	4					\$ 720		\$ 1,540		\$ 2,260
Task Group 400 Subtotal	26	20	48	0	54	\$ 11,876	\$ -	\$ 35,970	\$ -	\$ 47,846
TOTAL BUDGET	62	20	48	0	82	\$ 18,356	\$ 1,600	\$ 80,850	\$ -	\$ 100,806
Optional Tasks:										
Fatal Flaw Analysis and Regulatory Review	4					\$ 720			\$ 10,247	\$ 10,967
Environmental Constraints Analysis	4					\$ 720			\$ 6,925	\$ 7,645
Total - Optional Tasks	8	0	0	0	0	\$ 1,440	\$ -	\$ -	\$ 17,171	\$ 18,611

Billing Rates	\$/hr
Principal Engineer	180
Senior Project Engineer	170
Project Engineer	150
Water Resource Planner	138
Assistant Engineer	127
Drafter	97
Administrative Assistant	57

Mileage to be reimbursed at IRS rate



SCHEDULE

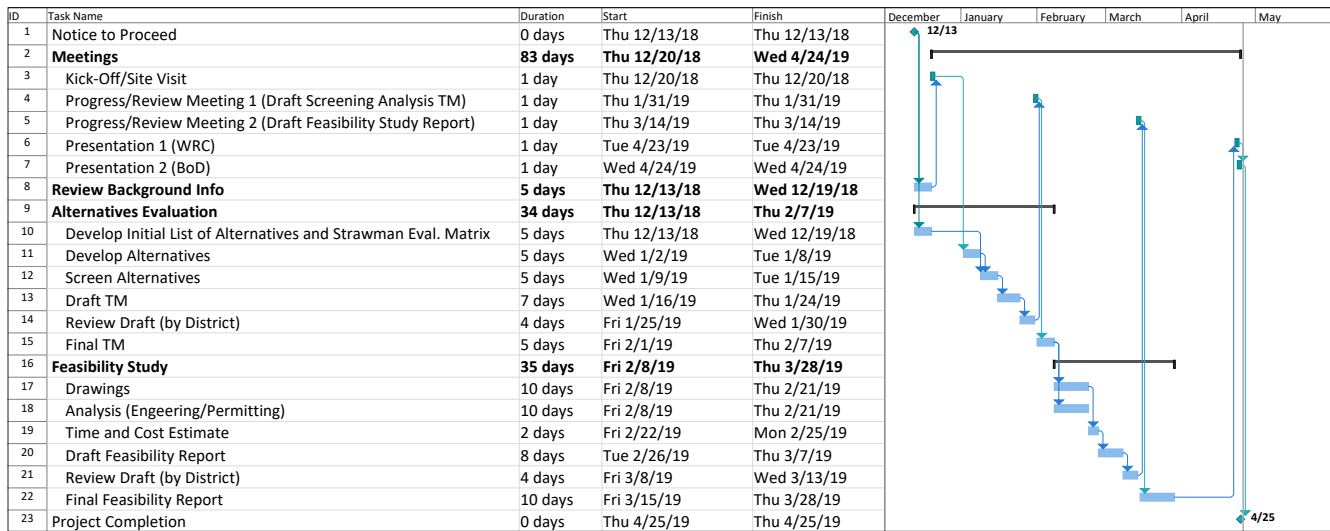


Figure 1 - Proposed Project Schedule

Figure 1 provides a Gantt Chart schedule for the project, based on an assumed notice to proceed on December 13, 2018. This schedule, while aggressive, will meet all of the District’s submittal and meeting requirements, but will require the District’s adherence to the notice-to-proceed and meeting dates, plus turn-around of draft submittal reviews in the time frames indicated in the schedule.

We see a benefit in sound preparation prior to the in-person Kick-off Meeting and Site Visit, i.e., review of the background information, generation of an initial list of potential alternatives and creation of a strawman matrix. This preparation will enhance the quality of the meeting and the information obtained at site. While it may be possible to complete this work in one week, per the schedule, an alternative to the schedule in the RFP would extend the period available for preparations in advance of the Kick-off Meeting and Site Visit, and reduce the time available to finalize the screening and produce the technical memorandum after the Kick-off Meeting and Site Visit. Under this scenario, the Kick-off Meeting and Site Visit would occur on (or about) January 3, 2019, but all other milestone dates would remain the same. A telephone kick-off meeting could be held near the time of award to establish project background, goals and protocols. We can discuss whether there is a material advantage to this shift in schedule with the District at the time of award.

FEE SCHEDULE



ENGINEERS AND TECHNICAL SUPPORT STAFF

Principal Engineer	\$180/HR
Senior Project Engineer	\$170/HR
Project Engineer	\$150/HR
Water Resources Planner	\$138/HR
Assistant Engineer	\$127/HR
GIS Specialist	\$130/HR
GIS Technician	\$110/HR
Senior Design Technician	\$ 97/HR
Administrative Assistant	\$ 57/HR

Routine office expenses such as computer usage, telephone charges, office equipment and supplies, incidental postage, copying, faxes, etc., are included in the hourly rates.

DIRECT PROJECT EXPENSES

Outside Reproduction	Cost + 10%
Subcontracted or Subconsultant Services	Cost + 10% Travel & Subsistence (<i>other than mileage</i>)
Auto Mileage	Current IRS Rate - \$.54/mi.



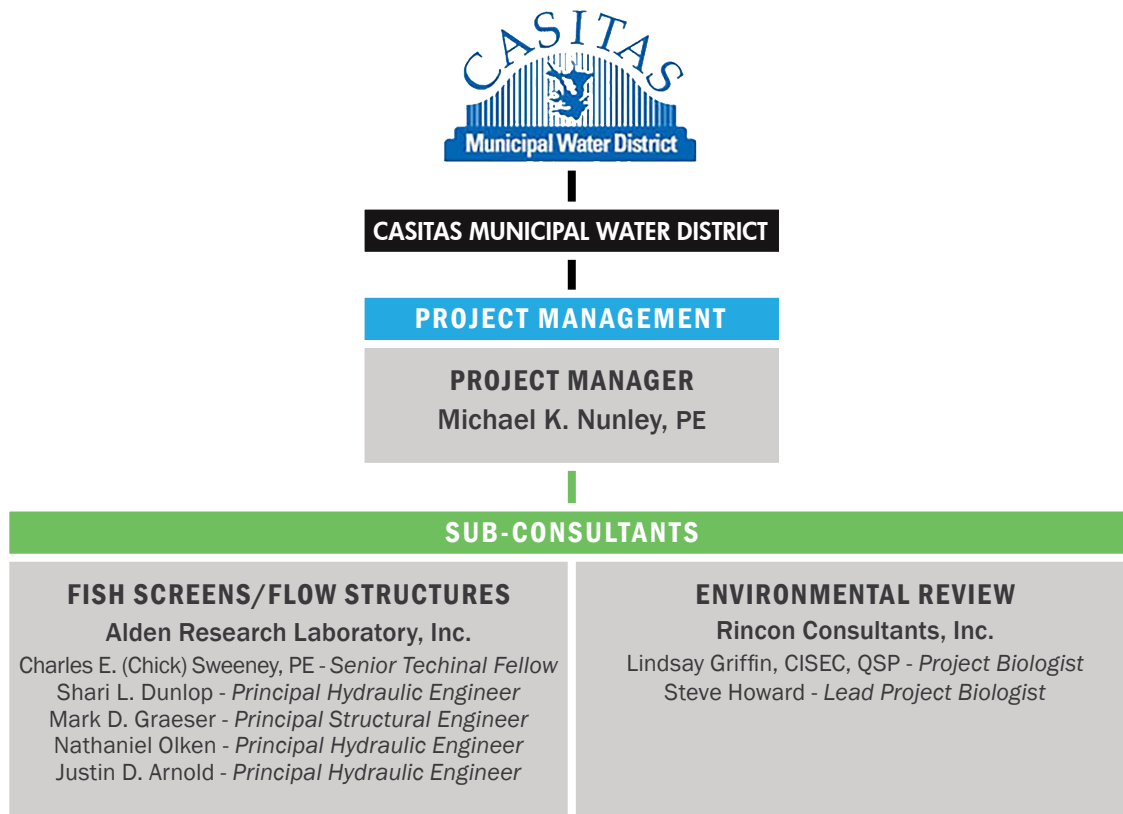
Alden Hourly Rates Summary
1-May-18

Personnel	Title or Category	Hourly Billing Rate
Allen, Greg	Technical Advisor (Fish Passage Design)	\$ 191.84
Amaral, Steve	Technical Advisor (Fisheries Biology)	\$ 186.81
Arnold, Justin	Principal Hydraulic Engineer	\$ 188.09
Bodesheimer, Lori	Administrative	\$ 78.60
Dunlop, Shari	Project Manager / Lead Hydraulic Engineer	\$ 189.00
Gessler, Dan	Hydraulic Engineer, Specialist	\$ 248.45
Graeser, Mark	Lead Structural Engineer	\$ 192.20
Islam, Ashraf	Senior Hydraulic Engineer	\$ 158.85
Mater, Ben	Staff Hydraulic Engineer	\$ 125.41
Olken, Nate	Staff Fisheries Engineer	\$ 158.40
Orlins, Joe	Hydraulic Engineer, Specialist	\$ 239.04
Perkins, Norman	Senior Structural Engineer	\$ 231.20
Rashid, Mizan	QA / QC	\$ 266.50
Richings, Dan	Staff Structural Engineer	\$ 109.80
Rounds, Michael	Staff Hydraulic Modeler	\$ 128.21
Sweeney, Chick	Lead Fisheries Engineer	\$ 284.62
Taylor, Zachary	Staff Hydraulic Engineer	\$ 119.82
Willig, Isaac	Senior Hydraulic Engineer	\$ 146.47



Professional, Technical & Support Personnel*	Hourly Rate
Principal II	\$230
Principal I	\$215
Senior Supervisor II	\$195
Supervisor I	\$185
Senior Professional II	\$165
Senior Professional I	\$150
Professional IV	\$135
Professional III	\$120
Professional II	\$105
Professional I	\$95
Environmental Technician/Field Aide III	\$90
Environmental Technician/Field Aide II	\$85
Environmental Technician/Field Aide I	\$80
Senior GIS Specialist	\$130
GIS/CADD Specialist II	\$115
GIS/CADD Specialist I	\$100
Graphic Designer	\$95
Technical Editor	\$105
Production Specialist	\$80
Clerical/Administrative Assistant I	\$75

PROJECT TEAM



Mike Nunley, PE, will serve as Project Manager for this work. He will serve as primary client contact and will direct the efforts of the technical team, including subconsultants Alden and Rincon Consultants. His resume was submitted with the Oncall SOQ.

Charles E. "Chick" Sweeney, Senior Technical Fellow, will provide senior technical guidance and input. Mr. Sweeney has nearly 45 years of experience in the hydraulic design and analysis of civil hydraulic structures and has been instrumental in the design and/or modification of scores of fish screening and passage projects throughout the Pacific Northwest. His resume was submitted with the Oncall SOQ and is also provided in the Appendix.

Shari Dunlop, Principal Hydraulic Engineer, will lead the alternatives evaluation and hydraulic analysis for the project. Ms. Dunlop has 20 years of experience in management and hydraulic engineering with a focus on the design and modification of dams and river diversions, and their appurtenant structures to address fisheries, environmental, and safety requirements. Ms. Dunlop has led numerous feasibility studies. Ms. Dunlop and Mr. Sweeney have collaborated in their proposed roles for this project for more than 10 years. Her resume is attached.

Mr. Sweeney and Ms. Dunlop will be supported by Justin Arnold, Principal Hydraulic Engineer, Nate Olken, Principal Hydraulic Engineer, and Mark Graeser, Principal Structural Engineer. Mr. Arnold has 18 years of experience in hydraulic engineering and facility construction, has participated in design studies and field start-up of many fish screening projects in the Pacific NW and is well-versed in the practical aspects of screen, backing baffle, and screen cleaner design and field operation troubleshooting. Mr. Olken has been the lead engineer on over one-hundred screen intake screening evaluations for power companies across the country. These studies evaluated not only the biological efficacy of the screening technologies but also their ability to address operational issues, associated with debris, bio-fouling and excessive screen wear. Mr. Graeser has 17 years of structural design experience and has designed and provided engineering during construction services for a wide variety of hydraulic structures, including dams, gates, pump stations, and screens. Mr. Arnold's, Mr. Olken's, and Mr. Graeser's resumes are attached.

Steve Howard will serve as Lead Project Biologist. He has 20 years of experience with anadromous salmonids including steelhead and Pacific Lamprey in Southern California. Mr. Howard managed fish passage operations at the Freeman Diversion on the Santa Clara Riv-

er while working for the United Water Conservation District from 2007 to 2016. This included working with District engineers, fish passage and screen engineering consultants and operations and maintenance staff with designing, monitoring, and revising fish screens at the diversion to maximize diversions and to ensure the latest screening criteria were used. Elements of fish screening criteria for steelhead have been modified by the National Marine Fisheries Service (NMFS) over past last 15 years and based on discussion with NMFS, there is the potential for additional modifications with various criteria in the future. Mr. Howard's resume is attached.

Lindsay Griffin will serve as a Project Biologist. She focuses on coastal watershed resources and provides support on biological, regulatory permitting, project management, CEQA, and NEPA related assignments statewide. Ms. Griffin's academic and professional emphasis is in Ecology, Evolution, and Marine Biology. Ms. Griffin has extensive training with the fauna and flora of the California coast. She has received specific training in survey protocols, habitat requirements and natural histories of the tidewater goby, steelhead, Santa Ana sucker, arroyo chub and California red-legged frog, as well as federally and state listed coastal avian species such as the California least tern and western snowy plover. She holds a USFWS Recovery Permit 10(a)(1)(A) for tidewater goby. Ms. Griffin has conducted extensive surveys and provided monitoring for the above species throughout southern California. Additionally, Ms. Griffin is a water quality specialist and a qualified CISEC (Certified Inspector of Erosion and Sediment Control) and a QSP (Qualified SWPPP Practitioner). She has managed and implemented numerous water quality and storm water compliance projects. She is responsible for oversight and implementation of fieldwork, data collection, compilation, client and agency contact, report preparation, and project management. Ms. Griffin's resume is attached.



CASITAS MUNICIPAL WATER DISTRICT ROBLES DIVERSION FISH SCREEN ALTERNATIVES FEASIBILITY STUDY

APPENDIX

Alden Resumes

Charles E. "Chick" Sweeney, PE - *Senior Technical Fellow*

Shari L. Dunlop, PE - *Principal Hydraulic Engineer*

Mark D. Graeser, PE - *Principal Structural Engineer*

Nathaniel Olken, PE - *Principal Hydraulic Engineer*

Justin D. Arnold, PE - *Principal Hydraulic Engineer*

Rincon Resumes

Lindsay Griffin, CISEC, QSP - *Project Biologist*

Steve Howard - *Lead Project Biologist*



MASSACHUSETTS | COLORADO | WASHINGTON | OREGON

Charles E. (Chick) Sweeney, P.E.

Senior Technical Fellow



Email : csweeney@aldenlab.com

Work Phone: 425-881-7700 x2364

Website: www.aldenlab.com

Years of Relevant Experience: 43

Alden Team Since: 1974

Professional Activities:

Life Member, American Society of Civil Engineers

Registrations:

Professional Engineer, WA

Education

M.S., Colorado State University, Civil and Hydraulic Engineering

B.S., Rose Hulman Institute of Technology, Civil Engineer, Honors

Expertise

- Fish passage facilities design
- Hydraulic design of dams and hydropower systems
- Physical and numerical hydraulic modeling
- Field investigations and fish passage facility start-up

Experience

Mr. Sweeney has more than 40 years of experience in hydraulic engineering consulting. For the last 20 years, he has been focused on design and retrofit of a wide range of fisheries facilities including design of upstream and downstream fish passage facilities. He has performed hydraulic design and analysis of a variety of civil works, including dams, fisheries facilities, hydroelectric, fossil fuel, and nuclear power plants, flood control and irrigation projects, harbor facilities, river training works, and water supply and sewage treatment plants.

Selected Projects

Portland General Electric, Round Butte Dam, Deschutes River. OR: Lead hydraulic engineer for design of the Round Butte Selective Water Withdrawal (SWW) and Fish Collection Facility. In leading the hydraulic design efforts, Mr. Sweeney initially managed field investigations to characterize the reservoir temperature regime and numerical modeling to develop the selective withdrawal water management plan. He participated in the team which brainstormed and developed the overall design concept, lead the physical and numerical modeling studies that developed the design, plus the detailed hydraulic design calculations, provided input to and review of the plans and specifications, and finally managed the team that performed the hydraulic commissioning and evaluation of the completed facility. The Round Butte SWW received the American Consulting Engineers Council Grand Conceptor Award.

City of Bellingham, Conceptual Design for the Middle Fork Nooksack Diversion Structure Fish Passage Facility, Washington- As the lead fisheries engineer for the project, developed conceptual design of a fish screening structure at the diversion intake. A 2-D hydrodynamic model, Hivel-2D, and a sediment transport model SED-2D were performed. The purpose of the numerical modeling was to gain a better understanding of the flow field and sediment transport characteristics near the diversion structure from hydraulic and fluvial geomorphologic perspectives. Results from the flow and sediment transport analyses were used to design a fish screen system for the diversion channel and for developing conceptual design of a fish ladder.

U.S. Fish and Wildlife Service via Sverdrup Civil, Inc., Leavenworth National Fish Hatchery, Icicle Creek Fish Passage Restoration Alternatives, Washington. Technical Advisor and Senior Reviewer for hydrologic and hydraulic analyses of alternative strategies for restoration of upstream fish passage past the hatchery.



Charles E. (Chick) Sweeney, P.E .

Senior Technical Fellow

PacifiCorp, Soda Springs Fish Passage Facilities, and Tailrace Barrier Modifications, North Umpqua River, OR (2009): Technical Advisor for hydraulic design of new fish screen and ladder facilities and for the evaluation of options to modify the tailrace barrier at the Soda Springs project to bring its performance into compliance with NMFS anadromous salmonid passage criteria. For the latter, reviewed existing barrier performance, obtained field measurements, analyzed options for modification, calculated expected performance under modified scenarios and provided recommendation to the client. Managed a prototype test program of the recommended modifications.

PacifiCorp, Slide Creek Dam Tailrace Barrier, North Umpqua River, OR (2010-2014): Technical Advisor for hydraulic model studies to develop design of tailrace barrier and pending field start-up and balancing of the same.

Avista Corporation, Cabinet Gorge Dam, Clark Fork River, MT (2006-2011): Lead Hydraulic Engineer for site selection and design of a tailrace fish trap targeting bull trout. Analyses utilized a 3-D CFD model of the project tailrace

USACE Seattle District, Albeni Falls Dam, Pend Orielle River, ID (2011): Led workshops to develop and evaluate concepts for fish (bull trout) passage facilities to be retrofit at existing dam.

USACE Portland District, Fall Creek Dam Upstream Migrant Fish Collection Facility, Willamette River, OR (2013): Led workshop to develop and evaluate concepts for retrofit of an existing upstream migrant fish passage facility.

Alaska Energy Authority, Susitna Hydroelectric Project, Susitna River, AK, (2013): Participated on an expert panel developing concepts for fish passage facilities at a proposed 700 ft. high dam.

B.C. Hydro. Site C Hydropower Development, Peace River, British Columbia (2012): Member of an expert panel advising on development of fish protection and passage measures for a new hydroelectric development.

United Water Conservation District, Freeman Diversion Dam, Santa Clara River, CA (2014-2016): Lead Hydraulic Designer for a new “roughened ramp” fish ladder for steelhead and Pacific lamprey.

USACE Portland District, Lookout Point Head of Reservoir Collection Alternatives Report, Lookout Point Dam, OR (2010): Hydraulic Design Lead for Alternatives Report addressing the feasibility of and project-specific alternatives for a head-of-reservoir facility or in-tributary collection and downstream transport facility for juvenile salmonids.

USACE Portland District, Willamette Downstream Fish Passage Design Requirements Report, Willamette Valley Projects, OR (2010): Lead Author for literature review of historical, current and proposed technologies for downstream passage at high-head facilities similar to the Corps operated Projects in the Willamette Valley. Documented and defined critical physical and biological data required for the design and evaluation of the performance of potential downstream passage alternatives.

Tacoma Power, Cushman Hydropower Project Fish Passage, Skokomish River, Mason County, WA (2008): Lead Hydraulic Designer for a floating surface collector to provide downstream passage for migrating salmon.

Tacoma Power, Cowlitz River Hydropower Project Fish Passage, Cowlitz River, WA (2012-2014): Team Leader and Lead Hydraulic Designer for Conceptual Design Report detailing options for downstream fish passage on the Cowlitz River system. Responsibilities entailed leading a multi-discipline Downstream Fish Passage Team with representatives from the owner, resource agencies, FERC, NGOs and owner.

