



PO Box 675 • 61750 Chollita Road • Joshua Tree CA 92252
 Phone (760) 366-8438 • Fax (760) 366-9528 • www.jbwd.com
 An Equal Opportunity Provider

**JOSHUA BASIN WATER DISTRICT
 REGULAR MEETING OF THE BOARD OF DIRECTORS
 WEDNESDAY JANUARY 16, 2013 7:00 PM
 61750 CHOLLITA ROAD, JOSHUA TREE CALIFORNIA 92252**

AGENDA

1. CALL TO ORDER
2. PLEDGE OF ALLEGIANCE
3. DETERMINATION OF QUORUM
4. APPROVAL OF AGENDA
5. JBWD 50th ANNIVERSARY: San Bernardino County 3rd District Supervisor Ramos and Kathleen Radnich, Public Consultant
6. PUBLIC COMMENT: At this time, any member of the public may address the Board on matters within the Board's jurisdiction that are not listed on the agenda. Please use the podium microphone. The Board may not discuss at length or take action on items not on the agenda.
 During either "Public Comment" Item, please use the podium microphone. State your name and have your information prepared and be ready to provide your comments to the Board. The District is interested and appreciates your comments. A 3-minute time limit may be imposed. Thank you.
7. CONSENT CALENDAR: Items on the Consent Calendar are considered routine in nature and will be adopted in total by one action of the Board of Directors unless any Board Member or any individual or organization interested in one or more consent calendar items wishes to be heard.
 - A. Approve Minutes of the January 2, 2013 Regular Meeting of the Board of Directors
 - B. Financial Report for November 2012
 - C. Financial Report for December 2012
 - D. Check Audit Report for December 2012
8. REQUEST OF WAIVER OF FIRE HYDRANT
 Recommend that the Board deny the request for waiver of a fire hydrant for construction of a new home at 61160 Trentwood.
9. CONSERVATION REPORT
 Information only. Conservation Coordinator Deborah Bollinger to report.
10. AUTHORIZATION OF AGREEMENTS FOR BIOLOGICAL, CULTURAL, AND NATIVE AMERICAN MONITORING FOR DURING CONSTRUCTION OF RECHARGE PIPELINE PROJECT
 Recommend that the Board take the following actions: 1) Authorize an agreement with Circle Mountain Biological Consultants to provide tortoise monitoring and other biological services during the

Pg. 1-3

Pg. 4-6

Pg. 7-9

Pg. 10-23

Pg. 24-25

Pg. 26-28

Pg. 29-183

construction of the Groundwater Recharge Pipeline and Pond project at an estimated cost of \$115,000 for the pipeline and an optional \$5,000 for the pond including a 10% contingency; and 2) Authorize an agreement with Bonterra Consulting to provide cultural resources and Native American monitoring for the project at an estimated cost of \$69,000 for the pipeline and an optional \$21,000 for the pond, including a 10% contingency.

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11. STRATEGIC PLANNING WORKSHOP

Recommend that the Board set a date in March for the annual strategic planning workshop and authorize staff to retain a facilitator to assist in the planning process, at a cost not to exceed \$2,500.

Pg. 185

12. TRIP TO WASHINGTON DC TO SEEK FUNDS FOR GROUNDWATER PIPELINE AND RECHARGE PROJECT

Recommend that the Board authorize Vice President Frank Coate to go to Washington D.C. to seek additional funds for the Groundwater Recharge Project.

13. COMMITTEE REPORTS:

A. PUBLIC INFORMATION COMMITTEE: President Luckman and Director Fuller: Kathleen Radnich, Public Outreach Consultant to report.

B. PERSONNEL AND FINANCIAL COMMITTEE: Director Wilson and Director Fuller

C. ENGINEERING COMMITTEE: Director Coate and Director Fuller

14. PUBLIC COMMENT

At this time, any member of the public may address the Board on matters within the Board's jurisdiction that are not listed on the agenda. Please use the podium microphone. The Board may not discuss at length or take action on items not on the agenda.

15. GENERAL MANAGER REPORT

16. DIRECTORS COMMENTS/REPORTS

17. DISTRICT GENERAL COUNSEL REPORT

18. FUTURE AGENDA ITEMS

19. CLOSED SESSION

A. At this time the Board will go into a closed session to confer with Legal Counsel on existing litigation pursuant to subdivision (a) of Government Code Section 54956.9. (Re: Joshua Basin Water District v. Robert Ellis, San Bernardino Superior Court – Joshua Tree District, Case No. CIVMS 900168).

20. ADJOURNMENT

INFORMATION

The public is invited to comment on any item on the agenda during discussion of that item.

Any person with a disability who requires accommodation in order to participate in this meeting should telephone Joshua Basin Water District at (760) 366-8438, at least 48 hours prior to the meeting in order to make a request for a disability-related modification or accommodation.