Portland General Electric Company, Willamette Falls Project, Willamette River, OR (2001-2007): Technical Advisor for hydraulic engineering, modeling, and fisheries engineering issues for re-licensing of the Sullivan Hydroelectric Project at Willamette Falls.

Cascade Water Alliance, Lake Tapps Fish Screen Study, White River, WA, - Technical Advisor for analysis of functionality of an existing fish screen on the White River diversion under new flow criteria and rehabilitation and start-up of the systems. Flow criteria were changed when the facility use was transferred from hydropower generation to municipal water withdrawal.

PUD No. 1 of Chelan County, Rocky Reach Dam Fish Bypass Systems, WA - Project Manager for field studies, conceptual design, hydraulic modeling, and agency presentation of designs for juvenile migrant fish bypass around Rocky Reach Dam on the Columbia River. Project also included field studies and conceptual design for Rock Island Dam.



MASSACHUSETTS | COLORADO | WASHINGTON | OREGON

Shari L. Dunlop

Principal Hydraulic Engineer



Email : sdunlop@aldenlab.com

Work Phone: 425-881-7700 x6449

Website: www.aldenlab.com

Years of Experience: 20

Alden Team Since: 2008

Professional Registration:

Professional Engineer, Oregon and British Columbia

Professional Activities:

Society of American Military Engineers (SAME), Member

Education

B.S., University of Saskatchewan, 1998, Civil Engineering (with Distinction)

Portland State University, Selected Courses: River Restoration Design; Principles of Streambank Analysis & Stabilization

Canadian Dam Safety Association, Dam Safety Workshop

PSMJ, Project Management Bootcamp

Expertise

- Project Management
- Fisheries Engineering
- Total Dissolved Gas Mitigation
- Hydraulic Structures and Water Conveyance Analysis and Design
- Dam Safety Engineering

Experience

Ms. Dunlop is a project manager and principal engineer responsible for the design of complex, multi-disciplinary projects, generally associated with dams and hydroelectric facilities. Ms. Dunlop's 20 years of experience includes management and hydraulic engineering for the development of new hydropower facilities, and modification of existing dams and their appurtenant structures to address fisheries, environmental, and dam safety requirements. Ms. Dunlop is well versed in the coordination and application of modeling tools for engineering design. She effectively coordinates staff and sub-consultants, manages budgets and schedules, and produces high quality deliverables to achieve successful project implementation. Ms. Dunlop has is well-versed in providing documentation to meet regulatory requirements, and has recent experience in Western region fisheries engineering and biological criteria.

Selected Projects

Portland General Electric, Round Butte Selective Water Withdrawal (SWW) and Downstream Fish Passage Facility, Deschutes River, OR: Providing project management and technical review to a team of engineers, biologists and modelers in a study to assess options to improve fish collection efficiency at the existing downstream fish collection facility. The options under evaluation include concentrating flow into a single V-screen channel, using guide and/or exclusion nets, or installing floating pumps in the reservoir. Alden is using a 3-D CFD model to demonstrate the hydraulic and temperature effects of the alternatives, and integrating the results with their understanding of fish behavior to prioritize options or combinations of options for field testing and/or implementation. Preliminary recommendations were provided in summer 2017. Alden will provide additional modeling and engineering to advance the design of a guide net system in 2018.



Shari L. Dunlop

Principal Hydraulic Engineer

United Water Conservation District, Freeman Diversion Hardened Ramp Fish Passage Structure, Santa Clara, CA: Project Manager and Hydraulic Engineer for the hydraulic design of a unique hardened fish passage ramp at the Freeman Diversion Dam. The design is being achieved in three phases: design criteria and alternatives development; alternatives evaluation; and preliminary design. Extensive use of hydraulic modeling is required due to the prototypical nature of the facility. Contributed to criteria development, completed 1-D screening analysis of alternatives, participated in extensive consultation with resource agencies and coordinated the work of Alden and its partner consultants.

Tacoma Power, Cowlitz Barrier Dam Improvements, Cowlitz River, WA: Providing project management, hydrologic and hydraulic engineering to analyze the functionality of, and design improvements for, the existing Cowlitz Barrier Dam and associated upstream fish passage facilities. Developing conceptual designs and evaluating operational and structural alternatives to improve the performance of the currently non-functional left fish entrance and conveyance channel without degrading the performance of the existing right entrance. Completed 1-D modeling and miscellaneous calculations to support the design and evaluation. In 2018, will provide technical guidance and review during a detailed evaluation of alternatives using CFD modeling.

USACE Portland District, Fall Creek Dam Upstream Migrant Fish Collection Facility, Willamette River, OR: Provided hydraulic engineering and fish passage design support to prime consultant A/E firm for the development and evaluation of alternatives to retrofit and existing fish collection facility to improve adult fish passage at Fall Creek Dam.

USACE Portland District, Willamette River Spring Chinook/Winter Steelhead Downstream Dam Passage Modeling Support, OR: Project Manager for an independent review, parameterization, and simulation of alternatives using a spreadsheet model developed by the USACE, which determines project survival for three life stages of anadromous salmonids. Coordinated the work of hydraulic engineers and biologists, facilitated a workshop with the resource agencies and was responsible for the preparation of all project deliverables.

USACE Portland District, Cougar Floating Screen Structure (FSS) Design Support (via URS), McKenzie River, OR: Provided hydraulic engineering support and management of Alden's subcontract for a project to advance the design and assess feasibility of an FSS to collect and transport juvenile salmonids at Cougar Dam. Specific focus was given to the connection between the proposed FSS and the existing Water Temperature Control Tower (WTC), mooring requirements for the FSS, and fish transport.

Tacoma Power, Cowlitz Falls Dam Downstream Fish Passage Facility, Cowlitz River, WA: Project Manager and Hydraulic Engineer for the conceptual design for downstream fish passage. Specific tasks include: participating in Downstream Fish Passage Team meetings and brainstorming sessions; coordinating input from the consultant team (three firms); and preparing the Conceptual Design Report. Also executed prototype field studies and participated in the independent review of the final design. Continuing involvement in field start-up evaluation.

PacifiCorp, Slide Creek Tailrace Barrier Modifications, OR: Project Manager for the evaluation of potential modifications to address velocity variations in the flow exiting the Slide Creek tailrace barrier. Managed conceptual design and 3-D computational fluid dynamics modeling.

PacifiCorp, Soda Springs Tailrace Barrier Modifications, North Umpqua River, OR: Project Manager and Hydraulic Engineer for the evaluation of options to modify the tailrace barrier at the Soda Springs project to bring its performance into compliance with NMFS anadromous salmonid passage criteria. Reviewed existing barrier performance, obtained field measurements, analyzed options for modification, and calculated expected performance under modified scenarios. Managed and executed a prototype test program of the recommended modifications.

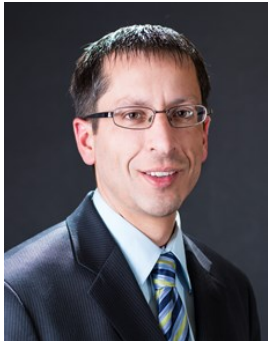
USACE Seattle District, Albeni Falls Dam, Pend Oreille River, WA: Co-facilitator for a workshop to develop and evaluate concepts for retrofitting the existing dam to provide bull trout passage facilities.

Portland General Electric, Faraday Diversion Dam Instream Flow Requirement, North Fork Clackamas River, OR: Hydraulic Engineer responsible for evaluating PGE's options to increase the instream flow downstream of the Faraday Diversion Dam using the existing auxiliary water supply (AWS) system. Analyzed the hydraulics of the system, evaluated the maximum capacity for the range of reservoir operating levels, and confirmed that the option would comply with the hydraulic requirements of the NMFS criteria for fish ladders under increased flows.



Mark D. Graeser, P.E.

Principal Structural Engineer



Email : mgraeser@aldenlab.com
Work Phone: 425-881-7700 x2351
Website: www.aldenlab.com
Years of Experience: 16
Alden Team Since: 2013

Professional Activities:

American Concrete Institute (ACI)
 Association of State Dam Safety Officials (ASDSO)

Registration/Certifications

Professional Engineer: CA, CO, ID, GA, ME, OR, UT, WA

Education

M.S., University of Minnesota, Structural Engineering
 B.S., University of Iowa, Civil Engineering

Expertise

- Dams, Spillways, Hydraulic Gates, Hydropower Facilities, and Fish Passage Facilities
- Evaluation of Existing Structures
- Constructability Review and Construction Phase Services

Experience

Mr. Graeser is a principal structural engineer and design manager experienced in the design and construction of hydraulic structures and hydropower projects. He is effective at managing engineering staff and ensuring that there is a proper balance between quality and schedule. Mr. Graeser has been project manager for construction projects as large as \$35M and lead structural engineer for construction projects as large as \$70M. His specific project experience includes hydropower facilities, dam appurtenances, and fish passage facilities. Mr. Graeser also specializes in the evaluation, retrofit, rehabilitation, and modernization of existing structures.

Selected Projects

Portland General Electric, Faraday Diversion Dam Attraction Water Supply (AWS) Retrofit—Feasibility Study and Alternatives Analysis, Estacada, OR: Lead Structural Engineer. Provided structural engineering and constructability review for the conceptual design development of alternatives and selection of the preferred alternative. Completed feasibility study report and participated in design workshops. Identified next steps for the final design phase. Also directed the field work for the dive inspection.

Brookfield White Pine Hydro, Shawmut Hydroelectric Station Fish Passage Project, ME: Lead Structural Engineer. Responsible for the 50-ft high steel-framed fish lift with 490 cubic-ft hopper. The structural design also features several hydraulic gates and wedge wire screens, concrete flumes and access platforms. Developed a 3D structural model to analyze the steel-framed fish lift. Currently providing structural engineering design, plans, and specifications.

Duke Energy Corporation, Sutton Energy Complex Effluent Channel Fish Barrier Net, Wilmington, NC: Lead Structural Engineer. Responsible for the structural design of the anchorage for the 215-ft long barrier net. Reviewed the loading calculations and the anchor block stability checks. Developed the civil and structural drawings for the project.

Denver Water, Strontia Springs Dam Diversion Tunnel and Sediment Flushing—Feasibility Study, CO: Lead Structural Engineer. Evaluated the existing diversion tunnel for the feasibility of flushing sediment. Results and recommendations were summarized in a technical memorandum.

Avista Utilities, Cabinet Gorge Dam Total Dissolved Gas (TDG) Abatement Project, Clark Fork, ID: Lead Structural Engineer. Work included feasibility study, prototype design, final design and implementation of measures to reduce TDG downstream of Cabinet Gorge Dam. Evaluated structural requirements and modifications to the spillway crest required to incorporate roughness elements, deflectors, and flip buckets to reduce TDG. Provided structural engineering design, plans, specifications, and engineering services during construction.



Mark Graeser, P.E.

Principal Structural Engineer

City of Hollister, Return Pump Station and Diversion Control Structures, Hollister, CA: Lead Structural Engineer. Provided structural engineering design, plans, specifications, cost estimate, and construction services for the pump station and three diversion control structures. Design challenges included hydrodynamic loading due to water/structure interaction and high groundwater. The structures were located in an extremely high seismic region; less than 4 km from the Calaveras fault and less than 6 km from the San Andreas fault.

Highland Ditch Company, St. Vrain Diversion Replacement, Lyons, CO: Lead Structural Engineer. Project included the replacement of the existing 350 cfs diversion structure, sluice structure, 70-foot long weir structure, debris structure, and several new retaining walls. The project was in response to significant damage resulting from historic flooding. Design and construction was completed in only 4 months for the aggressive \$1M design-build project. Provided structural engineering design, plans, and services during construction.

First Light, Scotland Hydroelectric Station Fish Passage Project, Windham County, CT: Structural Review. Performed structural review of the 60-ft high steel-framed fish lift. Reviewed the structural drawings and calculations. Created an independent 3D model for the review.

Seattle City Light, Boundary Dam Total Dissolved Gas (TDG) Mitigation Spillway Modifications, Pend Orielle River, WA: Senior Structural Engineer. Provided structural design of the stainless steel ramps, roughness elements, and anchorage at Spillway 1. Responsible for 3D finite element analysis of the roughness elements and lead engineer for developing the technical specifications.

USACE Portland District, Columbia River Pile Dikes Major Maintenance Report and Environmental Assessment, OR : Independent Technical Review (ITR). Reviewed the draft submittals for the report and associated appendices. Responsible for the review of structural engineering and constructability aspects of the project.

USACE Portland District, Regulating Outlet Assessments, OR: Independent Technical Review (ITR) for all report submittals of the Willamette Valley and Rogue River Basin Regulating Outlet Assessments. Project included regulating outlet assessments at nine dams.

Upper Chiquita Dam and Reservoir, Santa Margarita Water District, CA: Lead Structural Engineer for the dam appurtenances. Provided structural engineering design, plans, and specifications for all of the dam related structures. Design includes inlet, outlet, spillway, and vault structures. Responsible for designing the pipe encasement for the drains, inlet, and outlet piping. Provided engineering services during construction for the \$38M construction project.

USACE Omaha District, Fort Peck Dam Spillway Plunge Pool Interim Repair - Design & Construction Services, MT: Lead Structural Engineer. Project received an Exceptional performance rating from the Army Corps of Engineers. Responsible for the new 350-ft by 350-ft RCC apron and the 50-ft high RCC training walls. Provided structural engineering design, plans, specifications, and design documentation report (DDR). Due to the urgent need, the final design was completed in only three months. Designed for multiple bid options to maximize the use of available funding. Project Manager for engineering services during construction for the \$35M construction project.

USACE Portland District, Fall Creek Regulating Outlet Gate Rehabilitations, OR: Lead Structural Engineer. Performed gate inspections and prepared the Design Documentation Report (DDR) and the final design for the rehabilitation of two service gates and two emergency gates. Structural rehabilitation includes recoating the gates, replacing the seals, and rehabilitating the bottom sill.

Portland General Electric, Faraday Dam Emergency Spillway Liner Design and Stability Analysis/Remediation, Estacada, OR: Lead Structural Engineer. Responsible for the design of a concrete liner for the Faraday Emergency Spillway. Also performed stability analyses of the emergency spillway structure and designed post-tension anchors to increase the factor of safety for sliding stability. Provided structural design and prepared plans and specifications for the spillway liner, drain system, and post-tension anchors.

Portland General Electric, Focused Spillway Assessments and PFMA (Faraday, North Fork, Timothy Lake and Pelton Dams), OR: Lead Structural Engineer. Performed spillway inspections and participated in focused potential failure mode analysis (PFMA) for Pelton Dam, North Fork Dam, Faraday Dam, and Timothy Dam. The project is a result of a recent FERC mandate for chuted spillways in response to the recent events at Oroville Dam.



Nathaniel Olken, P.E.

Principal Hydraulic Engineer



Email : nolken@aldenlab.com

Work Phone: 508-829-6000 x6445

Website: www.aldenlab.com

Years of Experience: 14

Alden Team Since: 2002

Professional Activities:

American Society of Civil Engineers (ASCE) Member

American Fisheries Society (AFS) Member

Board member Portland Chapter of the Coastal Conservation Association

Oregon Department of Fish and Wildlife Fish Screening Task Force member

Education

M.E., Tufts University, 2010, Water Resources Engineering

Certificate, Tufts University, 2010, Water, Systems, Science and Society

Certificate, University of Wisconsin, 2005, Engineering Innovative Fish Passage: Design of Fish Passage at Dams and Road Crossings

Certificate, University of Wisconsin, 2005, Engineering Innovative Fish Passage: The Design of Nature-Like Fishways

National Outdoor Leadership School (NOLS), 2000, Semester in the Rockies Graduate

B.S., University of Massachusetts, 2000, Civil/Environmental Engineering

Expertise

- 316(b) CWIS technology review and development
- Debris management at water intakes
- Site layout and resource management
- Engineering economics
- Hydraulic and hydrologic analyses
- Flow monitoring
- Water quality testing and monitoring
- Upstream and downstream fish passage evaluations and design

Experience

Mr. Olken has been with Alden Research Laboratory for over 15 years, where he has been involved a wide array of projects to reduce the human impacts on aquatic organisms. His work has focused primarily with Section 316(b) of the Clean Water Act. Mr. Olken has been the lead engineer on over one-hundred 316(b) evaluations for power companies across the country and is an expert in fish protection technologies for use at large water withdrawals. He has also supported engineering efforts for several hydraulic and fish passage projects. Mr. Olken currently works from Alden's branch office in Portland Oregon.

Feature Project

Design of Fish Return Systems and Operations/Maintenance Guidelines (EPRI Report 3002001422) (2015)

Modified traveling water screens (TWS) can be readily applied at existing facilities with standard TWS without major construction efforts. Due to the ease of retrofit, modified TWS are expected to be the preferred option at many facilities. A critical part of an effective modified TWS installation is a system for returning collected organisms safely back to the source waterbody. As part of this project I co-authored a report to provide technical guidance on the design and operation of fish return systems installed at cooling water intake structures. This report is based on fish return operating experience at existing facilities, the current state-of-knowledge on stressors that can influence the safe transport of fish within a return, and input from guidelines on other fish conveyance systems.



Nathaniel Olken, P.E.

Principal Hydraulic Engineer

Selected Projects

Evaluation of Section 316(b) Compliance Technologies – Assessed cooling water intake technology and compliance alternatives (including detailed design and cost estimates) for over 100 facilities. Wrote reports presenting detailed information on data gaps and needs, areas of further study required, estimated biological efficacy and costs of possible technologies applied at power plants to meet the Environmental Protection Agency's (EPA) impingement mortality and entrainment standards. Evaluated technologies include: Ristroph-style traveling water screens, cylindrical wedgewire screens, modular inclined screens, Eicher screens, barrier nets, louvers, angled bar racks, and behavioral barriers. Evaluations were used for both internal planning and as part of permit applications under the remanded and Final 316(b) rules.

Fish Protection Impact Evaluation for Ludington Pump Storage Project – Lead engineer to evaluate entrainment reducing technologies at the Ludington Pumped Storage Project as part of the projects FERC relicensing process. The evaluation included; a review of all fish protection technologies considered to reduce adverse environmental impact at water withdrawals, a site-specific evaluation of options that could improve the performance of the existing 12,850 ft long seasonally deployed barrier net and a review of other options that could meet or exceed the level of protection offered by the existing barrier net.

Downstream Fish passage – Prepared conceptual designs of downstream fish passage and turbine exclusion options as part of FERC licensing for two hydro development projects at existing U.S. Army Corps of Engineers Dams in Vermont. Worked with project owners and U.S. Fish & Wildlife Service to ensure proposed designs met the FERC permit requirements for the passage and protection of endangered species at the site. At the conclusion of this study the project owners were successful in obtaining FERC permits at both facilities

Electric Barrier Status Update – Conducted a literature review to summarize the state-of-knowledge of electric fields for fish protection. The resulting report included a discussion of the basic components used to generate electric fields, the evolution of electric field technology, and a comparison of the different systems commercially available. Biological and engineering performance data from pilot and full scale installations were also included in the report.

Evaluation and Feasibility Studies – Evaluated fish protection alternatives including a barrier net to prevent the loss of paddlefish at a large hydroelectric project in Missouri. Provided preliminary louver designs to guide fish away from hydropower power penstocks to fish bypass systems for Massachusetts and Georgia hydroelectric facilities.

Floating Surface Collector (FSC) Start-up and Screen Balancing – Tuned and verified the hydraulic performance of the FSC dewatering screens, using current meters and Acoustic Doppler Velocimeters and Ott meters at the Swift Reservoir and Lower Baker Dams in Washington.

Publications

"Retrofitting Fish Protection Technologies at an Existing Cooling Water Intake," with Black, J.L., Taft, E.P., and Olken, N., Power Magazine, September 2005.

"Numeric and Physical Model Study of Fish Barrier Net Designs for Complex Hydraulic Environments." Electric Power Research Institute. 2008. Electric # 1016808. Prepared by: B. McMahon S. Li G. Allen N. Olken.

"Best Management Practices Manual for Preventing Cooling Water Intake Blockages." Electric Power Research Institute. 2009. 1020524. Prepared by: N. Perkins E. Matys N. Olken G. Allen.

"Engineering and Biological Assessment – Fine-Mesh, Modified Traveling Water Screen Retrofits" Electric Power Research Institute. 2013. 3002001104. Prepared by: R. Tuttle, G. Allen, N. Olken, J. Black.