Materials related to an item on this Agenda submitted to the Board of Directors after distribution of the agenda packet are available for public inspection in the District's office located at 61750 Chollita Road, Joshua Tree, California 92252 during normal business hours.

This meeting is scheduled to be broadcast on Time Warner Cable Channel 10 on January 23 at 7:00 pm and January 30 at 7:00 pm. DVD recordings of Joshua Basin Water District Board meetings are available at the District office and at the Joshua Tree Library.

JOSHUA BASIN WATER DISTRICT
Minutes of the
REGULAR MEETING OF THE BOARD OF DIRECTORS
January 2, 2012

1. CALL TO ORDER: 7:00 PM
2. PLEDGE OF ALLEGIANCE
3. DETERMINATION OF QUORUM:

Frank Coate	Present
Victoria Fuller	Present
Mickey Luckman	Present
Mike Reynolds	Present
Gary Wilson	Present

STAFF PRESENT: Joe Guzzetta, General Manager
Marie Salsberry, HR Manager/Administrative Specialist

CONSULTANTS PRESENT: Gil Granito, District Counsel
Kathleen Radnich, Public Outreach Consultant

GUESTS 10

4. APPROVAL OF AGENDA
President Luckman requested that Item F of the Consent Calendar be pulled.
MSC Reynolds/Fuller 4/1 to approve the agenda for the January 2, 2012 Regular Meeting of the Board of Directors, pulling Item F of the Consent Calendar for Discussion.

Coate	Aye
Fuller	Aye
Luckman	Aye
Reynolds	Aye
Wilson	No

5. PUBLIC COMMENT
Kay Keene of Joshua Tree commented on her request for a variance to the District's Rules and Regulations regarding remote meter requirements. President Luckman referred the subject to staff for review.

6. CONSENT CALENDAR
MSC Coate/Reynolds 5/0 to approve the minutes of the November 28, 2012 Special Joint Meeting of the Board and Citizens Advisory Committee; to approve the minutes of the December 12, 2012 Special Board Meeting; to Approve the Check Audit Report for November 2012; to approve change of time for the Regular Agenda Committee meeting to Tuesday a week prior to each Board meeting at 3:15 pm; and to affirm adoption of Resolution 12-896 Expressing the Board of Directors' appreciation for Director Bill Long.
President Luckman noted that the wording for Resolution 12-899 had changed; she read the resolution.
MSC Coate/Reynolds 5/0 to adopt Resolution 12-899, recognizing Michael Luhrs for his service to the Joshua Basin Water District.

7. UPDATE OF MOJAVE WATER AGENCY ACTIVITIES BY MOJAVE WATER AGENCY

GENERAL MANAGER KIRBY BRILL, AND INTRODUCTION OF NEW PUBLIC INFORMATION OFFICER YVONNE HESTER

Mojave Water Agency (MWA) General Manager Kirby Brill related information on the relationship between MWA and JBWD, and years of planning for a sustainable water supply for JBWD. He complimented JBWD's leadership, noting that he recently attended the groundbreaking ceremony for JBWD's Groundwater Recharge Project.

Mr. Brill introduced MWA Community Liaison Officer Yvonne Hester; Ms. Hester commented on attending the groundbreaking ceremony for the Groundwater Recharge Project and her interest in coordinating with JBWD in the future.

8. PURCHASE OF 3-YEAR SUPPLY OF MXU BATTERIES FOR ELECTRONIC METER READING

General Manager Joe Guzzetta presented the staff report, noting that staff may have identified an alternative source to purchase the batteries from. He recommended that the Board approve the purchase of a three-year supply of MXU batteries in case the alternative source does not work out.

MSC Fuller/Reynolds 4/1 to approve staff recommendation to authorize, as a backup situation, the purchase of approximately 2,000 batteries and appropriate up to \$50,000 from the "Opportunity Reserve", understanding that the sensus batteries are not expected to be available after one month.

Coate	Aye
Fuller	Aye
Luckman	Aye
Reynolds	Aye
Wilson	No

9. CONSIDERATION OF 2081 "INCIDENTAL TAKE" PERMIT FOR GROUND WATER RECHARGE PROJECT

GM Guzzetta reported that the District may, but is not required to, apply for an "Incidental Take Permit" from the state department of Fish and Game that would allow the construction of the recharge pipeline project to continue in the event that some tortoises are harmed. Award of the permit would require the District to give 65 acres of "mitigation land" intended to replace disturbed tortoise habitat. Alternatively, the District could proceed without a permit since construction is expected to be completed during the time when tortoises are not active and it is expected that no harm will come to any tortoises resulting during construction.

After discussion the Board took the following action:

MSC Reynolds/Fuller 5/0 to determine not to apply for an "Incidental Take" 2081 Permit from the California Department of Fish and Game for the Ground Water Recharge Project.

10. REVIEW STRATEGIC PLAN SUMMARY

GM Guzzetta reported that USGS may have a presentation for the Board in March on preliminary findings of their most recent study. Large meter testing is well underway. Staff has determined a less costly alternative to the planned emergency water supply for the hospital. Altitude valves and earthquake valves are under construction.

There were no questions from the Board.

11. COMMITTEE REPORTS

- A. PUBLIC INFORMATION COMMITTEE: President Luckman and Director Fuller; Kathleen Radnich, Public Outreach Consultant reported the District is collaborating with Joshua Tree National Park on a project related to the garden. JBWD and other local agencies are re-evaluating public

education programs that they have partnered on in the past. The District will celebrate its fiftieth anniversary on January 16th with an open house, light refreshments, "Bottled vs. Tap Water" taste test, and free 50th anniversary commemorative edition calendars. San Bernardino County Supervisor Ramos will attend to present a resolution to the District.

12. PUBLIC COMMENT

None.

13. GENERAL MANAGER REPORT

GM Guzzetta had nothing further to report.

14. DIRECTORS COMMENTS/REPORTS

Director Reynolds commented that 2013 will be a year to remember for Joshua Basin Water District; the District's fiftieth anniversary, and the completion of the recharge project.

- A. Appoint new Board Engineering and Agenda Committee members: President Luckman appointed Vice President Coate and Director Fuller to the Engineering and Operations Committee. President Luckman appointed herself and Vice President Coate to the Agenda Committee.
- B. Appoint Personnel/Finance Ad Hoc Committee: President Luckman appointed Director Fuller and Director Wilson, and noted that this will be a standing, rather than ad hoc, committee.
- C. Appoint representatives for MWA TAC, Morongo Basin Pipeline Commission, ASBCSD, and LAFCO meetings: President Luckman appointed Vice President Coate to attend the Morongo Basin Pipeline Commission; Director Reynolds to attend the Association of San Bernardino County Special Districts; and herself and Director Fuller to share in attending the San Bernardino County Local Agency Formation Commission meetings.
- D. Consider applications for appointment to CAC: an application for membership on the District's Citizens Advisory Committee was received from Fred Klintworth of Joshua Tree.
MSC Luckman/Reynolds 5/0 to appoint Fred Klintworth to the Citizens Advisory Committee.

15. DISTRICT GENERAL COUNSEL REPORT

District Counsel Gil Granito reported regarding the Ellis litigation that the court of appeals has issued a final notice allowing an extension until January 3rd for Dr. Ellis to file his brief.

16. FUTURE AGENDA ITEMS

None requested.

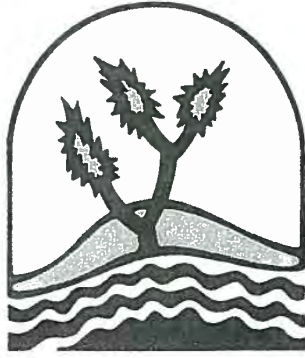
17. ADJOURNMENT 8:12 PM

MSC Reynolds/Fuller 5/0 to adjourn the January 2nd, 2013 Regular Meeting of the Board of Directors.
Respectfully submitted:

Joe Guzzetta, General Manager

The next regular meeting of the Board of Directors is scheduled for January 16, 2013 at 7:00 pm.

		BEGINNING	TOTAL	TOTAL	ENDING	AVERAGE
		BALANCE	DEBITS	CREDITS	BALANCE	DAILY
						BALANCE
GENERAL FUND						
01 -11100	PETTY CASH FUND	600.00	0.00	0.00	600.00	600.00
01 -11110	CHANGE FUND	1,500.00	0.00	0.00	1,500.00	1,500.00
01 -11200	GENERAL FUND-U S	128,416.53	669,716.87	700,921.10CR	97,212.30	137,093.16
01 -11210	PAYROLL FUND - U	5,000.00	71,267.84	71,267.84CR	5,000.00	10,931.48
01 -11220	CREDIT CARD FUND	78,476.09	65,402.04	79,783.31CR	64,094.82	48,891.02
01 -11300	LAIF - INVESTMEN	566,068.98	406,678.99	92,059.22CR	880,688.75	725,284.79
01 -11305	LAIF - EMERGENCY	1,000,000.00	0.00	0.00	1,000,000.00	1,000,000.00
01 -11306	LAIF - EQUIP & T	365,019.93	0.00	0.00	365,019.93	365,019.93
01 -11307	LAIF - OPPORTUNI	2,000,000.00	0.00	0.00	2,000,000.00	2,000,000.00
01 -11308	LAIF - WELL & BO	50,000.00	0.00	0.00	50,000.00	50,000.00
01 -11309	LAIF - CONSUMER	303,277.41	1,244.34	51,249.86CR	253,271.89	301,610.56
01 -11310	LAIF - WATER CAP	95,328.82CR	3,608.00	0.00	91,720.82CR	95,208.55CR
01 -11313	LAIF - SEWER CAP	188,054.28	0.00	0.00	188,054.28	188,054.28
01 -11315	LAIF - CAPITAL P	0.00	0.00	0.00	0.00	0.00
01 -11320	LAIF- CMM REDEMP	178,887.62	87,206.88	43,603.44CR	222,491.06	199,235.89
01 -11325	LAIF - CMM RESER	274,615.73	0.00	0.00	274,615.73	274,615.73
01 -11330	LAIF - CMM PREPA	2,975.98	0.00	0.00	2,975.98	2,975.98
01 -11338	LAIF - HI DESERT	2,410,816.99	0.00	61,825.69CR	2,348,991.30	2,366,132.83
FUND 01 TOTAL		7,458,380.72	1,305,124.96	1,100,710.46CR	7,662,795.22	7,576,737.10
REPORT TOTALS		7,458,380.72	1,305,124.96	1,100,710.46CR	7,662,795.22	7,576,737.10