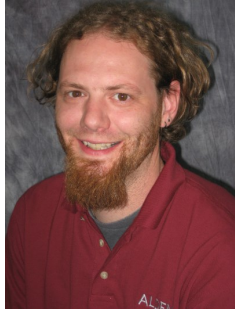
"A Comparison of the NMFS and Section 316(b) of the Clean Water Act Fish Screen Criteria." International Conference on Engineering and Ecohydrology for Fish Passage. June 24-27, 2013

"Design of Fish Return Systems and Operations/Maintenance Guidelines" Electric Power Research Institute. 2015. 3002001422. Prepared by: R. Tuttle, D. Giza, N. Olken.



Justin D. Arnold, P.E.

Principal Hydraulic Engineer



Email : jarnold@aldenlab.com

Work Phone: 425-202-2373

Website: www.aldenlab.com

Years of Experience: 18

Alden Team Since: 2000

Professional Registration:

P.E.: WA

Education

BS, University of Iowa, B.S., Civil Engineering

Expertise

- Fish exclusion and conveyance systems
- Physical hydraulic modeling
- Field studies
- Pump intake design
- Project Management

Experience

Mr. Arnold has over seventeen years of experience in hydraulic engineering related to a variety of hydraulic structures, including fish passage facilities, hydro projects, and pump intakes. He specializes in hydraulic loading and energy loss analyses, performance verification of fish exclusion and conveyance systems, and pump intake design and retrofitting.

Justin has designed and executed multiple field start-up and prototype facility test programs and has performed fish dewatering screen balancing and performance evaluations at both model and prototype scales for many fish passage facilities including Bonneville, Cowlitz Falls, Howard Hanson, and Round Butte dams. These programs have centered on hydraulic load estimation, energy loss analysis, and data acquisition and analysis in support of the design of fish passage facilities and exclusion systems, and post construction performance verification.

Feature Projects

Tacoma Power, Cowlitz Falls North Shore Fish Collector Field Startup, Morton, Washington, 2017 & 2018.

Lead engineer for hydraulic verification of newly installed fish screening facility with two adjustable floor sections. Developed rating curves for fish bypass weir, fish collector flume, existing spillway flume, spillway flume flap gates, and various system flow meters and flow baffles, using combination of Ott C-21 meters and ADV. Adjusted screen baffles to produce uniform screen approach velocity and manipulate channel hydraulics. Developed conceptual design for velocity meter deployment. Provided interim status reports and prepared final written report.

PacifiCorp, Prospect 3 Fish Screen Baffle Replacement, Medford, Oregon, 2014.

Developed spreadsheet model to estimate screen backing plate porosities for the inclined floor screen, to limit screen approach velocity components to 0.8 fps. The model was validated against existing field measurements. Conducted feasibility level calculations to evaluate the incremental benefits of installing wedgewire screen ports in the solid wall panels. Prepared construction drawings for implementation of the new screen backing plates.



Justin D. Arnold, P.E.

Principal Hydraulic Engineer

Selected Projects

Puget Sound Energy, Field Startup at Upper and Lower Baker Floating Surface Collectors, Concrete, Washington, 2009 & 2013. Led field start-up testing preparation tasks, including test program development, design of velocity meter deployment hardware, and estimation of required backing plate porosity and louver settings. Lead engineer for field start-up tasks. Developed weir rating curves using ADV measurements. Performance of the floating surface collectors were tuned and verified, using Ott C-31 current meters and ADV. Analyzed data collected to guide the field program and develop report graphics and discussion. Provided interim status reports, discussion for several report sections, and conducted senior review of the final report.

Avista, Cabinet Gorge Dam Spillway Modifications Feasibility Study, Clark Fork River, Idaho, 2011. Conducted a feasibility study of the use of macro-scale roughness elements and flip bucket treatments to reduce production of total dissolved gas. Developed conceptual design of roughness and flip bucket options, and operation schedule.

Portland General Electric, River Mill Surface Collector and Penstock, Estacada, Oregon, 2011. Project engineer/manager for a physical hydraulic model study of a downstream fish passage facility installed within an isolation box in front of the Unit 5 intake. Developed a rating curve for the gates designed to admit flow to the isolation box for operation above the 500 cfs design capacity of the fish screen.

USACE - Seattle District, Howard Hanson Fish Passage Facility, Green River, Washington, 2010. Project engineer and technician for physical hydraulic model study to balance the approach velocity normal to a modular inclined screen installed in a fish collection assembly. Screen performance was evaluated using LDV measurements and visual observation of dye injected into the flow field. Design change recommendations were developed to balance the velocity distribution normal to the screen face.

Portland General Electric, Pelton Round Butte Selective Water Withdrawal and Fish Collection Facility, Warm Springs, Oregon, 2009. Evaluated and developed designs of various system components of a floating selective water withdrawal and fish passage structure. Calculated system head losses for use in design geometry development and load estimating. Designed and operated a physical hydraulic model to verify head losses, identify design deficiencies, and develop improvements. Conducted field startup and hydraulic balancing of prototype facility screening systems, including instrument selection and deployment strategies, test program development, louver setting calculations, and execution of field test and adjustment programs.

Montgomery Watson Harza, Cowlitz Falls Fish Passage, Morton Washington 2007. Lead engineer for hydraulic balancing of fish screen. Flow was drawn through the facility via gate slots leading to the turbine intakes. Developed weir rating curve and balanced approach velocity for three ranges of turbine discharge to maintain design attraction flow rate of 200 cfs.

USACE - Portland District, Bonneville Second Powerhouse Vertical Barrier Screen Debris Investigation and Startup Testing, Bonneville, Oregon, 2004/2005. Project engineer for a physical hydraulic model study to balance velocity magnitudes approaching a vertical barrier screen and develop a gatewell discharge rating curve. Made velocity and pressure measurements using LDV and piezometric taps. Conducted investigations of debris accumulation patterns and their impact on screen velocity and headloss. Data were used to develop cleaning cycle recommendations to prevent screen failure. Deployed current meters in the powerhouse gatewell to verify the gatewell discharge rating curve and lateral flow distribution.

Gunderboom, Inc., Aquatic Filter Barrier Screen Cartridge Prototype Testing, Astoria, New York, 2005. Designed test facility for evaluation of a prototype aquatic filter barrier screening system. Conducted ADV velocity measurements at the screen face to ensure performance criteria were met. Subjected screen cartridge to increased differential loads to evaluate the flow capacity and structural integrity of the cartridge design.

Rincon Consultants, Inc.
Environmental Scientists · Planners · Engineers


Lindsay Griffin, CISEC, QSP

PROJECT BIOLOGIST

Lindsay Griffin serves as a Senior Biologist and Project Manager in Rincon's Natural Resources Group for the past six years, where she focuses on coastal watershed resources and provides support on biological, regulatory permitting, project management, CEQA and NEPA related assignments statewide. Lindsay graduated from the University of California, Santa Barbara with a Bachelors of Science degree in Environmental Studies with an emphasis in Ecology, Evolution and Marine Biology. Lindsay has extensive training with the fauna and flora of the California coast. She has received specific training in survey protocols, habitat requirements and natural histories of the tidewater goby, steelhead, Santa Ana sucker, arroyo chub and California red-legged frog, as well as federally and state listed coastal avian species such as the California least tern and western snowy plover. She holds a USFWS Recovery Permit 10(a)(1)(A) for tidewater goby. Lindsay has conducted extensive surveys and provided monitoring for the above species throughout southern California. Additionally, Lindsay is a water quality specialist and a qualified CISEC (Certified Inspector of Erosion and Sediment Control) and a QSP (Qualified SWPPP Practitioner). She has managed and implemented numerous water quality and storm water compliance projects. She is responsible for oversight and implementation of fieldwork, data collection, compilation, client and agency contact, report preparation, and project management.

EDUCATION

B.S., Environmental Studies,
University of California, Santa
Barbara

CERTIFICATIONS/ REGISTRATIONS

USFWS Recovery Permit
10(a)(1)(A) for tidewater goby
Certified Inspector of Sediment &
Erosion Control (CISEC)
Certification (1/13)
Qualified SWPPP Practitioner
(QSP)
Scientific Collecting Permit (SC-
12409)

AFFILIATIONS

Member, American Cetacean
Society (ACS)
Salmonid Restoration Federation
(SRF)
Surfrider Foundation (Member)
California Trout (Caltrout
Member)

EXPERIENCE

Rincon Consultants, Inc. (2012 -
present)
Community Property
Management (2011-2012)
POD (Protect Our Dolphins) of
Santa Barbara (2010 – 2012)

PROJECT EXPERIENCE

PERMIT COMPLIANCE MITIGATION IMPLEMENTATION

- Construction Monitoring/Fisheries Biologist Lead for McGrath State Park Campground Water Siphon, Tidewater goby surveys, monitoring and relocation, Ventura County Watershed Protection District- Santa Clara River Estuary, Ventura County, California
- Fisheries Biologist, Utility Client, Presence/absence surveys, Arroyo chub and threespine stickleback relocations and steelhead monitoring- Ventura River, Ventura, California
- Fisheries Biologist, Carpinteria Sanitary District Emergency Floodwall Repair Project, Tidewater goby surveys, monitoring – Carpinteria Creek, Carpinteria California
- Fisheries Biologist/Project Manager, Emergency Culvert Replacement Project, Caltrans, Tidewater goby surveys and monitoring- Sycamore Creek, Santa Barbara, California
- Senior Fisheries Biologist, Santa Ana River Bellows Joint Construction Monitoring, Metropolitan Water District of Southern California, Santa Ana sucker surveys and monitoring- Santa Ana River, California
- Senior Fisheries Biologist and Construction Monitoring Lead for Chapala Creek and Mason Street Bridge Replacement Project, Tidewater goby and steelhead surveys, monitoring and relocation- City of Santa Barbara, California
- Senior Fisheries Biologist, Emergency Debris Removal Project Biological Assessment and Permitting (Primary Author), City of Carpinteria- Carpinteria Creek, California



Real Support Property
Management (2005 – 2011)

Parkstone Companies (2003 –
2005)

- Senior Aquatic Biologist and Project Manager, LA 1 Trancas Cr Bridge CRLF Habitat Assessment (Primary Author), California Department of Transportation (CalTrans) District 7, City of Malibu – Trancas Creek, CA
- Senior Aquatic Biologist and Project Manager, SR-27 Arborist Project, Steelhead Monitoring in Topanga Creek, California Department of Transportation (CalTrans) District 7, Topanga Canyon, California
- Senior Fisheries Lead, Southern California Steelhead Monitoring, snorkel and spawner surveys- San Antonio Creek, Ojai, Ventura County, California
- Presence/absence verification surveys with electro-fishing and PIT tagging for brown trout (*Salmo trutta*) in Mono Lake tributaries as part of Los Angeles Water and Power's long-term settlement agreement to restore the Mono Lake Basin with Ross Taylor Associates.
- Western pond turtle presence/absence and HSI surveys – Conejo Creek, City of Thousand Oaks, California (1 survey with positive ID of species)
- California red-legged frog presence/absence survey, San Luis Obispo Creek, San Luis Obispo, California (protocol day/night surveys)
- Water Quality Specialist, Various Culvert Improvement/Replacement Projects, Ventura County Watershed Protection District, Ventura, California
- Construction Monitoring for avoidance of Western snowy plover- Los Angeles County Beaches & Harbors, Los Angeles Beaches, California (43 adult plovers observed).
- Western snowy plover and California least tern nest surveys- Ormond Beach, California (66 adult plovers, 2 brood, 3 chicks, 14 nests with eggs observed)
- California least tern nest surveys and monitoring- United Water Conservation District, Saticoy, California

PROJECT EXPERIENCE, CONT'D

- Construction Monitoring for compliance with Coastal Development Permit– Private Residential Coastal Development on Padaro Lane in Carpinteria, CA
- Restoration of oak woodlands – City of Agoura Hills, Agoura Hills, CA
- Biological Resources Assessments, Cardno ATC Associates, Var. Locations, CA
- Aquarist/Animal Husbandry Intern with Heal the Bay, Santa Monica, California
- Marine Mammal Research (acoustic analysis, photo identification, mapping of distribution, boat-based behavioral identification), POD (Protect Our Dolphins) of Santa Barbara, Santa Barbara, California & Okeanis – Monterey Bay, California
- Nesting bird surveys – Private Residential Coastal Development on Padaro Lane in Carpinteria, CA
- Nesting bird surveys, Cardno ATC, Cell Tower Sites in Riverside, Los Angeles & San Bernardino Counties, California
- Evaluation of Habitat Restoration Project on UCSB Lagoon Bluffs, The Cheadle Center for Biodiversity & Ecological Restoration (CCBER), Santa Barbara, California
- Native Plant Restoration Monitoring & Maintenance Oversight, private residence, Santa Monica Mountains, California

WATER QUALITY MONITORING/WATER DIVERSION

- Surface water and ground water sampling (401/404), Ventura County Watershed Protection District, Various flood control channel improvement projects, Ventura County, California
- SWPPP Compliance Inspections- Westlake Village Community Park, Westlake Village, CA



Rincon Consultants, Inc.
Environmental Scientists · Planners · Engineers

Rincon Consultants, Inc.
Environmental Scientists · Planners · Engineers


Steve Howard

LEAD PROJECT BIOLOGIST

Mr. Howard is a certified fisheries professional with expertise in ESA consultations, aquatic studies including fishery and amphibian habitat assessment and population surveys, fish and amphibian species identification, fish passage assessment, instream flow studies, fish and aquatic invertebrate population analysis, water quality assessment, and wildlife population surveys. Mr. Howard has performed numerous projects in aquatic habitats ranging from high elevation lakes and streams to coastal estuaries. Mr. Howard has also conducted projects including subsurface soil and groundwater investigations, environmental impact studies, environmental monitoring, and site closure and remediation. Mr. Howard has been involved in permitting large power projects and smaller instream projects throughout California.

Mr. Howard has conducted numerous fish population studies throughout many of the western states including Chinook Salmon, steelhead and Bull Trout studies in northern California and Oregon, steelhead studies in central and southern California, various trout species studies in California, Oregon and Idaho, and native non-game fish studies in Oregon and southern California. Mr. Howard has also conducted fish population surveys in southern and central California estuaries for the endangered Tidewater Goby and has conducted surveys for Unarmored Threespine Stickleback in the Santa Clara River and Santa Ana Sucker surveys in various southern California drainages. Mr. Howard has performed California Red-legged Frog and Arroyo Toad surveys in southern and Central California. Mr. Howard has provided expert analyses to various CEQA and NEPA documents on steelhead related projects in southern California.

HYDROELECTRIC PROJECT EXPERIENCE

Mr. Howard has directed or conducted technical aquatic studies and helped prepare applications to relicense hydroelectric projects in the Sierra Nevada mountains and in southern California. Mr. Howard participated in numerous studies related to the BIG Creek alternative licensing process (ALP) in the San Joaquin River watershed including water quality, macroinvertebrate studies, fish population surveys, geomorphic studies, and instream flow studies. Mr. Howard lead many of the aquatic studies related to the relicensing of Santa Felicia Dam on Piru Creek in Ventura County, California. Mr. Howard also participated in dispute resolution meetings during the relicensing process. The results of these meetings resolved disputes regarding data analysis and instream flow objectives. When employed at United Water Conservation District, Mr. Howard developed with assistance of consultants many of the studies required under the FERC license and biological opinion by the National Marine Fisheries Service. These studies were also developed in collaboration with NMFS. Mr. Howard has been retained as an expert witness in ESA litigation and has provided testimony in federal court related to water projects and endangered species.

EDUCATION

B.S., Freshwater Fisheries,
Humboldt State University,
1999)

AFFILIATIONS

American Fisheries Society
Desert Fishes Council
American Institute of Fisheries
Research Biologists
Certified Fisheries Professional,
American Fisheries Society
Federal 10(a)(1)(A) permit for
Tidewater Goby, Unarmored
Threespine Stickleback, Santa
Ana Sucker, and California Red-
legged Frog.

EXPERIENCE

Rincon Consultants, Inc.
(2018 – present)
R2 Resource Consultants (2016
– 2018)
United Water Conservation
District (2007 – 2015)
Entrix Environmental
Consulting (2000 – 2007)

AREAS OF EXPERTISE

Project Management
Fisheries/Hydrology
Aquatic Ecology
Aquatic Endangered Species
Water Quality
Environmental Compliance &
Permitting



ESA CONSULTATIONS

Mr. Howard was part of a team that designed an effects analysis methodology for steelhead in the Ventura River. The analysis was a habitat-based analysis related to effects from operations and maintenance activities throughout the watershed by multiple agencies. Mr. Howard was also part of a technical team that collaborated with federal resource agencies to develop a Multiple Species Habitat Conservation Plan for operations and maintenance activities of the Freeman Diversion on the Santa Clara River. Fish species covered under the plan include southern California steelhead, Pacific Lamprey, Santa Ana Sucker and Tidewater Goby. Mr. Howard worked with the staff hydrologist to evaluate effects downstream of the diversion based on a hydrologic model that used over 60 years of hydrologic and ground water data to evaluate effects to migrating steelhead and Pacific Lamprey migrating between the ocean and the diversion.

HABITAT ASSESSMENTS/BIOASSESSMENTS

Mr. Howard has conducted habitat assessments for aquatic species from high mountain streams to coastal rivers and estuaries. Some of these include habitats for resident salmonids, steelhead and Pacific Lamprey, Tidewater Goby, Unarmored Threespine Stickleback, Arroyo Toad and California Red-legged Frog. Many of these assessments were related to FERC Relicensing projects, pre-construction surveys, and Habitat Conservation Plans. Mr. Howard worked with a team to design and conduct a bioassessment study in the Santa Clara River Estuary. The macroinvertebrate data were used to characterize population diversity and to develop relationships between species abundance, density, richness and microhabitat preferences (grain size, salinity tolerances, etc.) in support of defensible site-specific NPDES limits for treated wastewater discharge to the estuary. Mr. Howard has also conducted bioassessments in coastal rivers and high mountain streams in California utilizing SWAMP procedures.

ENDANGERED/THREATENED/SENSITIVE SPECIES STUDIES

Mr. Howard has worked with multiple federal and state listed species or species of special concern in California including southern California steelhead, Tidewater Goby, Santa Ana Sucker, Unarmored Threespine Stickleback, California Red-legged Frog, Arroyo Toad, Arroyo Chub, and Pacific Lamprey.

WATER QUALITY

Mr. Howard has designed and implemented water quality studies from high mountain streams and reservoirs to coastal rivers and lagoons. Many of these studies were related to dam relicensing requirements, NPDES water quality permits and certifications, and invasive species control and eradication including Quagga Mussels.

PUBLICATIONS

- Swift, C. C., D. Holland, M. Booker, R. Woodfield, A. Gutierrez, S. Howard, J. Mulder, E. Bailey, and B. Lohstroh 2018. Long-term qualitative changes in fish populations and aquatic habitat in San Mateo Creek Lagoon, northern San Diego County, southern California, USA. *Bull. Southern California Acad. Sci.* 117(1), pp. 1–28.
- Howard, S.R. and M.T. Booth. 2016. Range expansion of Shimofuri Goby (*Tridentiger bifasciatus*) in southern California, with emphasis on the Santa Clara River. *California Fish and Game* 102(2):45-49
- Swift, C. C., S. Howard, J. Mulder, D. J. Pondella II, and T. P. Keegan. 2014. Expansion of the non-native Mississippi Silverside, *Menidia audens* (Pisces, Atherinopsidae), into fresh and marine waters of coastal southern California. *Bull. Southern California Acad. Sci.* 113(3). pp. 153-164.
- Swift, C. C., and S. Howard. 2009. Current status and distribution of the Pacific Lamprey south of Point Conception, southern coastal California, USA. Pages 269-278 in L. R. Brown, S. D. Chase, M. G. Mesa, B. J. Beamish, and P. B. Moyle, editors. *Biology, management and conservation of lampreys in North America*. American Fisheries Society, Symposium 72, Bethesda, Maryland.



Rincon Consultants, Inc.
Environmental Scientists · Planners · Engineers

MEMORANDUM

TO: Board of Directors

From: Michael L. Flood, Interim General Manager

RE: **Proposed Revision to the Water Allocation and Efficiency Program (WEAP) to Allow an Allocation Aggregation Variance by Agreement for All Qualifying Customers with Annual Allocations.**

Date: November 20, 2018

RECOMMENDATION:

Board of Directors consider approval of a revision to the WEAP as follows:

1. Revision to the 'Addendum to the Application for Water Service Variance for Water Allocation and Water Consumption Aggregation' form to allow for all qualifying customers with annual allocations to aggregate their allocations.
2. Amend all annual allocation customer classifications with the following language within the WEAP:

"The customer may apply and be considered for the aggregation of allocations and water volume for accounts serving contiguous parcels under a single ownership, subject to the conditions of the Casitas addendum to the Application for Water Service. The issuance of the aggregation variance is subject to the discretion of the General Manager."