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Cash Flow November 30, 2012

Beginning Cash			7,458,380.72
SOURCE OF FUNDS:			
Water A/R Collections	231,350.29		
Turn On/Misc	38,018.03		
Consumer Deposits	6,300.00		
Project Deposits	0.00		
Property Taxes G.D.	12,421.72		
ID #2 Tax Collections	32,912.40		
Standby Collections - Prior	87,239.44		
Standby Collections - Current	133,860.92		
CMM Assessment Collections	43,603.44		
Water Capacity Charges	3,608.00		
Sewer Capacity Charges	0.00		
Meter Installation Fees	1,603.00		
Interest	0.00		
TOTAL SOURCE OF FUNDS		<u>590,917.24</u>	
FUNDS USED:			
Debt Service	0.00		
Capital Additions	93,532.09		
Operating Expenses	169,081.18		
Employee Funded 457 Transfer	2,205.38		
Bank Transfer Payroll Taxes	29,576.18		
CalPERS Transfer	18,735.53	313,130.36	
		<u>313,130.36</u>	
Bank Transfer Payroll	71,267.84		
Bank Transfer Fees/Charges	2,104.54	73,372.38	
TOTAL USE OF FUNDS		<u>386,502.74</u>	
Net Increase (Decrease)			204,414.50
Cash Balance at End of Period			<u>7,662,795.22</u>

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BOARD REPORT

AS OF: NOVEMBER 30TH, 2012

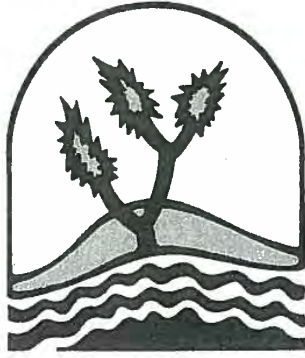
01 -GENERAL FUND

FINANCIAL SUMMARY

% OF YEAR COMPLETED: 41.67

	CURRENT BUDGET	CURRENT PERIOD	YEAR TO DATE ACTUAL	TOTAL ENCUMBERED	BUDGET BALANCE	% YTD BUDGET
<u>REVENUE SUMMARY</u>						
REVENUES	<u>4,706,850</u>	<u>511,279.03</u>	<u>3,172,223.62</u>	<u>0.00</u>	<u>1,534,625.94</u>	<u>67.40</u>
TOTAL REVENUES	4,706,850	511,279.03	3,172,223.62	0.00	1,534,625.94	67.40
<u>EXPENSE SUMMARY</u>						
Production	1,042,154	70,168.47	320,036.99	0.00	722,117.01	30.71
Distribution	634,374	45,128.73	209,800.76	0.00	424,573.24	33.07
Customer Service	487,302	41,935.24	193,851.24	0.00	293,450.76	39.78
Administration	569,082	52,639.58	210,082.13	0.00	358,999.71	36.92
Engineering	189,435	12,984.15	73,531.37	0.00	115,903.63	38.82
Finance	427,155	33,630.41	172,283.90	0.00	254,871.10	40.33
Personnel	98,877	3,590.93	20,087.64	0.00	78,789.36	20.32
Legal	104,000	16,607.40	42,405.53	0.00	61,594.47	40.77
Bonds & Loans	595,491	372.51	175,479.96	0.00	420,010.55	29.47
Benefits Allocated	0	0.00	0.00	0.00	0.00	0.00
Field Allocated	0	0.00	0.00	0.00	0.00	0.00
Office allocated	(1)	0.00	0.00	0.00	(0.52)	0.00
Non-departmental	<u>285,376</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>285,376.00</u>	<u>0.00</u>
TOTAL EXPENSES	4,433,245	277,057.42	1,417,559.52	0.00	3,015,685.31	31.98
REVENUE OVER/(UNDER) EXPENSES	273,605	234,221.61	1,754,664.10	0.00	(1,481,059.37)	641.31

	BEGINNING	TOTAL	TOTAL	ENDING	AVERAGE	
	BALANCE	DEBITS	CREDITS	BALANCE	DAILY	
					BALANCE	
GENERAL FUND						
01 -11100	PETTY CASH FUND	600.00	0.00	0.00	600.00	600.00
01 -11110	CHANGE FUND	1,500.00	0.00	0.00	1,500.00	1,500.00
01 -11200	GENERAL FUND-U S	97,212.30	1,323,302.90	1,322,803.38CR	97,711.82	131,441.04
01 -11210	PAYROLL FUND - U	5,000.00	76,165.54	76,165.54CR	5,000.00	9,894.90
01 -11220	CREDIT CARD FUND	64,094.82	54,976.55	65,248.74CR	53,822.63	45,055.43
01 -11300	LAIF - INVESTMEN	880,688.75	616,866.08	204,194.09CR	1,293,360.74	1,063,818.52
01 -11305	LAIF - EMERGENCY	1,000,000.00	0.00	0.00	1,000,000.00	1,000,000.00
01 -11306	LAIF - EQUIP & T	365,019.93	0.00	0.00	365,019.93	365,019.93
01 -11307	LAIF - OPPORTUNI	2,000,000.00	31,628.14	225,000.00CR	1,806,628.14	1,915,847.79
01 -11308	LAIF - WELL & BO	50,000.00	0.00	0.00	50,000.00	50,000.00
01 -11309	LAIF - CONSUMER	253,271.89	748.15	1,325.00CR	252,695.04	253,253.28
01 -11310	LAIF - WATER CAP	91,720.82CR	3,608.00	0.00	88,112.82CR	91,604.43CR
01 -11313	LAIF - SEWER CAP	188,054.28	5,418.00	0.00	193,472.28	188,229.05
01 -11315	LAIF - CAPITAL P	0.00	0.00	0.00	0.00	0.00
01 -11320	LAIF- CMM REDEMP	222,491.06	87,791.80	10,407.08CR	299,875.78	259,627.58
01 -11325	LAIF - CMM RESER	274,615.73	0.00	0.00	274,615.73	274,615.73
01 -11330	LAIF - CMM PREPA	2,975.98	0.00	0.00	2,975.98	2,975.98
01 -11338	LAIF - HI DESERT	2,348,991.30	116.99	5,250.99CR	2,343,857.30	2,344,862.73
<hr/>						
FUND 01	TOTAL	7,662,795.22	2,200,622.15	1,910,394.82CR	7,953,022.55	7,815,137.53
<hr/>						
REPORT TOTALS		7,662,795.22	2,200,622.15	1,910,394.82CR	7,953,022.55	7,815,137.53



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Cash Flow

December 31, 2012

Beginning Cash		7,662,795.22
SOURCE OF FUNDS:		
Water A/R Collections	223,568.63	
Turn On/Misc	7,347.08	
Consumer Deposits	4,350.00	
Project Deposits	1,000.00	
Property Taxes G.D.	46,695.11	
ID #2 Tax Collections	149,255.24	
Standby Collections - Prior	20,916.59	
Standby Collections - Current	403,671.79	
CMM Assessment Collections	87,791.80	
Water Capacity Charges	3,608.00	
Sewer Capacity Charges	5,418.00	
Meter Installation Fees	1,603.00	
Interest	0.00	
TOTAL SOURCE OF FUNDS		<u>955,225.24</u>
FUNDS USED:		
Debt Service	335,085.81	
Capital Additions	87,739.06	
Operating Expenses	111,584.81	
Employee Funded 457 Transfer	2,744.65	
Bank Transfer Payroll Taxes	31,712.62	
CalPERS Transfer	18,582.50	587,449.45
Bank Transfer Payroll	75,614.17	
Bank Transfer Fees/Charges	1,934.29	77,548.46
TOTAL USE OF FUNDS		<u>664,997.91</u>
Net Increase (Decrease)		<u>290,227.33</u>
Cash Balance at End of Period		<u>7,953,022.55</u>

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01 -GENERAL FUND
 FINANCIAL SUMMARY