BACKGROUND:

On October 11, 2017, the Board of Directors adopted a modification to the WEAP allowing for agricultural and agricultural domestic customer classifications to aggregate their annual water allocations from different accounts under certain circumstances. These circumstances were as follows:

1. The water services to be aggregated had to serve parcels that were contiguous.
2. Said parcels must be under a single ownership.
3. Customers must request an allocation aggregation via a Casitas MWD 'Addendum to the Application for Water Service Variance for Water Allocation and Water Consumption Aggregation' form.

DISCUSSION:

This revision to the WEAP has been a useful tool to provide a fair administration of the program. Customer needs in regard to water use may change within a particular physical location throughout the year and allowing allocation aggregation can assist a customer to use water more efficiently. Staff realized that all customers currently under annual allocations and can meet the criteria of the addendum would also be able to benefit from this program.

The proposed changes to the 'Addendum to the Application for Water Service Variance for Water Allocation and Water Consumption Aggregation' form are attached.

PROPOSED

ADDENDUM TO THE APPLICATION FOR WATER SERVICE

VARIANCE FOR WATER ALLOCATION AND WATER CONSUMPTION AGGREGATION

This addendum to the Application for Water Service allows eligible customers to aggregate the annual allocations and water consumption for the herein mentioned active water service accounts.

Terms and Conditions. The terms and conditions of this variance, water allocation assignments and water allocation adjustments are in accordance with the Casitas’ Rates and Regulation and the Casitas’ Water Efficiency and Allocation Program, as revised from time to time. The District retains full and sole discretion to issue, condition, and terminate this variance at any time. Water served through each meter is to be used only for the parcels under the ownership of the single entity, and no water may be transferred or shared with other parcels under a different ownership.

Aggregation. The aggregation of water allocations and water consumption is accomplished by the combining of water allocation assignments and metered water consumption for two or more water services that are serving contiguous parcels that are owned by the same entity. The combining of fiscal year (July-June) water allocations and water consumption will occur during the District’s determination of the quantity of water consumed that is in excess of the customer’s allocation. The excess water consumption from the aggregation of water allocation and water consumption is subject to the application of the Conservation Penalty.

Eligibility for the Aggregation Variance. The following criteria are required for the Aggregation Variance:

- Qualify for the annual over-allocation billing classification.
- Contiguous parcels under a single ownership.

Applicable Water Service Accounts and Parcels.

The following water service accounts are designated to participate under this variance:

Account No. _____	Account No. _____
Account No. _____	Account No. _____
Account No. _____	Account No. _____

The customer designates the following participating assessor’s parcel numbers under this variance:

APNs: _____

I have completed this addendum and affirm that I am the applicant to the above accounts, the property owner or designated representative of the property owner for the above listed parcels, and the information contained herein, including attachments, is complete and accurate. I further understand that all variances are subject to change and I may be liable for back charges for any violation of the conditions of this addendum.

Signature: _____ Date: _____

Casitas Municipal Water District:

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Administration: _____ Date: _____

11/28/18

**CASITAS MUNICIPAL WATER DISTRICT
INTEROFFICE MEMORANDUM**

TO: MICHAEL FLOOD, INTERIM GENERAL MANAGER
FROM: JULIA ARANDA, ENGINEERING MANAGER
SUBJECT: AUTHORIZE INTERIM GENERAL MANAGER TO SIGN AN AGREEMENT FOR PROFESSIONAL GIS SERVICES
DATE: 11/27/2018

RECOMMENDATION:

It is recommended the Board of Directors authorize the Interim General Manager to enter into an agreement for professional GIS services with ESRI, Inc for the sum not to exceed \$47,000.

BACKGROUND AND DISCUSSION:

The District invested in the creation of a Geographic Information System (GIS) to assist in the efficient operation of the water system. Much progress has been made since 2017 to incorporate the Casitas and Ojai systems into a GIS database. Field data has been gathered on most assets, and use of the GIS for work order management is beginning to be employed.

The District engaged ID Modeling, Inc., (now Sedaru) to create the base GIS map for the Casitas system. The water model prepared by Water Systems Consulting for the Ojai System has also been integrated into the GIS. A GIS committee was formed to coordinate activities across all District departments. The committee is providing feedback on how best to implement the District's GIS program for their respective departments. Additionally, the GIS technician is providing support to departments for GIS-related analysis, mapping, and training.

ESRI is the leader in the GIS industry and is the software provider for the District's GIS. The agreement with ESRI for the ESRI Enterprise Advantage Program (EEAP) will provide the next steps needed to help integrate the different departments into the GIS, additional storage space on the internet, and provide training to better utilize the tools in the software.

BUDGET IMPACT:

The Fiscal Year 18-19 budget includes \$50,000 for GIS services.

Attachment: ESRI proposal for EEAP dated 10/1/2018



October 1, 2018

Michael Flood
General Manager
Casitas Municipal Water District
1055 N Ventura Ave
Oak View, CA 93022

Dear Mr. Flood,

The purpose of this letter is to provide estimated budgetary costs for extending Casitas Municipal Water District (CMWD)'s GIS program during the remainder of the 2018 Fiscal Year. These cost options could change based on further evaluation of your needs and how your organization chooses to proceed with ArcGIS. However, the costs being provided are based on well-established and proven industry patterns across our water utility customers in the US.

These programs would enable Casitas Municipal Water District to reach the following stated goals:

- Develop a more geocentric organization by creating a live-link between authoritative information and departments, groups, and individuals through a portal
- Support a solid GIS foundation through Enterprise GIS and migrate to the [Water Industry Data Model](#)
- Optimize field and office workflows through deployment of low risk, high reward solutions
- Support CMWD's GIS deployment long-term through foundational training courses

Recommendations

A key first step for CMWD is to reinforce and stabilize the current GIS deployment which has been discussed and confirmed by staff. Esri is providing two options for your consideration. Both options include a complete solution involving Software (Software as a Service or SaaS), Services and Training.

Additional Named User Licenses (Software as a Service)

In order to accomplish the first 2 goals outlined above, we discussed adding named-user licenses. Adding Named Users will allow individuals to access resources and geographic information through Apps and web maps. Each user receives a unique user identity to sign in and access information they need from any device, anywhere. Each user's access, security level and capabilities can all be controlled.

- Level 2 Named User licenses - \$500/user/annually - Level 2 Named Users can view information in maps and Apps, create and share content, perform edits and own groups, in addition to other tasks. Individual's access, security and capabilities can be controlled. This level is ideal for field crews needing to work with Apps to collecting data, red-line, and for completing tasks such as meter change outs, valve turning and leak investigations.

- Level 1 Named User licenses - \$100/user/annually - Level 1 Named Users can view information in maps and Apps only and join groups. Individual's access, security and capabilities can be controlled. This level is ideal for inner office staff and management for viewing maps or dashboards to monitor water quality or progress of tasks being completed in the field.

Unlimited level 1 named users will be available to CMWD through the deployment of ArcGIS Enterprise (see services engagement below). Twelve (12) additional level 2 named users have been added to enable those staff members who need advanced capabilities such as red-lining, collecting information to improve data completeness and completing assigned tasks in the field. The additional 12 level 2 named users are \$6,000 per year on an annual basis.

Services

Esri is providing two options for your consideration. Both options include a complete solution involving Software, Services and Training. In both options, the Software recommendations and Training recommendations remain the same. Also provided are justifications as to how and why the different Services programs can provide a positive impact to the organization both operationally and technologically.

1. Starter Option: Additional Level 2 Named Users (Software as a Service) + Small EEAP (Services) + Training

The small EEAP will enable CMWD to accomplish the following over the course of the 1-year EEAP engagement beginning in 2018:

- Bring Data Management in house
- Platform Deployment, Configuration, and Provisioning
- Platform Enablement
- Training to support organization and administer ArcGIS long-term

The total pricing estimate for the **Starter Option** to be started this 2018 Fiscal Year is **\$65,070** (2018 pricing). The breakdown for Software, Services & Training are as follows:

Component	Program	Total for 2018
Software as a Service (Additional Named-User Licenses)	(12) Level 2 Named User License	\$6,000
Services	EEAP 1-year engagement (small)*	\$47,000 (2018 price)
Training	(21) Training days with SUEA discount	\$12,070
Total		\$65,070

*The small EEAP consists of 50 learning and service credits and 50 technical advising hours. Please note, there is also a mid-sized EEAP program which has 50 learning and service credits and 100 technical advising hours for 59,000 for 2018 if CMWD would like additional technical advising throughout the year. An example of how the 50 learning and service credits can be designated is as follows:

Goal	Activity
Bring data management in house and migrate to the water industry standard model	<u>Water Industry Data Model (WDM) Mapping and Migration: remote support</u> <ul style="list-style-type: none"> • Migration of Casitas MWD's asset data in its current GIS model for collections into Esri's WDM • Create geometric networks and implement data reviewer
Develop a more geocentric organization	<u>Enterprise Jumpstart: 3 days onsite</u> <ul style="list-style-type: none"> • Configure on-premises portal for CMWD • Set up security (SSL, Logins) • Federate Portal and ArcGIS Server • Set up Third-Party replacement Apps (if time permits) * • Knowledge transfer to responsible staff for topics such as, <ul style="list-style-type: none"> ○ ArcGIS Enterprise administration ○ Creating, updating, configuring and administering geodatabases ○ Creating and working with services ○ Sharing imagery and caching ○ Configuring and using a Web GIS Portal ○ Disaster Recovery
Support organization and administer GIS long-term through foundational knowledge	<u>Instructor-led training courses</u> Any remaining learning and service credits can be applied towards training courses (1 credit = 1 day of instructor-led training) identified in the Training Recommendations section (see below)

Optional Add-on to Starter Option:

After CMWD's data has been migrated to the Water Industry Standard Data model and ArcGIS Enterprise has been configured to support the organization, CMWD can focus on extending GIS to field and office staff through configurable applications. If CMWD would like to add this service, the a-la -carte price is provided below. *This total is not included in the estimate for the Starter Option above:*

Optimize field and office workflows	<u>Web GIS Launch Kit: 3 days onsite</u> <ul style="list-style-type: none"> • Esri to set up low risk, high reward field and office Apps such as, red-lining App, map change request (to complete data set), valve exercising, meter change outs, leak investigations, viewers/dashboards for management, outage map for customers • Third-Party replacement Apps (see above) • Knowledge transfer to responsible staff 	\$11,1000 (2018 price)
-------------------------------------	--	---------------------------

2. Advanced Option: Additional Level 2 Named Users (Software as a Service) + Large EEAP (Services) + Training

The large EEAP will enable CMWD to accomplish the following over the course of the 1-year EEAP engagement beginning in 2018:

- Bring Data Management in house
- Platform Deployment, Configuration, and Provisioning
- Platform Enablement
- Training to support organization and administer ArcGIS long-term
- Dig Alerts /811 Locates (see [811 Services Document](#))

The total pricing estimate for the **Advanced Option**, to commence this 2018 Fiscal Year, is **\$104,070** (2018 pricing). The breakdown for Software, Services & Training are as follows:

Component	Program	Total for 2018
Software as a Service (Additional Named-User Licenses)	(12) Level 2 Named User License	\$6,000
Services	EEAP 1-year engagement (Large)**	\$86,000 (2018 price)
Training	(21) Training days with SUEA discount	\$12,070
Total		\$104,070

**The large EEAP consists of 100 learning and service credits and 100 technical advising hours which can be designated as follows:

Goal	Activity
Bring data management in house and migrate to the water industry standard model	<u>Water Industry Data Model (WDM) Mapping and Migration; remote support</u> <ul style="list-style-type: none"> • Migration of Casitas MWD's asset data in its current GIS model for collections into Esri's WDM • Create geometric networks and implement data reviewer
Develop a more geocentric organization	<u>Enterprise Jumpstart; 3 days onsite</u> <ul style="list-style-type: none"> • Configure on-premises portal for CMWD • Set up security (SSL, Logins) • Federate Portal and ArcGIS Server • Set up Third-Party replacement Apps (if time permits) * • Knowledge transfer to responsible staff for topics such as, <ul style="list-style-type: none"> ○ ArcGIS Enterprise administration ○ Creating, updating, configuring and administering geodatabases ○ Creating and working with services ○ Sharing imagery and caching ○ Configuring and using a Web GIS Portal ○ Disaster Recovery
Optimize field and office workflows	<u>Web GIS Launch Kit; 3 days onsite</u>

	<ul style="list-style-type: none"> • Esri to set up low risk, high reward field and office Apps such as, red-lining App, map change request (to complete data set), valve exercising, meter change outs, leak investigations, viewers/dashboards for management, outage map for customers • Third-Party replacement Apps (see above) <p>Knowledge transfer to responsible staff</p>
Automate and streamline 811 locates	<u>811 Locates Services Offering</u> <ul style="list-style-type: none"> • Configure 811 Locates App • Setup a script that runs 24/7 to processes incoming emails from the 811 system
Support organization and administer GIS long-term through foundational knowledge	<u>Instructor-led training courses</u> Any remaining learning and service credits can be applied towards training courses (1 credit = 1 day of instructor-led training) identified in the Training Plan (see below)

Training

As previously discussed, CMWD will work with a designated Training Coordinator who will compose a training plan of both free e-learning (self-paced) and paid instructor-led trainings. The Training Coordinator will identify training courses based on CMWD's current experience with ArcGIS and identify which courses will support the above-mentioned activities. Most instructor-led training span over the course of 2 to 3 days and can be taken remotely (online) or at one of [Esri's training facilities](#). The Training Coordinator will be involved throughout the EEAP engagement and will work closely with the Technical Advisor and Account Manager to schedule training courses at relevant times. While the learning and service credits through the EEAP can be applied towards training courses (1 credit = 1 day of instructor-led training), it is strongly recommended that CMWD also considers budgeting for training outside of the allotted EEAP program to avoid over-consuming credits.

Based on preliminary discussions with CMWD's training coordinator and responsible staff, it is estimated that following courses would support staff over the course of the 1-year engagement.

Course	# of attendees	Class length (days)	Price per person	Total	Notes
Introduction to GIS Using ArcGIS	2	2	\$1,210	\$2,420	Optional
ArcGIS Pro: Essential Workflows	2	3	\$1,815	\$3,630	Optional
Migrating from ArcMap to ArcGIS Pro	1	2	\$1,210	\$1,210	
Managing Geospatial Data in ArcGIS	2	2	\$1,210	\$2,420	
Working with Geometric Networks for Utilities	2	1	\$605	\$1,210	
Sharing GIS Content Using ArcGIS	2	2	\$1,210	\$2,420	Optional
ArcGIS Enterprise: Configuring a Base Deployment	1	2	\$1,210	\$1,210	
ArcGIS for Server: Site Configuration and Administration	1	3	\$1,815	\$1,815	
Field Data Collection and Management Using ArcGIS	2	2	\$1,210	\$2,420	
Using ArcGIS for Water Utility Workflows	2	2	\$1,210	\$2,420	

Services through Partner

Other needs identified through on-going conversations can be accomplished by leveraging one of our partners. It is recommended that Esri Business Partners be leveraged for:

- Management of Cloud Deployment of ArcGIS Enterprise (if not managed on-premises within CMWD's infrastructure)
- Purchasing a GNSS High-Accuracy Receiver with Bluetooth capabilities

I want to thank you for your interest in ArcGIS and please do not hesitate to contact me if you have any questions.

Thank you,

Abbey Lozano | Account Manager | Esri Global Water Practice





AN ESRI
PROPOSAL

October 1, 2018

Proposal for the Esri Enterprise Advantage Program (EEAP)

Prepared for:

Julia Aranda, Engineering Manager
Casitas Municipal Water District
1055 N Ventura Ave
Oak View, CA 93022

Esri Proposal # P18-23851

380 New York Street
Redlands, California 92373-8100 usa
909 793 2853
info@esri.com
esri.com



Introduction

Environmental Systems Research Institute, Inc. (Esri) is pleased to provide this proposal to Casitas Municipal Water District (Casitas MWD) for the Esri Enterprise Advantage Program (EEAP). The EEAP is a collaborative gateway to Esri experts and key services that can help your organization define, implement, and operate a location platform.

Esri recognizes the vision your organization has for GIS across the enterprise and anticipates that the EEAP can be leveraged to support your high-impact initiatives, including:

- Develop a more geocentric organization by creating a live-link between authoritative information and departments, groups, individuals through a portal
- Optimize field and office workflows
- Ensure data health to support GIS

To accomplish this, your organization will experience an ongoing engagement that aims to keep you at the forefront of Esri resources, technology, and best practices. Over the course of the year, you will have the opportunity to:

- Collaborate with a trusted advisor who will work proactively with your team through key meetings and regular communication
- Develop a plan for implementing a location strategy that drives innovation and idea incubation throughout your organization
- Access select support, training, consulting, and managed cloud services, as needed, to achieve your objectives
- Receive strategic advice and planning to support your staff, introduce GIS across your organization, and solve key business problems

Through the EEAP, Esri will help your organization maximize the impact of its investment in Esri technology. The proposal below describes the components of the EEAP and includes a proposed program configuration based upon Esri's current understanding of your organization's objectives and priorities.

EEAP Components

Technical Advisor

The EEAP provides organizations with an assigned Technical Advisor, whose mission is to drive long-term vision and technical enablement through understanding of your key business and technical objectives. Also, the Technical Advisor will become familiar with your organizational structure, system architecture, Esri software usage, applications, and workflows. The Technical Advisor works with the Esri Account Manager to:

- Understand your organization's critical workflows and recommend opportunities to enhance those workflows with location-based solutions
- Engage in and facilitate strategic meetings with your organization's key staff, Esri experts, and other relevant stakeholders throughout the term of the EEAP
- Create a Technical Work Plan, which will articulate the vision, objectives, and goals of your organization and identify strategic activities that will help meet those goals
- Proactively work with your organization and Esri experts to execute on the activities determined in the Technical Work Plan throughout the course of the EEAP
- Maintain continuity through proactive communication and coordination throughout the engagement

Annual Planning Meeting

A key component of the EEAP is the Annual Planning Meeting, a one-day meeting conducted at Esri's headquarters in Redlands, an Esri regional office, or on-site at your facility. The meeting is coordinated and attended by the Technical Advisor and your Esri account team, with participation by other appropriate Esri technical and business staff. The objective of the meeting is to gather organizational stakeholders to discuss and understand your vision, goals, and objectives, and to begin to define ways the EEAP can be used to achieve those goals.

The Annual Planning Meeting provides valuable input for the Technical Advisor to develop your Technical Work Plan. The Technical Work Plan is a living document that outlines your targeted objectives and defines a plan of action to meet those objectives through the execution of Learning and Services activities.

Learning and Services Activities

Learning and Services activities are a flexible way for your organization to receive focused technical enablement support that addresses the objectives defined in the Technical Work Plan.

An associated Learning and Services credit value is assigned to each activity. See Table 1 (below) for a list of common activities with their associated credit value. For a comprehensive list of Learning and Services activities, please visit:

<http://www.esri.com/services/eeap/components>

Table 1. Learning and Services Activities with Associated Credit Values

Activities	Quantity	Learning and Services Credit Value
Business or Technical Consulting	2 hours	1
Premium Support Services	Annual subscription, 2 authorized callers, unlimited incidents	75
Instructor-led Training	1 day/1 person at US-based Esri facility or virtual classroom	1
Esri Managed Cloud Services	Variable, based upon your organization's requirements	As Quoted
Esri Technical Certification Exam	1 exam voucher	0.5
DevSummit Conference Registration	1 registration	1

We have included a brief list of specific Learning and Services activities that may be of interest to your organization in Appendix A. These activities, and others, would be further defined during the Annual Planning Meeting with your Technical Advisor.

Additional Program Benefits

Program subscribers will get access to the **Quarterly Technology Webcast**, an exclusive webinar where Esri Product Managers and other subject matter experts share software sneak peeks, insight into best practices, and perspectives on industry trends.

Additionally, each month your Technical Advisor will provide you with the **Esri Product Release Newsletter**. This comprehensive newsletter brings you the latest information about ongoing product releases, as well as updates on hot issues with our existing releases.

Proposed EEAP Configuration

The proposed EEAP configuration below is based upon Esri's current understanding of Casitas MWD's defined organizational objectives. Because the EEAP is an annual program, this configuration is intended to be leveraged within a period of 12 months.

Your organization may acquire additional Technical Advisor hours and/or Learning and Services Credits at any time during the program.

Description	Proposed Configuration Year 1
Technical Advisor	Up to 50 Hours
Learning and Services Activities	50 Credits
Annual Planning Meeting	Included
Quarterly Technology Webcast	Included
Price	\$47,000

The price quote is effective for 90 days and is exclusive of any applicable taxes for which Esri may collect and Casitas MWD shall remain responsible. This proposal is subject to the terms and conditions of the Advantage Programs Agreement (E204AP), which has been provided as part of the which is attached hereto as Appendix C.

Purchasing

To order these services as quoted, please email the following items to Eleni Navarro at enavarro@esri.com.