% OF YEAR COMPLETED: 50.00

	CURRENT BUDGET	CURRENT PERIOD	YEAR TO DATE ACTUAL	TOTAL ENCUMBERED	BUDGET BALANCE	% YTD BUDGET
<u>REVENUE SUMMARY</u>						
REVENUES	<u>4,706,850</u>	<u>235,664.03</u>	<u>3,407,887.65</u>	<u>0.00</u>	<u>1,298,961.91</u>	<u>72.40</u>
TOTAL REVENUES	4,706,850	235,664.03	3,407,887.65	0.00	1,298,961.91	72.40
<u>EXPENSE SUMMARY</u>						
Production	1,042,154	74,016.46	394,053.45	0.00	648,100.55	37.81
Distribution	634,374	44,967.19	254,767.95	0.00	379,606.05	40.16
Customer Service	487,302	37,935.50	231,786.74	0.00	255,515.26	47.57
Administration	569,082	44,416.15	254,498.28	0.00	314,583.56	44.72
Engineering	189,435	15,097.19	88,628.56	0.00	100,806.44	46.79
Finance	427,155	33,079.57	205,363.47	0.00	221,791.53	48.08
Personnel	98,877	6,156.92	26,244.56	0.00	72,632.44	26.54
Legal	104,000	20,199.50	62,605.03	0.00	41,394.97	60.20
Bonds & Loans	595,491	111,870.68	287,350.64	0.00	308,139.87	48.25
Benefits Allocated	0	0.00	0.00	0.00	0.00	0.00
Field Allocated	0	0.00	0.00	0.00	0.00	0.00
Office allocated	(1)	0.00	0.00	0.00	(0.52)	0.00
Non-departmental	<u>285,376</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>285,376.00</u>	<u>0.00</u>
TOTAL EXPENSES	4,433,245	387,739.16	1,805,298.68	0.00	2,627,946.15	40.72
REVENUE OVER/(UNDER) EXPENSES	273,605 (152,075.13)	1,602,588.97	0.00 (1,328,984.24)	585.73

CHECK NO	CHECK DATE	STATUS		VENDOR INFO	CHECK AMOUNT
052533	12/07/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212041914 FIRST CHOICE REALTY :US REFUND	91.27 ----- 91.27
052534	12/07/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212041915 ENGLISH, WILLIAM B. :US REFUND	37.67 ----- 37.67
052535	12/07/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212041916 DESERT GATE REAL EST:US REFUND	61.09 ----- 61.09
052536	12/07/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212041917 CAMPBELL, ADRIENNE :US REFUND	6.26 ----- 6.26
052537	12/07/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212041918 DEES, SCOTT :US REFUND	56.82 ----- 56.82
052538	12/07/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212041919 KIDMAN, RAND :US REFUND	45.32 ----- 45.32
052539	12/07/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212041920 FIRST CHOICE PROPERT:US REFUND	53.15 ----- 53.15
052540	12/07/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212041921 WALKER, VALERIE L :US REFUND	19.61 ----- 19.61
052541	12/07/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212041922 BOULDING, RON T :US REFUND	52.14 ----- 52.14
052542	12/07/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212041923 FIELD ASSET SERVICES:US REFUND	4.72 ----- 4.72

CHECK NO	CHECK DATE	STATUS	VENDOR INFO		CHECK AMOUNT
052543	12/07/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212041924 LEHMAN, DAVID :US REFUND	4.78 ----- 4.78
052544	12/07/2012	R	000145	CALIFORNIA STATE DISBURSEMENT UNIT I-120712 EE REMITTANCE	198.92 ----- 198.92
052545	12/07/2012	R	000230	CHARLES Z. FEDAK & COMPANY, CPA'S I-CFC1112 FINANCIAL AUDIT - 11/12	900.00 ----- 900.00
052546	12/07/2012	R	001850	CLINICAL LAB OF S.B. INC I-924610 SAMPLING - OCT 12	742.00 ----- 742.00
052547	12/07/2012	R	001888	RICHARD H COOK I-RC120312 EMERGENCY MANAGEMENT PROGRAM	1,725.00 ----- 1,725.00
052548	12/07/2012	R	002200	DEPT OF THE INTERIOR-BLM I-2013007707 RIGHT OF WAY RENTAL - 2013	8,887.89 ----- 8,887.89
052549	12/07/2012	R	002565	DUDEK AND ASSOCIATES, INC I-20123573 ENG SERV: MULTIPLE PROJECTS I-20123911 ENG SERV: MULTIPLE PROJECTS	21,266.70 35,559.25 ----- 56,825.95
052550	12/07/2012	V		C-CHECK VOID CHECK	0.00 ----- 0.00
052551	12/07/2012	V		C-CHECK VOID CHECK	0.00 ----- 0.00
052552	12/07/2012	R	003505	LORI PARKER I-7353 VEHICLE REPAIRS	216.67 ----- 216.67

CHECK NO	CHECK DATE	STATUS	VENDOR INFO		CHECK AMOUNT
052553	12/07/2012	R	004018	HACH COMPANY	
			I-8018022	PUMPING PLANT SUPPLIES	406.70

					406.70
052554	12/07/2012	R	005672	WILLIAM H. KLINE	
			I-WK120512	REIMB: WELL 10 HEAT TAPE	180.33

					180.33
052555	12/07/2012	R	009897	THE MALLANTS CORPORATION	
			I-2556	TEMPORARY LABOR	2,773.86

					2,773.86
052556	12/07/2012	R	006200	HELEN A. MCALLISTER	
			I-5729B	JANITORIAL SERVICES - NOV 12	580.00

					580.00
052557	12/07/2012	R	003930	NBS	
			I-11120041	CMM ADMIN- ANNUAL REPORTING	1,295.00

					1,295.00
052558	12/07/2012	R	008102	OFFICEMAX CONTRACT INC.	
			C-255218	OFFICE SUPPLIES	52.78CR
			I-249836	OFFICE SUPPLIES	245.25

					192.47
052559	12/07/2012	R	000236	PAYPRO ADMINISTRATORS	
			I-PP120712	EE FSA DEDUCTIONS 12-7-12	774.17

					774.17
052560	12/07/2012	R	008414	ROBERT L. STEPHENSON	
			I-1249	VIDEO TAPING BD MEETINGS - NOV	300.00

					300.00
052561	12/07/2012	R	008415	PRUDENTIAL OVERALL SPLY.	
			I-20610769	SHOP EXPENSE	98.02

					98.02
052562	12/07/2012	R	009054	KATHLEEN J. RADNICH	
			I-1112512-48	PUBLIC RELATIONS SERVICES	446.40
			I-111812-47	PUBLIC RELATIONS SERVICES	367.20
			I-12/2/12-49	PUBLIC RELATIONS SERVICES	496.80

					1,310.40

CHECK NO	CHECK DATE	STATUS	VENDOR INFO		CHECK AMOUNT
052563	12/07/2012	R	009072	LAW OFFICES REDWINE AND SHERRILL	
			I-009072	LEGAL SERVICES - NOV 12	8,940.50

					8,940.50
052564	12/07/2012	R	009878	SOUTHERN CALIFORNIA EDISON	
			I-SCE1112	POWER FOR PUMPING - NOV 12	22,430.21

					22,430.21
052565	12/12/2012	R	1	CUSTOMER REFUNDS (MISC.)	
			I-000201212121925	CLAXTON, SYDNEY :US REFUND	73.24

					73.24
052566	12/12/2012	R	1	CUSTOMER REFUNDS (MISC.)	
			I-000201212121926	ALLIED ALLIANCE LLC :US REFUND	46.80

					46.80
052567	12/12/2012	R	1	CUSTOMER REFUNDS (MISC.)	
			I-000201212121927	SIMPSON, AMALYNN :US REFUND	23.80

					23.80
052568	12/12/2012	R	1	CUSTOMER REFUNDS (MISC.)	
			I-000201212121928	BUTLER, MISTER :US REFUND	69.52

					69.52
052569	12/12/2012	R	1	CUSTOMER REFUNDS (MISC.)	
			I-000201212121929	HOLDREN, BRIAN K :US REFUND	21.02

					21.02
052570	12/12/2012	R	1	CUSTOMER REFUNDS (MISC.)	
			I-000201212121930	MCKERN, DOUG :US REFUND	100.45

					100.45
052571	12/12/2012	R	1	CUSTOMER REFUNDS (MISC.)	
			I-000201212121931	FISCHER, JEFF M :US REFUND	14.29

					14.29
052572	12/12/2012	R	1	CUSTOMER REFUNDS (MISC.)	
			I-000201212121932	PATRICK, ROY :US REFUND	32.38

					32.38

CHECK NO	CHECK DATE	STATUS	VENDOR INFO		CHECK AMOUNT
052573	12/13/2012	R	001002	BUSINESS CARD	
			I-BA1212	BUSINESS EXPENSES & RECHARGE	298.99

					298.99
052574	12/13/2012	R	001004	BUSINESS CARD	
			I-BA1212	HYDRO REPAIR/OFFC SUPP/TRAININ	5,865.68

					5,865.68
052575	12/13/2012	R	001461	DEBORAH BOLLINGER	
			I-530	WATER CONSERVATION - NOV 12	2,500.00
			I-531	RECHARGE BASIN CONSULT- NOV 12	356.25

					2,856.25
052576	12/13/2012	R	004110	BURRTEC WASTE & RECYCLING SVCS	
			I-BW1212	RECYCLING - DEC 12	54.63
			I-BW1212B	TRASH REMOVAL - DEC 12	248.81
			I-BW1212C	TRASH REMOVAL - DEC 12	79.92