1. A copy of Quote No. 20537384 dated September 24, 2018 (attached in Appendix B), signed by an authorized representative OR a Purchase Order in the amount of the Total Firm Fixed Price above referencing the Quote No. 20537384
2. The Advantage Program Agreement (attached in Appendix C), signed by an authorized representative

After we receive these completed documents, your assigned Technical Advisor and Account Manager will contact you to schedule an initial phone call. We look forward to supporting you.

Contact

Abigail Lozano
 Account Manager
 303 449 7779 x8227
alozano@esri.com
www.esri.com

Appendix A Example Learning and Services Activities

Esri anticipates that the following sample activities may be of interest to your organization based upon an initial understanding of your requirements and industry best practices. Actual activities performed under the EEAP will be scoped and mutually agreed upon either during or following the Annual Planning Meeting and will be focused on your organization's specific objectives.

Activity 1 Water Industry Data Model (WDM) Mapping and Migration

This activity involves providing remote assistance with the migration of Casitas MWD's asset data in its current GIS model for collections into Esri's WDM. This support is envisioned to include assisting with the mapping of Casitas MWD's data to the WDM schema, modifying the WDM schema to accommodate model requirements not supported by the WDM (if required), and assisting with the migration of the data to a test environment. It includes providing a knowledge transfer on how to migrate and validate the results of the data migration using tools such as data reviewer and data interoperability. All support will be done remotely.

Activity 2 Platform Deployment, Configuration, and Provisioning

This activity will help the customer stand up a Location Platform within the customer's infrastructure. As part of this activity, an Esri consultant will meet on-site at a selected customer location to install and configure ArcGIS Enterprise consisting of Portal for ArcGIS, an ArcGIS Server site, and the ArcGIS Data Store, on customer provided physical, virtual or cloud servers. When installation and configuration are complete, the Esri consultant will focus the remaining time on knowledge transfer of standard ArcGIS Enterprise technology topics such as:

- ArcGIS Enterprise administration
- Creating, updating, configuring and administering geodatabases
- Creating and working with services
- Sharing imagery and caching
- Disaster recovery
- Configuring and using a Web GIS Portal

Activity 3 Platform Enablement

During this activity, Esri will help build the customer's capacity to use and administrator its Web GIS Portal. This activity includes on-site support by Esri consultant to configure an ArcGIS organization (ArcGIS Online subscription or existing Portal instance) and provide technology transfer to the customer's staff.

This activity includes a resource assessment to confirm the available GIS content, capabilities, and location product needs. The Esri consultant will help the customer register representative content, implement basic site branding, and configure sample maps and applications during the time on-site. Knowledge transfer topics include:

- Authoring registering and sharing content
- Creating web maps
- Account management and administrative tools
- Using Web GIS in user and publisher workflows
- Securing content and governance

Activity 4 Enterprise GIS Health Check

The Enterprise GIS Health Check provides support to review, monitor, and assess a GIS environment. This consulting services engagement provides a review and assessment of the overall state of a customer’s production GIS implementation based on key best practices considerations using a standard set of tools. It is a proactive approach designed to provide early detection of potential issues through a review of system configuration, workflows, error logs, system administration, and operations.

Activity 5 Training

Training will maximize the impact of the internal and external applications by providing customer staff with the knowledge needed to maintain and configure the ArcGIS Platform. User trainings could include:

- **Workforce Development Plan** – Esri will partner with the customer’s leadership to create a workforce development plan that aligns training with strategic business objectives. Esri will identify the business drivers and strategic objectives of the organization and together with customer staff, analyze the training need to meet these goals. This will be documented into a plan that will be used continuously to drive staff development
- **Instructor Led Training** – Esri will partner with the customer to provide targeted course recommendations for training based on the technology deployed within the platform.

Appendix B EEAP Quote

The remainder of this page intentionally left blank.



Environmental Systems Research Institute, Inc.
 380 New York St
 Redlands, CA 92373-8100
 Phone: 909-793-2853 Fax: 909-307-3049
 DUNS Number: 06-313-4175 CAGE Code: 0AMS3

To expedite your order, please attach a copy of this quotation to your purchase order.
Quote is valid from: 09/24/2018 To: 12/23/2018

Quotation # 20537384

Date: September 24, 2018

Customer # 278831 Contract #

Casitas Municipal Water District
 1055 N Ventura Ave
 Oak View, CA 93022

ATTENTION: Todd Evans
 PHONE: (805) 649-2251
 FAX: (805) 649-4485

Material	Qty	Description	Unit Price	Total
161877	1	Small Government and Local Utility EA Esri Enterprise Advantage Program (EEAP): 50 Technical Advisor Hours/ 50 Learning and Services Credits - Annual subscription designed to provide enterprise-wide visioning and geospatial enablement through technical advisory, an annual planning meeting, a collaboratively developed technical work plan, and access to exclusive quarterly technology webcasts. The program also provides access to a combination of consulting, premium support, and training services. This configuration includes a one day annual planning session; up to 50 Technical Advisor hours; Quarterly Technology Webcasts and 50 Learning and Services Credits. The Esri Advantage Program terms and conditions shall apply. If not attached, or already incorporated into an existing and current Esri master contract, these terms and conditions can be viewed on the web at https://www.esri.com/en-us/legal/terms/services .	47,000.00	47,000.00
			Item Total:	47,000.00
			Subtotal:	47,000.00
			Sales Tax:	0.00
			Estimated Shipping & Handling(Surface Delivery) :	0.00
			Contract Pricing Adjust:	0.00
			Total:	\$47,000.00

Esri may charge a fee to cover expenses related to any customer requirement to use a proprietary vendor management, procurement, or invoice program.

For questions contact: Abbey Lozano **Email:** alozano@esri.com **Phone:** (909) 793-2853 x8227

The items on this quotation are subject to and governed by the terms of this quotation, the most current product specific scope of use document found at <http://www.esri.com/~media/Files/Pdfs/legal/pdfs/e300.pdf>, and your applicable signed agreement with Esri. If no such agreement covers any item quoted, then Esri's standard terms and conditions found at <http://www.esri.com/~media/Files/Pdfs/legal/pdfs/ma-full/ma-full.pdf> apply to your purchase of that item. Federal government entities and government prime contractors authorized under FAR 51.1 may purchase under the terms of Esri's GSA Federal Supply Schedule. Supplemental terms and conditions found at <http://www.esri.com/legla/supplemental-terms-and-conditions> apply to some state and local government purchases. All terms of this quotation will be incorporated into and become part of any additional agreement regarding Esri's offerings. Acceptance of this quotation is limited to the terms of this quotation. Esri objects to and expressly rejects any different or additional terms contained in any purchase order, offer, or confirmation sent to or to be sent by buyer. The quotation information is confidential and may not be copied or released other than for the express purpose of system selection and purchase/license. The information may not be given to outside parties or used for any other purpose without consent from Esri. Delivery is FOB Origin.

If sending remittance, please address to: Esri, P.O. Box 741076, Los Angeles, CA 90074-1076



Quotation # 20537384

Date: September 24, 2018

Environmental Systems Research Institute, Inc.
380 New York St
Redlands, CA 92373-8100
Phone: 909-793-2853 Fax: 909-307-3049
DUNS Number: 06-313-4175 CAGE Code: 0AMS3

Customer # 278831 Contract #

Casitas Municipal Water District
1055 N Ventura Ave
Oak View, CA 93022

To expedite your order, please attach a copy of this quotation to your purchase order.
Quote is valid from: 09/24/2018 To: 12/23/2018

ATTENTION: Todd Evans
PHONE: (805) 649-2251
FAX: (805) 649-4485

If you have made ANY alterations to the line items included in this quote and have chosen to sign the quote to indicate your acceptance, you must fax Esri the signed quote in its entirety in order for the quote to be accepted. You will be contacted by your Customer Service Representative if additional information is required to complete your request.

If your organization is a US Federal, state, or local government agency; an educational facility; or a company that will not pay an invoice without having issued a formal purchase order, a signed quotation will not be accepted unless it is accompanied by your purchase order.

In order to expedite processing, please reference the quotation number and any/all applicable Esri contract number(s) (e.g. MPA, ELA, SmartBuy, GSA, BPA) on your ordering document.

BY SIGNING BELOW, YOU CONFIRM THAT YOU ARE AUTHORIZED TO OBLIGATE FUNDS FOR YOUR ORGANIZATION, AND YOU ARE AUTHORIZING ESRI TO ISSUE AN INVOICE FOR THE ITEMS INCLUDED IN THE ABOVE QUOTE IN THE AMOUNT OF \$ _____, PLUS SALES TAXES IF APPLICABLE. DO NOT USE THIS FORM IF YOUR ORGANIZATION WILL NOT HONOR AND PAY ESRI'S INVOICE WITHOUT ADDITIONAL AUTHORIZING PAPERWORK.

Please check one of the following:

- I agree to pay any applicable sales tax.
- I am tax exempt, please contact me if exempt information is not currently on file with Esri.

Signature of Authorized Representative

Date

Name (Please Print)

Title

The quotation information is proprietary and may not be copied or released other than for the express purpose of system selection and purchase/license. This information may not be given to outside parties or used for any other purpose without consent from Environmental Systems Research Institute, Inc. (Esri).

Any estimated sales and/or use tax reflected on this quote has been calculated as of the date of this quotation and is merely provided as a convenience for your organization's budgetary purposes. Esri reserves the right to adjust and collect sales and/or use tax at the actual date of invoicing. If your organization is tax exempt or pays state tax directly, then prior to invoicing, your organization must provide Esri with a copy of a current tax exemption certificate issued by your state's taxing authority for the given jurisdiction.

Esri may charge a fee to cover expenses related to any customer requirement to use a proprietary vendor management, procurement, or invoice program.

For questions contact: Abbey Lozano

Email: alozano@esri.com

Phone: (909) 793-2853 x8227

The items on this quotation are subject to and governed by the terms of this quotation, the most current product specific scope of use document found at <http://www.esri.com/~media/Files/Pdfs/legal/pdfs/e300.pdf>, and your applicable signed agreement with Esri. If no such agreement covers any item quoted, then Esri's standard terms and conditions found at <http://www.esri.com/~media/Files/Pdfs/legal/pdfs/ma-full/ma-full.pdf> apply to your purchase of that item. Federal government entities and government prime contractors authorized under FAR 51.1 may purchase under the terms of Esri's GSA Federal Supply Schedule. Supplemental terms and conditions found at <http://www.esri.com/legla/supplemental-terms-and-conditions> apply to some state and local government purchases. All terms of this quotation will be incorporated into and become part of any additional agreement regarding Esri's offerings. Acceptance of this quotation is limited to the terms of this quotation. Esri objects to and expressly rejects any different or additional terms contained in any purchase order, offer, or confirmation sent to or to be sent by buyer. The quotation information is confidential and may not be copied or released other than for the express purpose of system selection and purchase/license. The information may not be given to outside parties or used for any other purpose without consent from Esri. Delivery is FOB Origin.

If sending remittance, please address to: Esri, P.O. Box 741076, Los Angeles, CA 90074-1076

Appendix C Advantage Program Agreement

The remainder of this page intentionally left blank.

Advantage Program Agreement



Agreement No. _____

This Advantage Program Agreement ("**Agreement**") is between the entity shown below ("**Customer**") and **Environmental Systems Research Institute, Inc. ("Esri")**, a California corporation with a place of business at 380 New York Street, Redlands, California 92373-8100 USA.

This Agreement sets forth the terms under which Esri provides the Advantage Program to the Customer. This Agreement does not apply to Software, Online Services, Data, or Maintenance, or to development Professional Services. The terms of use for these Esri Offerings are set forth in the applicable signed master agreement or, if the Customer has no such agreement, the terms of Esri's Master Agreement found at <http://www.esri.com/legal/software-license>.

This Agreement is the sole and entire agreement of the parties as to the subject matter of this Agreement and supersedes any previous agreements, understandings, and arrangements relating to such subject matter. Neither party has relied on any statement, representation, or warranty not expressly stated in this Agreement. The Agreement comprises this signature page, the terms and conditions that begin on the following page, and all referenced attachments and addendums. Except for Product or Service descriptions, quantities, pricing, and delivery instructions, or as agreed in an Ordering Document signed by both parties, all terms included in any Ordering Document are void and of no effect. Any modification(s) or amendment(s) to this Agreement must be in writing and signed by both parties.

The parties may sign this Agreement in counterparts or via electronic signatures; such execution is valid even if an original paper document bearing both parties' original signatures is not delivered. This Agreement is executed and effective as of the last date signed below.

The authorized representatives of each party accept and agree to the terms of this Agreement by signing below:

(Customer)

ENVIRONMENTAL SYSTEMS RESEARCH
INSTITUTE, INC. (Esri)

Legal Address: _____

380 New York Street, Redlands, CA 92373-8100

By: _____
Authorized Signature

By: _____
Authorized Signature

Printed Name: _____

Printed Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Customer Contact Information

Contact: _____

Telephone: _____

Address: _____

Fax: _____

City, State, ZIP: _____

Email: _____

Attachment A contains definitions of capitalized terms used throughout this Agreement. Each section of this Agreement may include additional definitions that are used exclusively within that section.

1.0 GENERAL GRANT OF RIGHTS AND RESTRICTIONS

1.1 Grant of Rights. In consideration of Customer's payment of all applicable fees and in accordance with this Agreement, Esri

- a. Provides Services as set forth in this Agreement;
- b. Grants to Customer a nonexclusive, nontransferable right and license or subscription to access and use Esri Offerings as set forth in the Specifications and applicable Ordering Documents; and
- c. Authorizes Customer to copy and make derivative works of the Documentation for Customer's own internal use in conjunction with Customer's authorized use of Deliverables or Esri Offerings. Customer will include the following copyright attribution notice acknowledging the proprietary rights of Esri and its licensors in any derivative work:

"Portions of this document include intellectual property of Esri and its licensors and are used under license. Copyright © [*Customer will insert the actual copyright date(s) from the source materials.*] Esri and its licensors. All rights reserved."

The grants of rights in this section (i) continue for the duration of the subscription or applicable Term or perpetually if no Term is applicable or identified in the Ordering Documents and (ii) are subject to additional rights and restrictions in this Agreement including Attachment B.

1.2 Consultant or Contractor Access. Customer may authorize its consultants or contractors to (i) host Esri Offerings for Customer's benefit and (ii) use Esri Offerings exclusively for Customer's benefit. Customer will be solely responsible for its consultants' and contractors' compliance with this Agreement and will ensure that each consultant or contractor discontinues use of the Esri Offerings upon completion of work for Customer. Access to or use of Esri Offerings by consultants or contractors that is not exclusively for Customer's benefit is prohibited.

1.3 Reservation of Rights. All Esri Offerings are the copyrighted works of Esri or its licensors; all rights not specifically granted in this Agreement are reserved.

2.0 PROFESSIONAL SERVICES

2.1 Definitions. The following definitions supplement the definitions provided in Attachment A:

- a. "**Invention(s)**" means a patentable invention, discovery, innovation, or improvement, excluding Deliverables, relating to the subject matter of a Task Order.
- b. "**Inventor(s)**" means a party's principal, employee, consultant, or independent contractor that solely or jointly develops Inventions during Esri's performance under a Task Order.

2.2 Ownership of Deliverables and Inventions

- a. Esri or its licensors own and retain ownership of the Deliverables.
- b. Each party will retain title to any Inventions made or conceived solely by its Inventors during the Term of this Agreement, including, but not limited to, such Inventions that Esri's Inventors solely make or conceive while providing technical assistance pursuant to this Agreement. The parties will jointly own any Inventions made or conceived jointly by Inventors from both parties.
- c. The parties will negotiate in good faith and cooperate reasonably in (i) deciding whether or not to seek or maintain, or to continue to seek or maintain, patent protection in any country on any Invention and the extent and scope of such protection and (ii) protecting and enforcing any patents issued on such Invention.

3.0 ESRI MANAGED CLOUD SERVICES

3.1 Definitions. The following definitions supplement the definitions provided in [Attachment A](#):

- a. "**EMCS Environment**" means the hardware, Software, Data, and network platform that Esri or its third-party supplier provides as part of Esri Managed Cloud Services (EMCS).
- b. "**Hosting**" means the business of housing and making accessible Customer Content via the Internet.

3.2 Provision of EMCS

- a. **Generally.** Use of EMCS is subject to the Cloud Services terms found in [Attachment B](#) of this Agreement.
- b. **Requirements Planning.** It is Customer's responsibility to plan for and address with Esri changes to Customer's requirements, such as the need for additional capacity, the update of an application or dataset, or increased level of system availability.
- c. **Compensation and Expenses.** Esri will invoice Customer for the one-time setup fee upon Task Order execution. Thereafter, Esri will invoice Customer monthly for the EMCS to be provided the following month. Customer will pay invoices within 30 days of receipt. Customer is responsible for any shipping or temporary storage costs incurred during the delivery of Customer Content to Esri or removal of Customer Content from the EMCS Environment. This paragraph does not apply to EMCS provided under the Advantage Program (see the section entitled "Advantage Program" in this Agreement.)
- d. **Risk of Loss.** Risk of loss for all Customer Content shall at all times remain with Customer, and it is Customer's sole responsibility to maintain regular backups of Customer Content. Risk of loss for the EMCS Environment shall at all times remain with Esri.
- e. **Personally Identifiable Information.** Prior to providing any Customer Content under this Agreement, Customer shall notify Esri if Customer Content includes personally identifiable information.
- f. **Public Software.** Customer may not use, and may not authorize its end users or contractors to Combine or use any Esri Offerings with any software (including any underlying dependencies), documentation, or other material distributed under an open source or other similar licensing or distribution model that requires as a condition of such model that any component of the Esri Offering to be (1) disclosed or distributed in source code form, (2) made available free of charge to third parties, or (3) modifiable without restriction by third parties.
- g. **Monitoring.** Customer will provide information and other materials related to its Customer Content as reasonably requested by Esri or its Hosting partner to verify Esri's or Customer's compliance with this Agreement. Esri or its Hosting partner, as applicable, may browse, index, or otherwise monitor the external interfaces of any Customer Content solely for the purpose of verifying compliance with this Agreement.

4.0 TRAINING

4.1 Definitions. The following definitions supplement the definitions provided in [Attachment A](#):

- a. "**Customer-Supplied Training Data**" means any digital dataset(s) including, but not limited to, geographic vector data, coordinates, raster data reports, or associated tabular attributes supplied by Customer for use in training.
- b. "**Esri Mobile Lab**" means Esri equipment consisting of laptops preconfigured with Esri Software, Training Materials, hard drives, power cords, and network switches provided to Customer for use in conjunction with scheduled Esri Training Events only.
- c. "**Esri Training Event(s)**" means an Esri site class, Esri instructor-led online class, a Customer site/private class or coaching services
- d. "**Esri Training Event Assistant**" means Customer's primary Esri liaison in organizing private Esri Training Events.
- e. "**Student(s)**" means a Customer employee or agent who is a registered participant in a specific Esri Training Event, or Training-related services. If Customer is an individual, then Student means Customer.
- f. "**Training Pass**" means a non-refundable, non-transferable block of prepaid training days with a fixed price per day training price throughout the term of the Training Pass.

4.2 Permitted and Prohibited Uses

- a. Esri provides Training Materials for Training purposes only and for the exclusive use of the Student who attends the training course for which the Training Materials are provided.
- b. The Customer may reproduce copies of Training Materials for registered Students.
- c. Customer may not and may not permit any Student to (i) separate the component parts of the Training Materials for any use or (ii) use audio or video recording equipment during an Esri Training Event.
- d. Esri may issue temporary Product authorizations if Customer has an insufficient number of Products available for Training. Customer may use such Products as Training Materials under the terms of this Agreement. Customer will uninstall all deployed Products and return any media provided by Esri upon conclusion of the Esri Training Event.
- e. Customer will retain ownership of any Customer-Supplied Training Data.

4.3 Esri's Responsibilities

Esri will

- a. Provide an instructor qualified to conduct the Training;
- b. Provide all necessary Training Materials for Student; and
- c. Confirm Esri Training Events approximately 10 business days prior to the scheduled start date. Esri will only confirm Student registrations that include a payment method. Registrations without a confirmed payment method are placed on the reservation waiting list. All reservations on the waiting list are subject to availability. Customer site/Private class and coaching services confirmation is also dependent on receipt of the completed Customer site training request form.

4.4 Customer's Responsibilities

Customer will

- a. Ensure that all Students have received confirmation from Esri to participate in an Esri Training Event.. Esri reserves the right to disconnect any Student who permits unregistered student access to an online classroom Esri Training Event. In such case the full Esri Training Event fee will be invoiced and payable;
- b. Ensure that all Students meet the minimum prerequisites for the applicable Esri Training Event as listed on Esri's training website;
- c. Submit Student registrations in Esri site classes with payment method information at least 15 business days before the scheduled start date.
- d. Provide the Esri Training Event Assistant with a list of the names and email addresses of any Students who are to attend an Esri Training Event at least 3 business days before the scheduled start date, for compliance with the US embargoed country lists and the various US Government Lists of Parties of Concern or Specially Designated Nationals lists.
- e. For classes held at the Customer-designated facility, complete a client site training request form; consult with Esri personnel to determine classroom, computer, and network requirements; and provide all such required classrooms, computers, and network access;
- f. Ensure that Student use of Training Materials provided by Esri complies with the terms of this Agreement; and
- g. Assume full liability and responsibility for Student attending Training course(s) under this Agreement.
- h. If the Esri Mobile Lab is used, Customer will
 - 1. Immediately report any previously damaged Esri Mobile Lab equipment to the Esri Training Event Assistant upon receipt of the equipment;
 - 2. Keep Esri Mobile Lab equipment in a secure, locked area between Esri Training Event sessions;
 - 3. Be responsible for loss of, damage to, or theft of Esri Mobile Lab equipment while in Customer's possession;
 - 4. Allow the Esri instructor to check all Esri Mobile Lab equipment following the completion of an Esri Training Event. Esri will notify Customer in writing of any damage to Esri Mobile Lab equipment due to Customer use, excluding normal wear and tear. Customer will be financially responsible for any repair or replacement of equipment resulting from such damage; and

5. Make Esri Mobile Lab equipment available for freight pickup upon the conclusion of the Esri Training Event.

4.5 Student Registration and Training Event Change Policy

- a. Customer will provide written notice to the Esri Customer Service department at service@esri.com of any student substitution, before class commencement. A replacement Student must be from the same Customer organization as the Student being replaced.
- b. If Customer reschedules an Esri Training Event three or fewer days before the scheduled start date, Esri will charge Customer 50 percent of the fee plus the cost of the rescheduled Esri Training Event.
- c. If the Customer (i) cancels an Esri Training Event 3 or fewer days before the scheduled start date without concurrently rescheduling or (ii) is absent without notice from the Esri Training Event, the Customer will be liable for the full Esri Training Event fee.
- d. If cancellation of an Esri Training Event is necessary due to causes beyond the party's reasonable control, the affected party may reschedule or cancel the Training without incurring any liability.
- e. *Termination of Agreement.* Students who are currently registered for an Esri Training Event as of the date of termination of this Agreement may attend the scheduled Training, subject to the terms and conditions of this Agreement.

4.6 Invoicing; Prepaid Fees

- a. Esri will invoice Customer upon completion of the Esri Training Event or on purchase of a Training Pass. On Customer request, Esri will invoice in advance for an Esri Training Event.
- b. If Customer is invoiced and pays that invoice prior to the scheduled Esri Training Event, then Customer has 1 year from the date of the invoice to consume the Training days. For a multiyear order, the Training days must be consumed by the end date specified on the Esri quotation. Thereafter, all prepaid fees are forfeited.
- c. Training Pass exchange rates are described at <https://www.esri.com/training/training-for-organizations/>.

This paragraph does not apply to Training provided under the Advantage Program.

5.0 ADVANTAGE PROGRAM

5.1 Definitions. The following definitions supplement the definitions provided in Attachment A:

- a. "**Activity Description**" means a mutually agreed upon written statement that confirms the number of Learning and Services Credits that Esri estimates is required to perform an activity and authorizes Esri to begin work based on such estimate. The Activity Description serves as the Task Order for Services provided under the Advantage Program.
- b. "**Advantage Program**" means either the BPAP or the EEAP.
- c. "**Authorized Contact**" means the Customer point of contact for the Advantage Program identified below.
- d. "**BPAP**" means the Business Partner Advantage Program as described at www.esri.com/partners/bpap/components
- e. "**EEAP**" means the Esri Enterprise Advantage Program as described at www.esri.com/services/eeap/components
- f. "**Learning and Services Credits**" means a contracted unit of exchange that Customer may use to acquire Professional Services, Training, PSS, EMCS, or related travel expenses as described below.
- g. "**Premium Support Services**" or "**PSS**" means a prioritized incident management and technical support program further described at <http://support.esri.com/en/support/premium>.
- h. "**Technical Advisor**" means an Esri consultant assigned to work with Customer to provide Professional Services comprising advising on GIS strategies, facilitating annual account planning, and developing and coordinating a collaborative technical work plan under the Advantage Program.

5.2 Advantage Program Description. The Advantage Program is provided on an order-by-order, annual subscription basis allowing access to Professional Services, Training, PSS, and EMCS offerings that provides

Customer with the flexibility to select the offerings that best meet its needs with guidance from the Technical Advisor. The Advantage Program may change from time to time. The Advantage Program includes:

- a. **Technical Advisor.** Customer will receive up to the number of Technical Advisor hours ordered. Customer may elect to retain additional Technical Advisor hours for a supplemental price.
- b. **Annual Account Planning Session.** A 1-day annual account planning and review meeting is included.
- c. **Technical Work Plan.** A collaboratively developed document designed to drive the program's implementation through definition of Customer's GIS vision, goals, and objectives.
- d. **Learning and Services Credits.** Customer will receive the number of Learning and Services Credits ordered. Customer may use the credits toward any combination of Professional Services, Training, PSS, EMCS or related travel expenses. Customer may order, for an additional price, additional Learning and Services Credits. Learning and Services Credits may be exchanged as described at the BPAP or EEAP website. Esri will provide a monthly report outlining usage of Learning and Services Credits to date to the Authorized Contact.
- e. **Quarterly Technology Webcast.** Esri will provide an email invitation to the Authorized Contact for a quarterly webcast presenting business and technical information related to enterprise GIS.
- f. **No Project Services.** The Advantage Program is not designed for Esri to provide project-specific Professional Services such as custom application or database development for solutions or applications. Esri will not provide these types of Professional Services under the Advantage Program and does not warrant that Deliverables provided under an Advantage Program will comply with Specifications.

5.3 Authorized Contact Information. Customer identifies the following person as its initial Authorized Contact.

(to be completed by Customer):

Contact Name: _____
Telephone: _____
Address: _____
Fax: _____
City, State, ZIP: _____

Email: _____

5.4 Current on Maintenance. Customer must remain current on standard Software Maintenance during the Advantage Program term.

5.5 Authorization of Learning and Services Credits Use. Customer will contact its account manager or Technical Advisor to consume Learning and Services Credits for a particular request. Esri will submit an Activity Description by email to Customer for confirmation and authorization to use the Learning and Services Credits. Customer may authorize the consumption of Learning and Services Credits by submitting an email. Esri will begin work and deduct the estimated credit amount stated in the Activity Description from the unused Learning and Services Credits available.

5.6 Activity Descriptions for EMCS. The Activity Description for EMCS orders must include the following:

- a. **The EMCS Term—**The time period in which Esri provides the EMCS to Customer. The EMCS term does not begin until setup and deployment of the data and application are complete.
- b. **Targeted System Availability—**The minimum percentage of time that Customer has external access to the application and associated Customer Content through the Internet. Examples of supported levels of system availability are 95 percent, 99 percent, and 99.9 percent. Not all EMCS offerings include a Targeted System Availability.
- c. **Number of Anticipated Requests—**A The number of requests made by an end user through a client (e.g., desktop computer, web application, mobile device) and sent to a server(s) that is set up in the EMCS Environment by Esri and performs computational tasks on behalf of the end user. An example of a common request used in a GIS is a map request. A map request is made every time a user pans, zooms, or queries a map service.

- d. **Amount of Data Storage**—The storage capacity required to retain digital data, which is to be used and consumed in Customer GIS applications or Cloud Services.
- e. **Learning and Services Credits Consumption**—The price for the EMCS in Learning and Services Credits.

The Data storage location may be defined in the Activity Description.

5.7 Travel and Per Diem Expenses. Any Esri travel and per diem expenses will be quoted separately. Travel expenses will include a 15 percent burden and per diem will be determined in accordance with the full daily limits specified on the government General Services Administration (GSA) website at <http://gsa.gov/>. Customer may direct Esri to use Learning and Services Credits for travel and per diem expenses, or Customer may issue a purchase order and Esri will invoice Customer for the travel and per diem expenses as set forth in the "Professional Services" section of this Agreement.

5.8 Notification of Consumed Credits. Esri will notify Customer if the authorized Learning and Services Credits are consumed prior to completion of the requested work. Customer may elect to direct the use of additional Learning and Services Credits, if available; procure additional Learning and Services Credits; or notify Esri to stop work on such requested work. Esri reserves the right to stop work if Customer has consumed all of its Learning and Services Credits.

5.9 Review of Proposed Activities. Any activities proposed to be completed under the Advantage Program will be subject to Esri's review and approval to ensure alignment with the intent of the program.

5.10 Invoicing

- a. Esri shall invoice Customer as quoted for the Advantage Program subscription, additional Learning and Services Credits, or Technical Advisor services upon receipt of Customer's order. Subsequently, Esri will invoice annually at least 30 days in advance of the Advantage Program subscription expiration date. Esri will extend the Advantage Program subscription for a subsequent annual term upon receipt of Customer's payment of the renewal invoice. Esri will invoice fees for additional Learning and Services Credits or Technical Advisor services upon receipt of Customer's order.
- b. Pricing for annual program renewals and new or additional Services will be in accordance with Esri's standard pricing at the time of purchase or renewal.

5.11 Termination and Expiration. Upon termination or expiration of an Advantage Program subscription:

- a. Services will end as of the expiration or termination date stated; and
- b. Unless either party terminates the Advantage Program subscription for cause, Customer may apply any unused Learning and Services Credits toward any Professional Services, Training, PSS, or related travel expenses that are scheduled as of the termination or expiration date, provided that the Learning and Services Credits are used within 3 months after the termination or expiration date. Any other unused Learning and Services Credits will expire 30 days after the expiration or termination date; if Customer renews the Advantage Program subscription within this time period, any unused Learning and Services Credits will remain valid for up to 2 years from the purchase date or termination of this Agreement, whichever comes first.

ATTACHMENT A GLOSSARY OF TERMS FOR SERVICES

"**Affiliate**" means any entity that directly or indirectly (i) Controls; (ii) is Controlled by; or (iii) is under common Control with a party; where "Control" means having more than 50 percent of the voting stock or other voting interest in the Controlled entity.

"**API**" means application programming interface.

"**Authorization Code(s)**" means any key, authorization number, enablement code, login credential, activation code, token, user name and password, or other mechanism required for use of Esri Offerings.

"**Beta**" means any alpha, beta, or other prerelease Product.

"**Cloud Services**" means Online Services and EMCS.

"**Content**" means data, images, photographs, animations, video, audio, text, maps, databases, data models, spreadsheets, user interfaces, graphics components, icons, software, and other resources.

"**Control**" means having more than 50 percent of the voting stock or other voting interest in the Controlled entity.

"**Customer Content**" means any Content that Customer provides, uses, or develops in connection with Customer's use of Esri Offerings or Services. Customer Content excludes any feedback, suggestions, or requests for improvements that Customer provides to Esri.

"**Data**" means any commercially available digital dataset(s) including, but not limited to, geographic vector data, raster data reports, or associated tabular attributes, that Esri bundles with other Esri Offerings or delivers independently.

"**Deliverables**" means anything that Esri delivers to a Customer as a result of performance of Professional Services.

"**Documentation**" means all user reference documentation that Esri provides with a Deliverable or an Esri Offering.

"**Esri Managed Cloud Services**" or "**EMCS**" means a Customer-specific cloud infrastructure, Software, Data, and network platform that Esri hosts, manages, and makes available to Customer or Customer's end users via the Internet.

"**Esri Offering(s)**" means Deliverables provided on a firm fixed price basis and Training Materials. Esri Offerings exclude Services and Third-Party Content.

"**GIS**" means geographic information system.

"**Maintenance**" means a subscription program that Esri provides and that entitles Customer to Product updates and other benefits such as access to technical support and self-paced, web-based learning resources.

"**Malicious Code**" means software viruses; worms; time bombs; Trojan horses; or any other computer code, files, denial of service, or programs designed to interrupt, destroy, or limit the functionality of any computer software, hardware, or telecommunications equipment.

"**Online Services**" means any commercially available, Internet-based geospatial system that Esri provides, including applications and associated APIs for storing, managing, publishing, and using maps, data, and other information. Online Services exclude Data and Content.

"**Ordering Document(s)**" means a sales quotation, Maintenance renewal quote, purchase order, proposal, Task Order, or other document identifying the Esri Offerings, updates, or Services that Customer orders.

"**Perpetual License**" means a license to use a version of the Esri Offering for which applicable license fees have been paid, indefinitely, unless terminated by Esri or Customer as authorized under this Agreement.

"**Product(s)**" means Software, Data, and Online Services.

"**Professional Services**" means any development or consulting services that Esri provides to Customer.

"**Sample(s)**" means sample code, sample applications, add-ons, or sample extensions of Products.

"**Service(s)**" means EMCS, Training, and Professional Services.

"**Software**" means any proprietary commercial off-the-shelf software, excluding Data, accessed or downloaded from an Esri-authorized website or that Esri delivers on any media in any format including backups, updates, service packs, patches, hot fixes, or permitted merged copies.

"**Specification(s)**" means (i) the scope of work set forth in any Task Order or (ii) Esri's published course descriptions for Training.

"**Task Order(s)**" means an Ordering Document for Services.

"**Term License**" means a license for use of an Esri Offering for a limited time period ("**Term**").

"**Third-Party Content**" means any Content that Customer may obtain from a third-party website or that persons other than Esri employees, suppliers, or contractors may directly contribute to Esri's website.

"**Training**" means standard Product training that Esri provides under this Agreement.

"**Training Materials**" means digital or printed content required to complete Training, which may include, but is not limited to, workbooks, data, concepts, exercises, and exams.

ATTACHMENT B GENERAL TERMS AND CONDITIONS

The following general terms and conditions apply to all Esri Offerings and Services that Esri may offer to its customers. Certain Esri Offerings or Services may not be available under this Agreement. Please disregard any terms that are not applicable to Esri Offerings or Services offered under this Agreement.

ARTICLE 1—GENERAL USE RESTRICTIONS

Except as expressly permitted in this Agreement, Customer will not

- a. Sell, rent, lease, sublicense, distribute, lend, time-share, or assign Esri Offerings;
- b. Distribute or provide direct access to Esri Offerings to third parties, in whole or in part, including, but not limited to, extensions, components, or DLLs;
- c. Distribute Authorization Codes to third parties;
- d. Reverse engineer, decompile, or disassemble any Product or Deliverable delivered in compiled form;
- e. Make any attempt to circumvent the technological measure(s) that controls access to or use of Esri Offerings;
- f. Store, cache, use, upload, distribute, or sublicense Content or otherwise use Esri Offerings in violation of Esri's or a third-party's rights, including intellectual property rights, privacy rights, nondiscrimination laws, export laws, or any other applicable law or regulation;
- g. Remove or obscure any Esri or its licensors' patent, copyright, trademark, proprietary rights notices, or legends contained in or affixed to any Esri Offerings, output, metadata file, or online or hard-copy attribution page of any Data or Documentation;
- h. Unbundle or independently use individual or component parts of Esri Offerings;
- i. Incorporate any portion of Esri Offerings into a product or service for third-party use that competes with the Esri Offerings;
- j. Publish or in any other way communicate the results of benchmark tests run on Beta Products without the prior written permission of Esri and its licensors; or
- k. Use, incorporate, modify, distribute, provide access to, or combine any Esri Offerings in a manner that would subject any part of the Esri Offerings to open-source or open-database license terms that require any part of the Esri Offerings to be:
 1. Disclosed in source code form to third parties;
 2. Licensed to third parties for the purpose of making derivative works; or
 3. Redistributable to third parties at no charge.

These restrictions will not apply to the extent that they conflict with applicable law or regulation.

ARTICLE 2—TERM AND TERMINATION

2.1 Customer may terminate this Agreement or any Esri Offerings license or subscription at any time upon written notice to Esri. Termination without cause does not entitle Customer to receive any refund of fees paid. Any right to terminate pending Services engagements for convenience is set forth in the applicable section in the body of this Agreement. Either party may terminate this Agreement or any license or subscription for a material breach that is not cured within 30 days of written notice to the breaching party. Upon any termination of this Agreement for breach, Esri will stop providing Services. Any licenses in Esri Offerings that survive termination of this Agreement continue under the terms of this Agreement.

2.2 If Esri terminates this Agreement following Customer's breach, then Esri may also, at its election, terminate Customer's licenses or subscriptions in Esri Offerings. If Customer terminates this Agreement for cause or convenience, then Customer may, at its election, also terminate Customer's licenses or subscriptions to Esri Offerings.

2.3 Upon any termination of a license or subscription, Customer will

- a. Stop accessing and using the terminated Esri Offerings;
- b. Clear any client-side data cache derived from the terminated Cloud Services; and

- c. Stop using and uninstall, remove, and destroy all copies of affected Esri Offerings in Customer's possession or control, including any modified or merged portions thereof, in any form, and execute and deliver evidence of such actions to Esri or its authorized distributor.

Esri may stop performing Services immediately upon written notice to Customer if a bankruptcy or insolvency proceeding is commenced by or against Customer until the trustee cures any existing defaults and provides adequate assurance of future performance under this Agreement. This Agreement terminates upon the insolvency, liquidation, or dissolution of either party.

ARTICLE 3—LIMITED WARRANTIES AND DISCLAIMERS

3.1 Limited Warranties. Except as disclaimed below, Esri warrants to Customer that (i) Products and Training will substantially comply with the applicable Specifications and (ii) Services will substantially conform to the professional and technical standards of the industry. The warranty period for Esri Offerings and Services offered under a Perpetual License runs for 90 days from the date of delivery or from the date of acceptance if this Agreement provides an acceptance period. The warranty period for Esri Offerings and Services offered under a subscription or Term License basis runs for the lesser of (i) the duration of the subscription or term or (ii) 90 days from delivery or acceptance if this Agreement provides an acceptance period.

3.2 Special Disclaimer. Third-Party Content; Data; Samples; hot fixes; patches; updates; Online Services provided at no charge; and trial, evaluation and Beta Products are delivered "as is" and without warranty of any kind.

3.3 General Disclaimer. Except for the express limited warranties set forth in this Agreement, Esri disclaims all other warranties or conditions of any kind, whether express or implied, including, but not limited to, warranties or conditions of merchantability, fitness for a particular purpose, and noninfringement of intellectual property rights. Esri is not responsible for any nonconformities caused by Customer's modification of any Esri Offering other than as specified in the Documentation. Esri does not warrant that Esri Offerings, or Customer's operation of the same, will be uninterrupted, error free, fault tolerant, or fail-safe or that all nonconformities can or will be corrected. Esri Offerings are not designed, manufactured, or intended for use in environments or applications that may lead to death, personal injury, or physical property or environmental damage. Customer should not follow any navigational route suggestions that appear to be hazardous, unsafe, or illegal. Any such uses will be at Customer's own risk and cost.

3.4 Disclaimers

- a. **Internet Disclaimer.** Neither party will be liable for damages under any theory of law related to the performance or discontinuance of operation of the Internet or to regulation of the Internet that might restrict or prohibit the operation of Cloud Services.
- b. **Third-Party Websites; Third-Party Content.** Esri is not responsible for any third-party website or Third-Party Content that appears in or is referenced by Esri Offerings or Esri websites, including www.esri.com and www.arcgis.com. Providing links to third-party websites and resources does not imply an endorsement, affiliation, or sponsorship of any kind.

3.5 Exclusive Remedy. Customer's exclusive remedy and Esri's entire liability for breach of the limited warranties in this section will be to replace any defective media and to (i) repair, correct, or provide a workaround for the applicable Esri Offering or Services or (ii) at Esri's election, terminate Customer's right to use and refund the fees paid for Esri Offerings or Services that do not meet Esri's limited warranties.

ARTICLE 4—LIMITATION OF LIABILITY

4.1 Disclaimer of Liability. Neither Customer, Esri, nor any Esri distributor or licensor will be liable for any indirect, special, incidental, or consequential damages; lost profits; lost sales; loss of goodwill; costs of procurement of substitute goods or services; or damages exceeding the applicable license or current subscription fees paid or owed to Esri for the Esri Offerings giving rise to the cause of action.

4.2 The limitations and exclusions of liability in the preceding paragraph do not apply to Customer's infringement, misuse, or misappropriation of Esri's or Esri's licensors' intellectual property rights, either party's indemnification obligations, gross negligence, willful misconduct, or violations of the Export Compliance clause of this Agreement or any applicable law or regulation.

4.3 Applicability of Disclaimers and Limitations. Esri or its authorized distributor has set its fees and entered into this Agreement in reliance on the disclaimers and limitations in this Agreement; the fees reflect an allocation of risk that is an essential basis of the bargain between the parties. **These limitations will apply whether or not a party is aware of the possibility of any damage and notwithstanding any failure of essential purpose of any exclusive, limited remedy.**

4.4 The foregoing disclaimers, limitations, and exclusions may be invalid in some jurisdictions and apply only to the extent permitted by applicable law or regulation in Customer's jurisdiction. Customer may have additional rights that may not be waived or disclaimed. Esri does not seek to limit Customer's warranty or remedies to any extent not permitted by law.

ARTICLE 5—INDEMNIFICATIONS

5.1 Definitions. The following definitions supplement the definitions provided in Attachment A:

- a. "**Claim**" means any claim, action, or demand by a third party.
- b. "**Indemnitees**" means Customer and its directors, officers, and employees.
- c. "**Infringement Claim(s)**" means any Claim alleging that Customer's use of or access to Esri Offerings or Services infringe a patent, copyright, trademark, or trade secret.
- d. "**Loss(es)**" means out-of-pocket loss, damage award, settlement amount, cost, or expense, including awarded attorneys' fees.

5.2 Infringement Indemnity

- a. Esri will defend and hold all Indemnitees harmless from any Infringement Claim and indemnify any Loss arising out of an Infringement Claim as set forth in the following paragraphs.
- b. If Esri determines that an Infringement Claim is valid, Esri may, at its expense, either (i) obtain rights for Customer to continue using the Esri Offerings or Services or (ii) modify the Esri Offerings or Services while maintaining substantially similar functionality. If neither alternative is commercially reasonable, Esri may terminate Customer's right to use the Esri Offerings or Services and will refund any (a) license fees that Customer paid for the infringing Esri Offerings or Services acquired under a Perpetual License, prorated on a 5-year, straight-line depreciation basis beginning from the initial date of delivery or (b) unused portion of fees paid for Term Licenses, Subscriptions, and Maintenance.
- c. Esri has no obligation to defend an Infringement Claim or to indemnify Customer to the extent the Infringement Claim arises out of (i) the combination or integration of Esri Offerings or Services with a product, process, system, or element that Esri has not supplied or specified in the Specification; (ii) alteration of Esri Offerings or Services by anyone other than Esri or its subcontractors; (iii) compliance with Customer's specifications; or (iv) use of Esri Offerings or Services after Esri either provides a modified version to avoid infringement or terminates Customer's right to use the Esri Offerings or Services.

5.3 General Indemnity. Esri will defend and hold all Indemnitees harmless from, and indemnify any Loss arising out of, any Claim for bodily injury, death, or tangible or real property damage brought against any of the indemnified parties to the extent arising from any negligent act or omission or willful misconduct by Esri or its directors, officers, employees, or agents performing Services while on Customer's site.

5.4 Conditions for Indemnification. As conditions for indemnification, Indemnitee will (i) promptly notify Esri in writing of the Claim, (ii) provide all available documents describing the Claim, (iii) give Esri sole control of the defense of any action and negotiation related to the defense or settlement of any Infringement Claim, and (iv) reasonably cooperate in the defense of the Infringement Claim at Esri's request and expense.

5.5 This section sets forth the entire obligation of Esri, its authorized distributor, and its licensors regarding any Claim for which Esri must indemnify Customer.

ARTICLE 6—INSURANCE

If Esri is providing Services, Esri will carry, at a minimum, the following coverage:

- a. Comprehensive general liability or commercial general liability with a minimum coverage of \$1,000,000.00 combined single limit per occurrence for bodily injury, including death, and property damage liability to include the following:
 1. Premises and operations;
 2. Blanket contractual liability;
 3. Broad form property damage;
 4. Independent contractors;
 5. Personal injury, with employee exclusion deleted; and
 6. Completed operations.
- b. Workers' compensation insurance, with waiver of subrogation, in an amount that complies with statutory limits.

ARTICLE 7—SECURITY AND COMPLIANCE

7.1 Security. Esri publishes its security capabilities at <http://trust.arcgis.com>. Customer may give Esri personnel access to Customer systems or to Customer or third-party personal information, controlled information, or sensitive data if access is essential for Esri's performance of Services and if Esri expressly agrees to such access. Esri will use reasonable administrative, technical, and physical safeguards to protect such data and guard against unauthorized access. Customer bears responsibility to (i) confirm that Esri's published security and privacy controls meet all applicable legal requirements for protection of Customer Content and (ii) upload or share Customer Content through Cloud Services only when it is legal to do so. Esri is not responsible to review Customer Content to ensure compliance with applicable laws and regulations. Customer must contact Esri at securesupport@esri.com for further instruction before providing any Customer Content that requires security measures other than Esri's published security capabilities.

7.2 Malicious Code. Esri will use commercially reasonable efforts to ensure that Esri Offerings will not transmit any Malicious Code to Customer. Esri is not responsible for Malicious Code that Customer introduces to Esri Offerings or that is introduced through Third-Party Content.

7.3 Export Compliance. Each party will comply with all applicable export laws and regulations, including the US Department of Commerce's Export Administration Regulations (EAR), the US Department of State's International Traffic in Arms Regulations (ITAR), and other applicable export laws. Customer will not export, reexport, transfer, release, or otherwise dispose of, in whole or in part, or permit access to or transfer or use of Services or Esri Offerings to any United States embargoed countries or denied entities or persons except in accordance with all then-current applicable US government export laws and regulations. Customer will not export, reexport, transfer, or use Services or Esri Offerings for certain missile, nuclear, chemical, or biological activities or end uses without proper authorization from the US government. Customer shall immediately notify Esri in writing if any US government entity or agency denies, suspends, or revokes Customer's export privileges. Customer will not upload, store, or process in Cloud Services any Customer Content that (i) has an Export Control Classification Number (ECCN) other than EAR99 or (ii) is controlled for export from the United States under ITAR. Customer will notify Esri in advance if Esri's performance of any Services or provision of any Esri Offerings is related to any defense article, defense service, or technical data, as defined under the ITAR Sections 120.6, 120.9, and 120.10, respectively; Esri will not perform any such Services or provide any such Esri Offerings until Esri obtains any necessary export license from the US government. Customer will reasonably assist Esri in applying for and obtaining an export license if needed.

ARTICLE 8—CLOUD SERVICES

8.1 Prohibited Uses. Customer shall not provide Customer Content or otherwise access or use Cloud Services in a manner that

- a. Spams, spoofs, or phishes email; transmits junk email or offensive or defamatory material; or stalks or makes threats of physical harm;
- b. Stores or transmits any Malicious Code;
- c. Violates any law or regulation;
- d. Infringes or misappropriates the rights of any third party;
- e. Probes, scans, or tests the vulnerability of Cloud Services or breach any security or authentication measures used by Cloud Services without written approval from Esri's product security officer; or
- f. Benchmarks the availability, performance, or functionality of Cloud Services for competitive purposes.

8.2 Service Interruption. System failures or other events beyond Esri's reasonable control may interrupt Customer's access to Cloud Services. Esri may not be able to provide advance notice of such interruptions.

8.3 Customer Content.

- a. Customer grants Esri and its subcontractors a nonexclusive, nontransferable, worldwide right to host, run, modify and reproduce Customer Content as needed to provide Cloud Services to Customer. Esri will not access, use, or disclose Customer Content without Customer's written permission except as reasonably necessary to support Customer's use of Cloud Services. Except for the limited rights granted to Esri under this Agreement, Customer retains all its rights, title, and interest in the Customer Content.
- b. If Customer accesses Cloud Services with an application provided by a third party, Esri may disclose Customer Content to such third party as necessary to enable interoperation between the application, Cloud Services, and Customer Content.
- c. Esri may disclose Customer Content if required to do so by law or regulation or by order of a court or other government body, in which case Esri will reasonably attempt to limit the scope of disclosure.
- d. When Customer's use of Cloud Services ends, Esri will either:
 - (i) Make Customer Content available to Customer for download for a period of 30 days unless Customer requests a shorter window of availability or Esri is legally prohibited from doing so; or
 - (ii) Download all Customer Content in Esri's possession to a medium of Customer's choosing and deliver such Customer Content to Customer.

Esri will have no further obligations to store or return Customer Content at the conclusion of the Cloud Services.

8.4 Removal of Customer Content. Esri may remove or delete Customer Content if there is reason to believe that uploading Customer Content to or using it with Cloud Services materially violates this Agreement. If reasonable under these circumstances, Esri will notify Customer before removing Customer Content. Esri will respond to any Digital Millennium Copyright Act takedown notices in accordance with Esri's copyright policy, available at www.esri.com/legal/dmca_policy.

8.5 Service Suspension. Esri may suspend access to Cloud Services (i) if Customer materially breaches this Agreement and fails to timely cure the breach; (ii) if Esri reasonably believes that Customer's use of Cloud Services will subject Esri to immediate liability or adversely affect the integrity, functionality, or usability of the Cloud Services; (iii) for scheduled maintenance; (iv) to enjoin a threat or attack on Cloud Services; or (v) if Cloud Services become prohibited by law or regulated to a degree that continuing to provide them would impose a commercial hardship. When feasible, Esri will notify Customer of any Cloud Services suspension beforehand and give Customer reasonable opportunity to take remedial action.

Esri is not responsible for any damages, liabilities, or losses that may result from any interruption or suspension of Cloud Services or removal of Customer's content as described above.

8.6 Notice to Esri. Customer will promptly notify Esri if Customer becomes aware of any unauthorized use of Customer's subscription or any other breach of security regarding Cloud Services.

ARTICLE 9—GENERAL PROVISIONS

9.1 Payment. Customer will pay each correct invoice no later than 30 days after receipt and will remit payment to the address stated on the invoice. Customers outside the United States will pay the distributor's invoices in accordance with the distributor's payment terms.

9.2 Feedback. Esri may freely use any feedback, suggestions, or requests for Product improvement that Customer provides to Esri.

9.3 Patents. Customer may not seek, and may not permit any other user to seek, a patent or similar right worldwide that is based on or incorporates any Products. This express prohibition on patenting will not apply to Customer's software and technology except to the extent that Products, or any portion thereof, are part of any claim or preferred embodiment in a patent application or a similar application.

9.4 Restrictions on Solicitation. Neither party will solicit for hire any employee of the other party who is associated with the performance of Services during the performance of the Services and for a period of 1 year thereafter. This does not restrict either party from publicly advertising positions for hire in newspapers, professional magazines, or Internet postings.

9.5 Taxes and Fees; Shipping Charges. Fees that Esri quotes to Customer are exclusive of any and all applicable taxes or fees including, but not limited to, sales tax, use tax, or value-added tax (VAT); customs, duties, or tariffs; and shipping and handling charges. Esri will add any such taxes that it is required to remit to the total amount of its invoice to the Customer. For Customers outside the United States, the distributor may quote taxes or fees in accordance with its own policies.

9.6 Compliance Review. Customer will keep accurate and complete records and accounts pertaining to its compliance with its obligations under this Agreement. Esri or its authorized distributor may conduct a compliance review of these records and accounts with no less than 14 business days' written notice or may appoint an independent third party to conduct such a compliance review on its behalf. Customer will promptly correct any noncompliance identified during the compliance review. Neither Esri nor Esri's distributor may conduct a compliance review of Customer within 12 months after the conclusion of any prior compliance review that does not reveal any material Customer noncompliance.

9.7 No Implied Waivers. The failure of either party to enforce any provision of this Agreement is not a waiver of the provisions or of the right of such party thereafter to enforce that or any other provision.

9.8 Severability. If any provision of this Agreement is held to be unenforceable for any reason, (i) such provision will be reformed only to the extent necessary to make the intent of the language enforceable, and (ii) all other provisions of this Agreement will remain in effect.

9.9 Successor and Assigns. Customer will not assign, sublicense, or transfer Customer's rights or delegate Customer's obligations under this Agreement without Esri's and its authorized distributor's prior written consent, and any attempt to do so without consent will be void. This Agreement will be binding on the respective successors and assigns of the parties to this Agreement. Notwithstanding, a contractor under contract to the government to deliver Products may assign this Agreement and Products acquired for delivery to its government customer upon written notice to Esri, provided the government customer assents to the terms of this Agreement. Upon mutual agreement, Esri's Affiliates may provide Services under the terms of this Agreement; in such cases, the Ordering Documents will identify the Affiliate as the party that provides the Services. Esri's distributors are not Affiliates of Esri.

9.10 Survival of Terms. The Glossary of Terms and provisions of the following Articles of these General Terms and Conditions will survive the expiration or termination of this Agreement: "Limited Warranties and Disclaimers," "Limitation of Liability," "Indemnifications," and "General Provisions."

9.11 US Government Customer. The Products are commercial items, developed at private expense, provided to Customer under this Agreement. If Customer is a US government entity or US government contractor, Esri licenses or provides subscriptions to Customer in accordance with this Agreement under FAR

Subparts 12.211/12.212 or DFARS Subpart 227.7202. Esri Data and Online Services are licensed or subscribed under the same DFARS Subpart 227.7202 policy as commercial computer software for acquisitions made under DFARS. Products are subject to restrictions, and this Agreement strictly governs Customer's use, modification, performance, reproduction, release, display, or disclosure of Products. Agreement provisions that are inconsistent with federal law regulation will not apply. A US government Customer may transfer Software to any of its facilities to which it transfers the computer(s) on which it has installed such Software. If any court, arbitrator, or board holds that a US government Customer has greater rights to any portion of the Products under applicable public procurement law, such rights will extend only to the portions affected. Online Services are FISMA-Low authorized but do not meet higher security requirements including those found in DFARS 252.239-7010.

9.12 Governing Law. This Agreement is not subject to the United Nations Convention on Contracts for the International Sale of Goods.

- a. **Government Entities.** If Customer is a government entity, the applicable laws of Customer's jurisdiction govern this Agreement.
- b. **Non-government Entities.** US federal law and the law of the State of California exclusively govern this Agreement, excluding their respective choice of law principles.

9.13 Dispute Resolution. The parties will use the following dispute resolution processes:

- a. **Equitable Relief.** Either party will have the right to seek an injunction, specific performance, or other equitable relief in any court of competent jurisdiction without the requirement of posting a bond or proving injury as a condition for relief.
- b. **US Government Agencies.** This Agreement is subject to the Contract Disputes Act of 1978, as amended (41 USC 601–613).
- c. **Other Government Entities.** Esri will comply with mandatory dispute resolutions under applicable law.
- d. **Arbitration.** Except as noted above, the parties will submit to binding arbitration to resolve any dispute arising out of or relating to this Agreement that cannot be settled through negotiation. If Customer is in the United States or one of its territories or outlying areas, the Commercial Arbitration Rules of the American Arbitration Association will govern the arbitration proceedings. If Customer is outside the United States, the Rules of Arbitration of the International Chamber of Commerce will govern the proceedings. The parties will select a single arbitrator in accordance with the applicable arbitration rules. The language of the arbitration will be English. Arbitration will be at an agreed-upon location. Either party will, at the request of the other, make available documents or witnesses relevant to the major aspects of the dispute.

9.14 Force Majeure. A party will not be liable for any failure of or delay in the performance of this Agreement for the period that such failure or delay is due to causes beyond the party's reasonable control. Such causes may include, but are not limited to, acts of God, war, strikes, labor disputes, cyber attacks, laws, regulations, government orders, or any other force majeure event.

9.15 Independent Contractor. Esri is and at all times will be an independent contractor. Nothing in this Agreement creates an employer/employee, principal/agent, or joint venture relationship between Esri or its authorized distributor and Customer. No party has any authority to enter into contracts on behalf of another party or otherwise act on behalf of another party.

9.16 Notice. Customer may send notices required under this Agreement to Esri at the following address:

Environmental Systems Research Institute, Inc.
Attn: Contracts and Legal Department
380 New York Street
Redlands, CA 92373-8100
USA
Tel.: 909-793-2853
Email: LegalNotices@esri.com

Copyright © 2018 Esri
All rights reserved.
Printed in the United States of America.

Notice of Proprietary Information:

The information in the attached document is proprietary to Esri and contains commercial or financial information or trade secrets that are confidential and exempt from disclosure to the public under the Freedom of Information Act. This information shall not be disclosed outside of Customer's organization (except for consultants under a confidentiality obligation who are involved in the proposal evaluation process) without Esri's prior permission, and shall not be duplicated, used, or disclosed in whole or in part for any purpose other than to evaluate this proposal. If, however, a contract is awarded to Esri as a result of this information, the Customer shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Customer's right to use information contained in this data if it is obtained from another source without restriction.

Esri, the Esri globe logo, ArcGIS, esri.com, and other Esri marks used in this document are trademarks, service marks, or registered marks of Esri in the United States, the European Community, or certain other jurisdictions. Other companies and products or services mentioned herein may be trademarks, service marks, or registered marks of their respective mark owners.



Environmental Systems Research Institute, Inc.
 380 New York St
 Redlands, CA 92373-8100
 Phone: 909-793-2853 Fax: 909-307-3049
 DUNS Number: 06-313-4175 CAGE Code: 0AMS3

To expedite your order, please attach a copy of this quotation to your purchase order.
Quote is valid from: 09/26/2018 To: 12/25/2018

Quotation # 20537604

Date: September 26, 2018

Customer # 278831 Contract #

Casitas Municipal Water District
 1055 N Ventura Ave
 Oak View, CA 93022

ATTENTION: Michael Flood
 PHONE: (805) 649-2251
 FAX: (805) 649-4485

Material	Qty	Description	Unit Price	Total
153148	12	ArcGIS Online Named User Level 2 Term License	500.00	6,000.00
			Item Total:	6,000.00
			Subtotal:	6,000.00
			Sales Tax:	0.00
			Estimated Shipping & Handling(Surface Delivery) :	0.00
			Contract Pricing Adjust:	0.00
			Total:	\$6,000.00

Esri may charge a fee to cover expenses related to any customer requirement to use a proprietary vendor management, procurement, or invoice program.

For questions contact: Abbey Lozano **Email:** alozano@esri.com **Phone:** (909) 793-2853 x8227

The items on this quotation are subject to and governed by the terms of this quotation, the most current product specific scope of use document found at <http://www.esri.com/~media/Files/Pdfs/legal/pdfs/e300.pdf>, and your applicable signed agreement with Esri. If no such agreement covers any item quoted, then Esri's standard terms and conditions found at <http://www.esri.com/~media/Files/Pdfs/legal/pdfs/ma-full/ma-full.pdf> apply to your purchase of that item. Federal government entities and government prime contractors authorized under FAR 51.1 may purchase under the terms of Esri's GSA Federal Supply Schedule. Supplemental terms and conditions found at <http://www.esri.com/legla/supplemental-terms-and-conditions> apply to some state and local government purchases. All terms of this quotation will be incorporated into and become part of any additional agreement regarding Esri's offerings. Acceptance of this quotation is limited to the terms of this quotation. Esri objects to and expressly rejects any different or additional terms contained in any purchase order, offer, or confirmation sent to or to be sent by buyer. The quotation information is confidential and may not be copied or released other than for the express purpose of system selection and purchase/license. The information may not be given to outside parties or used for any other purpose without consent from Esri. Delivery is FOB Origin.

If sending remittance, please address to: Esri, P.O. Box 741076, Los Angeles, CA 90074-1076



Quotation # 20537604

Date: September 26, 2018

Environmental Systems Research Institute, Inc.
380 New York St
Redlands, CA 92373-8100
Phone: 909-793-2853 Fax: 909-307-3049
DUNS Number: 06-313-4175 CAGE Code: 0AMS3

Customer # 278831 Contract #

Casitas Municipal Water District
1055 N Ventura Ave
Oak View, CA 93022

To expedite your order, please attach a copy of this quotation to your purchase order.
Quote is valid from: 09/26/2018 To: 12/25/2018

ATTENTION: Michael Flood
PHONE: (805) 649-2251
FAX: (805) 649-4485

If you have made ANY alterations to the line items included in this quote and have chosen to sign the quote to indicate your acceptance, you must fax Esri the signed quote in its entirety in order for the quote to be accepted. You will be contacted by your Customer Service Representative if additional information is required to complete your request.

If your organization is a US Federal, state, or local government agency; an educational facility; or a company that will not pay an invoice without having issued a formal purchase order, a signed quotation will not be accepted unless it is accompanied by your purchase order.

In order to expedite processing, please reference the quotation number and any/all applicable Esri contract number(s) (e.g. MPA, ELA, SmartBuy, GSA, BPA) on your ordering document.

BY SIGNING BELOW, YOU CONFIRM THAT YOU ARE AUTHORIZED TO OBLIGATE FUNDS FOR YOUR ORGANIZATION, AND YOU ARE AUTHORIZING ESRI TO ISSUE AN INVOICE FOR THE ITEMS INCLUDED IN THE ABOVE QUOTE IN THE AMOUNT OF \$ _____, PLUS SALES TAXES IF APPLICABLE. DO NOT USE THIS FORM IF YOUR ORGANIZATION WILL NOT HONOR AND PAY ESRI'S INVOICE WITHOUT ADDITIONAL AUTHORIZING PAPERWORK.

Please check one of the following:

- I agree to pay any applicable sales tax.
- I am tax exempt, please contact me if exempt information is not currently on file with Esri.

Signature of Authorized Representative

Date

Name (Please Print)

Title

The quotation information is proprietary and may not be copied or released other than for the express purpose of system selection and purchase/license. This information may not be given to outside parties or used for any other purpose without consent from Environmental Systems Research Institute, Inc. (Esri).

Any estimated sales and/or use tax reflected on this quote has been calculated as of the date of this quotation and is merely provided as a convenience for your organization's budgetary purposes. Esri reserves the right to adjust and collect sales and/or use tax at the actual date of invoicing. If your organization is tax exempt or pays state tax directly, then prior to invoicing, your organization must provide Esri with a copy of a current tax exemption certificate issued by your state's taxing authority for the given jurisdiction.

Esri may charge a fee to cover expenses related to any customer requirement to use a proprietary vendor management, procurement, or invoice program.

For questions contact: Abbey Lozano

Email: alozano@esri.com

Phone: (909) 793-2853 x8227

The items on this quotation are subject to and governed by the terms of this quotation, the most current product specific scope of use document found at <http://www.esri.com/~media/Files/Pdfs/legal/pdfs/e300.pdf>, and your applicable signed agreement with Esri. If no such agreement covers any item quoted, then Esri's standard terms and conditions found at <http://www.esri.com/~media/Files/Pdfs/legal/pdfs/ma-full/ma-full.pdf> apply to your purchase of that item. Federal government entities and government prime contractors authorized under FAR 51.1 may purchase under the terms of Esri's GSA Federal Supply Schedule. Supplemental terms and conditions found at <http://www.esri.com/legla/supplemental-terms-and-conditions> apply to some state and local government purchases. All terms of this quotation will be incorporated into and become part of any additional agreement regarding Esri's offerings. Acceptance of this quotation is limited to the terms of this quotation. Esri objects to and expressly rejects any different or additional terms contained in any purchase order, offer, or confirmation sent to or to be sent by buyer. The quotation information is confidential and may not be copied or released other than for the express purpose of system selection and purchase/license. The information may not be given to outside parties or used for any other purpose without consent from Esri. Delivery is FOB Origin.

If sending remittance, please address to: Esri, P.O. Box 741076, Los Angeles, CA 90074-1076

CASITAS MUNICIPAL WATER DISTRICT

MINUTES
Quagga Mussel Committee

DATE: November 19, 2018
TO: Board of Directors
FROM: Assistant General Manager, Michael Flood
Re: Quagga Mussel Committee Meeting of November 19, 2018, at 1000 hours.

RECOMMENDATION:

It is recommended that the Board of Directors receive and file this report.

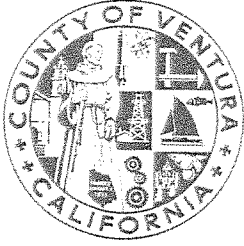
BACKGROUND AND OVERVIEW:

1. **Roll Call.**
Director Russ Baggerly
Director Peter Kaiser
Interim General Manager, Michael Flood
Operations Manager, Michael Shields
Water Quality Supervisor, Susan McMahon
Water Quality Analyst, Jordan Switzer
Thomas Moorhouse of Clean Lakes, Inc.
Michael Blankinship of Blankinship & Assoc.
2. **Public Comments.** None.
3. **Board comments.**
None
4. **Manager's Comments.**
None
5. **Discussion with Clean Lakes Inc. regarding the evaluation of the need for a State Implementation Plan (SIP) 5.3 Exception under the National Pollutant Discharge Elimination System (NPDES) Permit for Biological Pesticides and Residual Chemical Pesticide Applications from Aquatic Animal Invasive Species Control Applications at Lake Casitas.**
A presentation was given by Thomas Moorhouse of Clean Lakes, Inc and Michael Blankinship of Blankinship & Assoc. in regard to this item.

Topics covered were:

- a. What a SIP exception is and how the District would go about getting one for an aquatic pesticide.
- b. Environmental process including CEQA/NEPA.
- c. Definition of a 'Waters of the United States' and its impacts.
- d. Army Corp of Engineers jurisdictions.
- e. Water chemistry and impacts to treatment.
- f. State Water Resources Control Board role.
- g. Current CMWD documentation and future needs.
- h. Biological impacts

The Committee determined that staff should bring a cost proposal to his issue to the full Board of Directors.



**BOARD OF SUPERVISORS
COUNTY OF VENTURA**

GOVERNMENT CENTER, HALL OF ADMINISTRATION
800 SOUTH VICTORIA AVENUE, VENTURA, CALIFORNIA 93009

From the Desk of **STEVE BENNETT**
SUPERVISOR, FIRST DISTRICT
(805) 654-2703
FAX: (805) 654-2226
E-mail: steve.bennett@ventura.org

MEMBERS OF THE BOARD
PETER C. FOY, Chair
STEVE BENNETT
LINDA PARKS
KELLY LONG
JOHN C. ZARAGOZA

November 5, 2018

The Honorable Sonny Perdue,
Secretary, United States Department of Agriculture
1400 Independence Ave., S.W.
Washington, DC 20250

Re: Presidential Memo, Emergency Water Supplies, and a U.S. Forest Service Permit (FS299)

Dear Mr. Secretary Perdue,

Casitas Municipal Water District (CMWD) is responsible for the potable and agricultural water supply for 70,000 residents in the coastal area of Ventura County, California. CMWD's water supply has been subject to an extended drought that is about to enter its seventh year which has drawn down the water supply reservoir, Lake Casitas, to nearly 30% of its full capacity. Along with water conservation restrictions, CMWD has been pursuing a number of emergency water supply projects of which one of these projects includes needing a permit from the United States Forest Service (USFS) to conduct data collection activities.

This permit would allow the installation of several small stream monitoring devices that will help determine what impacts the proposed project might have on the local environment and is expected to take up to two years to complete once the devices are installed. Unfortunately, despite the permit application being submitted more than twelve months ago, the USFS has yet to grant the permit despite urgent pleas from the Casitas MWD to do so in consideration of current water supply conditions here.

In light of the President's memo of October 19th that included a call for enhanced cooperation from federal agencies in order to help resolve ongoing water supply problems in the western states, I am reaching out to you in the hope of obtaining your assistance with this matter.

The local USFS contact that Casitas MWD has been working with on this permit is the District Ranger of the Ojai and Santa Barbara Districts, John F. "Pancho" Smith. (805)967-3481 Ext. 217.

Cordially,

Steve Bennett
Supervisor, First District

CC: Jim Word, Board Director, Casitas Municipal Water District



**BOARD OF SUPERVISORS
COUNTY OF VENTURA**

GOVERNMENT CENTER, HALL OF ADMINISTRATION
800 SOUTH VICTORIA AVENUE, VENTURA, CALIFORNIA 93009

From the Desk of **STEVE BENNETT**
SUPERVISOR, FIRST DISTRICT
(805) 654-2703
FAX: (805) 654-2226
E-mail: steve.bennett@ventura.org

MEMBERS OF THE BOARD
PETER C. FOY, Chair
STEVE BENNETT
LINDA PARKS
KELLY LONG
JOHN C. ZARAGOZA

November 5, 2018

The Honorable Dianne Feinstein
United States Senate
331 Hart Senate Office Building
Washington, D.C. 20510

Re: Local Emergency Water Supplies and a U.S. Forest Service Permit (FS299)

Dear Senator Feinstein,

Casitas Municipal Water District (CMWD) is responsible for the potable and agricultural water supply for 70,000 residents in the coastal area of Ventura County, California. CMWD's water supply has been subject to an extended drought that is about to enter its seventh year which has drawn down the water supply reservoir, Lake Casitas, to nearly 30% of its full capacity. Along with water conservation restrictions, CMWD has been pursuing a number of emergency water supply projects of which one of these projects includes needing a permit from the United States Forest Service (USFS) to conduct data collection activities.

This permit would allow the installation of several small stream monitoring devices that will help determine what impacts the proposed project might have on the local environment and is expected to take up to two years to complete once the devices are installed. Unfortunately, despite the permit application being submitted more than twelve months ago, the USFS has yet to grant the permit despite urgent pleas from the Casitas MWD to do so in consideration of current water supply conditions here.

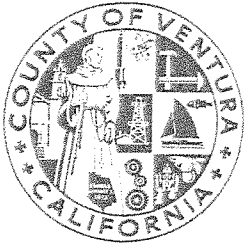
I am reaching out to you in the hope of obtaining your assistance with this matter.

The local USFS contact that Casitas MWD has been working with on this permit is the District Ranger of Ojai and Santa Barbara Districts, John F. "Pancho" Smith. (805)967-3481 Ext. 217.

Cordially,

Steve Bennett
Supervisor, First District

CC: Jim Word, Board Director, Casitas Municipal Water District



From the Desk of **STEVE BENNETT**
SUPERVISOR, FIRST DISTRICT
(805) 654-2703
FAX: (805) 654-2226
E-mail: steve.bennett@ventura.org

BOARD OF SUPERVISORS
COUNTY OF VENTURA
GOVERNMENT CENTER, HALL OF ADMINISTRATION
800 SOUTH VICTORIA AVENUE, VENTURA, CALIFORNIA 93009

MEMBERS OF THE BOARD
PETER C. FOY, Chair
STEVE BENNETT
LINDA PARKS
KELLY LONG
JOHN C. ZARAGOZA

November 5, 2018

The Honorable Kamala Harris,
United States Senator
112 Hart Senate Office Building
Washington, D.C. 20510

Re: Local Emergency Water Supplies and a U.S. Forest Service Permit (FS299)

Dear Senator Harris,

Casitas Municipal Water District (CMWD) is responsible for the potable and agricultural water supply for 70,000 residents in the coastal area of Ventura County, California. CMWD's water supply has been subject to an extended drought that is about to enter its seventh year which has drawn down the water supply reservoir, Lake Casitas, to nearly 30% of its full capacity. Along with water conservation restrictions, CMWD has been pursuing a number of emergency water supply projects of which one of these projects includes needing a permit from the United States Forest Service (USFS) to conduct data collection activities.

This permit would allow the installation of several small stream monitoring devices that will help determine what impacts the proposed project might have on the local environment and is expected to take up to two years to complete once the devices are installed. Unfortunately, despite the permit application being submitted more than twelve months ago, the USFS has yet to grant the permit despite urgent pleas from the Casitas MWD to do so in consideration of current water supply conditions here.

I am reaching out to you in the hope of obtaining your assistance with this matter.

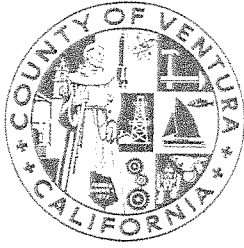
The local USFS contact that Casitas MWD has been working with on this permit is the District Ranger of Ojai and Santa Barbara Districts, John F. "Pancho" Smith. (805)967-3481 Ext. 217.

Cordially,

A handwritten signature in cursive script that reads "Steve Bennett".

Steve Bennett
Supervisor, First District

CC: Jim Word, Board Director, Casitas Municipal Water District



From the Desk of **STEVE BENNETT**
SUPERVISOR, FIRST DISTRICT
(805) 654-2703
FAX: (805) 654-2226
E-mail: steve.bennett@ventura.org

BOARD OF SUPERVISORS
COUNTY OF VENTURA
GOVERNMENT CENTER, HALL OF ADMINISTRATION
800 SOUTH VICTORIA AVENUE, VENTURA, CALIFORNIA 93009

MEMBERS OF THE BOARD
PETER C. FOY, Chair
STEVE BENNETT
LINDA PARKS
KELLY LONG
JOHN C. ZARAGOZA

November 5, 2018

The Honorable Julia Brownley
Congresswoman, 26th District
1019 Longworth House Office Building
Washington, D.C. 20515

Re: Local Emergency Water Supplies and a U.S. Forest Service Permit (FS299)

Dear Congresswoman Brownley,

Casitas Municipal Water District (CMWD) is responsible for the potable and agricultural water supply for 70,000 residents in the coastal area of Ventura County, California. CMWD's water supply has been subject to an extended drought that is about to enter its seventh year which has drawn down the water supply reservoir, Lake Casitas, to nearly 30% of its full capacity. Along with water conservation restrictions, CMWD has been pursuing a number of emergency water supply projects of which one of these projects includes needing a permit from the United States Forest Service (USFS) to conduct data collection activities.

This permit would allow the installation of several small stream monitoring devices that will help determine what impacts the proposed project might have on the local environment and is expected to take up to two years to complete once the devices are installed. Unfortunately, despite the permit application being submitted more than twelve months ago, the USFS has yet to grant the permit despite urgent pleas from the Casitas MWD to do so in consideration of current water supply conditions here.

I am reaching out to you in the hope of obtaining your assistance with this matter.

The local USFS contact that Casitas MWD has been working with on this permit is the District Ranger of Ojai and Santa Barbara Districts, John F. "Pancho" Smith. (805)967-3481 Ext. 217.

Cordially,

Steve Bennett
Supervisor, First District

CC: Jim Word, Board Director, Casitas Municipal Water District

**CASITAS MUNICIPAL WATER DISTRICT
TREASURER'S MONTHLY REPORT OF INVESTMENTS
11/20/18**

Type of Invest	Institution	CUSIP	Date of Maturity	Adjusted Cost	Current Mkt Value	Rate of Interest	Date of Deposit	% of Portfolio	Days to Maturity
*TB	Farmer MAC	31315PYF0	5/2/2028	\$511,310	\$479,805	2.925%	11/20/2017	2.42%	3402
*TB	Federal Farm CR Bank	3133EGZW8	10/25/2024	\$833,918	\$786,325	2.014%	10/25/2016	3.97%	2135
*TB	Federal Farm CR Bank	31331VWN2	4/13/2026	\$886,800	\$812,976	1.901%	5/9/2016	4.10%	2663
*TB	Federal Farm CR Bank	3133EFK71	3/9/2026	\$851,289	\$802,276	2.790%	3/28/2016	4.05%	2629
*TB	Federal Farm CR Bank	3133EFYH4	2/8/2027	\$1,012,613	\$947,030	3.000%	3/24/2016	4.78%	2958
*TB	Federal Farm CR Bank	3133EGWD	9/29/2027	\$694,629	\$623,960	2.354%	11/17/2016	3.15%	3189
*TB	Farmer MAC	3133EEPH7	2/12/2029	\$480,076	\$446,031	2.710%	11/20/2017	2.25%	3682
*TB	Federal Home Loan Bank	3130A3DL	9/8/2023	\$1,561,540	\$1,455,840	1.486%	10/13/2016	7.34%	1728
*TB	Federal Home Loan Bank	313379EE5	6/14/2019	\$1,353,784	\$1,343,399	1.625%	10/3/2012	6.78%	204
*TB	Federal Home Loan Bank	3130A0EN	12/10/2021	\$526,459	\$498,195	1.107%	5/9/2016	2.51%	1100
*TB	Federal Home Loan Bank	3130A5R35	6/13/2025	\$757,485	\$698,913	2.875%	2/19/2016	3.53%	2363
*TB	Federal Home Loan Bank	313383YJ4	9/8/2023	\$456,893	\$421,387	1.203%	7/14/2016	2.13%	1728
*TB	Federal Home Loan Bank	3130A5VW6	7/10/2025	\$1,020,764	\$970,200	2.360%	5/10/2017	4.89%	2390
*TB	Federal Home Loan Bank	3130AIXJ2	6/14/2024	\$914,055	\$834,032	2.875%	8/2/2016	4.21%	2004
*TB	Federal Home Loan Bank	3130ADNW8	2/14/2020	\$998,230	\$973,200	3.400%	1/16/2013	4.91%	444
*TB	Federal Home Loan Bank	3133XFKF	6/11/2021	\$618,067	\$597,010	2.375%	9/8/2014	3.01%	921
*TB	Federal Home Loan MTG Corp	3137EADB	1/13/2022	\$672,041	\$654,027	1.721%	5/1/2016	3.30%	1133
*TB	Federal National Assn	31315P2J7	5/1/2024	\$784,247	\$732,997	2.625%	5/25/2016	3.70%	1961
*TB	Federal National Assn	3135G0ZR	9/6/2024	\$1,461,462	\$1,363,292	2.125%	5/25/2016	6.88%	2086
*TB	Federal National Assn	3135G0K3	4/24/2026	\$2,525,268	\$2,327,475	1.375%	7/6/2010	11.74%	2674
*TB	US Treasury Inflation Index NTS	912828MF	1/15/2020	\$1,170,944	\$1,169,129	1.375%	11/18/2015	5.90%	415
*TB	US Treasury Note	912828WE	11/15/2023	\$767,701	\$760,341	2.750%	12/13/2013	3.84%	1795

Accrued Interest

\$125,295

Total in Gov't Sec. (11-00-1055-00&1065)

\$20,859,576

\$19,823,134

99.98%

Total Certificates of Deposit: (11.13506)

\$0

\$0

0.00%

** **LAIF as of: (11-00-1050-00)**

N/A

\$461

\$461

2.16%

Estimated

0.00%

*** **COVI as of: (11-00-1060-00)**

N/A

\$2,914

\$2,914

1.96%

Estimated

0.01%

TOTAL FUNDS INVESTED

\$20,862,951

\$19,826,509

100.00%

Total Funds Invested last report

\$20,867,680

\$19,681,923

Total Funds Invested 1 Yr. Ago

\$21,125,837

\$20,786,427

**** **CASH IN BANK (11-00-1000-00) EST.**

\$3,198,537

\$3,198,537

CASH IN Western Asset Money Market

\$0

\$0

0.19%

TOTAL CASH & INVESTMENTS

\$24,061,488

\$23,025,046

TOTAL CASH & INVESTMENTS 1 YR AGO

\$21,591,891

\$21,252,482

*CD CD - Certificate of Deposit

*TB TB - Federal Treasury Bonds or Bills

** Local Agency Investment Fund

*** County of Ventura Investment Fund

Estimated interest rate, actual not due at present time.

**** Cash in bank

No investments were made pursuant to subdivision (i) of Section 53601, Section 53601.1 and subdivision (i) Section 53635 of the Government Code.

All investments were made in accordance with the Treasurer's annual statement of investment policy.

CASITAS MUNICIPAL WATER DISTRICT

RESOLUTION OF APPRECIATION FOR THE SERVICE OF MARY BERGEN ON THE BOARD OF DIRECTORS

WHEREAS; Mary Bergen has served on the Board from November, 2010 to December 2018, and

WHEREAS; Mary Bergen has served on the Board of Directors for the Upper Ventura River Groundwater Sustainability Agency, and

WHEREAS; Mary Bergen has been an ardent supporter of agriculture in the Ojai Valley by bringing a view to the Board of the importance to the community of agriculture to the environment in the Ojai Valley, and

WHEREAS; Mary Bergen has acquired a great wealth of knowledge concerning the Water Industry and Casitas Municipal Water District during that service on the Board, and

WHEREAS; Mary Bergen always sought the best for all the District in all the decisions made during her time on the Board.

NOW THEREFORE BE IT RESOLVED by the Board of Directors of the Casitas Municipal Water District that Mary Bergen is to be commended and appreciated for the years of service and the leadership that she assisted the Board and District during her service.

Adopted this 28th day of November, 2018

Signed:

Jim Word, President

Bill Hicks, Vice President

Pete Kaiser, Assistant Secretary

Russ Baggerly, Member

Mike Flood, Interim General Manager

CASITAS MUNICIPAL WATER DISTRICT

RESOLUTION OF APPRECIATION FOR THE SERVICE OF BILL HICKS ON THE BOARD
OF DIRECTORS

WHEREAS; Bill Hicks has served on the Board from November, 1990 to December 2018, and

WHEREAS; Bill Hicks has been involved in finding resolution to the many large issues that faced the district over his 27 years of service, and

WHEREAS; Bill Hicks has represented the district by serving as a Director on the ACWA/JPIA, and

WHEREAS; Bill Hicks has been a supporter of the Lake Casitas Recreation Area in, and

WHEREAS; Bill Hicks has acquired a great wealth of knowledge concerning the Water Industry and Casitas Municipal Water District during that service on the Board, and

WHEREAS; Bill Hicks always sought the best for the District in all the decisions made during his time on the Board.

NOW THEREFORE BE IT RESOLVED by the Board of Directors of the Casitas Municipal Water District that Bill Hicks is to be commended and appreciated for the twenty-seven years of service and the leadership that he provided to the Board and District during his service.

Adopted this 28th day of November, 2018

Signed:

Jim Word, President

Mary Bergen, Secretary

Pete Kaiser, Assistant Secretary

Russ Baggerly, Member

Mike Flood, Interim General Manager