					383.36
052577	12/13/2012	R	001555	CENTRATEL	
			I-121203192101	DISPATCH SERVICES - NOV 12	329.02

					329.02
052578	12/13/2012	R	001932	COUNTY OF SAN BERNARDINO	
			I-105281	SEPT, OCT & NOV MAP REVISIONS	12.00

					12.00
052579	12/13/2012	R	000058	GARDA CL WEST, INC.	
			I-187-309912	COURIER FEES - DEC 12	471.44

					471.44
052580	12/13/2012	R	004152	HI-DESERT STAR	
			I-7078	EE RECRUITING	143.00
			I-7109	EE RECRUITING	130.00
			I-A7078	EE RECRUITING	143.00
			I-A7109	EE RECRUITING	130.00
			I-B7078	EE RECRUITING	143.00
			I-B7109	EE RECRUITING	130.00
			I-C7109	EE RECRUITING	90.00

					909.00
052581	12/13/2012	V			

CHECK NO	CHECK DATE	STATUS	VENDOR INFO		CHECK AMOUNT
			C-CHECK	VOID CHECK	0.00

					0.00
052582	12/13/2012	R	004720	INLAND WATER WORKS	
			I-247761	D-1-1 FLOW METER SUPPLIES	161.63

					161.63
052583	12/13/2012	R	005870	KRIEGER & STEWART INC.	
			I-35742	ENG SVCS: RECHARGE CONTIGENCY	21,257.30

					21,257.30
052584	12/13/2012	R	009897	THE MALLANTS CORPORATION	
			I-2559	TEMPORARY LABOR	2,593.51

					2,593.51
052585	12/13/2012	R	006790	MOBILE MINI, LLC - CA	
			I-217003287	23' RECORD STORAGE RENTAL	226.71

					226.71
052586	12/13/2012	R	000070	ONLINE INFORMATION SERVICES, INC.	
			I-460596	ID VERIF. SERV. THRU 11/30/12	252.75

					252.75
052587	12/13/2012	VOID	008300	POSTMASTER	
			I-SD121112	POSTAGE FOR WATER BILLING	3,000.00

					3,000.00
052588	12/13/2012	R	008405	PRECISION ASSEMBLY	
			I-15243	NOV WATER BILLING & PUBL INFO	1,825.60

					1,825.60
052589	12/13/2012	R	010645	TROPHY EXPRESS	
			I-86286	NAME BADGES: STAFF & DIRECTORS	27.48

					27.48
052590	12/13/2012	R	010690	TYLER TECHNOLOGIES	
			I-025-57792	ONLINE PRODUCTS - DEC 12	185.00

					185.00
052591	12/13/2012	R	011615	WESTERN EXTERMINATOR CO.	

CHECK NO	CHECK DATE	STATUS	VENDOR INFO	CHECK AMOUNT
			I-WE1112 EXTERMINATOR - NOV 12	75.00
			I-WE1112B EXTERMINATOR - NOV 12	33.00

				108.00
052592	12/19/2012	R	009500 USDA RURAL DEVELOPMENT	
			I-USDA 12/14 LN #02 EARLY PAYOFF OF ID #02 BONDS	335,085.81

				335,085.81
052593	12/21/2012	R	000501 ACWA/JPIA	
			I-ACWA0113 EE HEALTH BENEFIT & EAP JAN 13	8,674.55

				8,674.55
052594	12/21/2012	R	000675 AQUA-METRIC SALES COMPANY	
			I-0045846-IN INVENTORY	669.06

				669.06
052595	12/21/2012	R	001630 AT&T MOBILITY	
			I-829480028X12052012 COMMUNICATIONS - NOV 12	894.29

				894.29
052596	12/21/2012	R	001526 CANYON AUTO SERVICES, INC	
			I-7196 VEHICLE REPAIRS	136.11

				136.11
052597	12/21/2012	R	001528 CARPI & CLAY, INC	
			I-CC1112 LOBBYIST - NOV 12	1,750.00

				1,750.00
052598	12/21/2012	R	001560 CENTURY FORMS, INC.	
			I-71262 WINDOW ENVELOPES	836.75

				836.75
052599	12/21/2012	R	001595 CHEM-TECH INTERNATIONAL, INC.	
			I-JBWD157 WATER TREATMENT EXPENSE	1,212.51
			I-JBWD158 220 GALLON TANK	836.14

				2,048.65
052600	12/21/2012	R	001850 CLINICAL LAB OF S.B. INC	
			I-925248 SAMPLING - NOV 12	510.00

				510.00

CHECK NO	CHECK DATE	STATUS	VENDOR INFO		CHECK AMOUNT
052601	12/21/2012	R	001865	COMPUTER GALLERY	
			I-307111	INSTALL ARCGIS	437.50
			I-307214CW	PLAT. MAINTENANCE - JAN 13	2,937.00
			I-307218CW	BDR BACKUP SERVICE - JAN 13	1,010.00
			I-307243CW	PRINTER MAINTENANCE - NOV 12	86.70

					4,471.20
052602	12/21/2012	R	002213	JOHN ZACCARIA	
			I-13116	OFFICE SUPPLIES	132.62

					132.62
052603	12/21/2012	R	002853	ENVIRONMENTAL SCIENCE ASSOC.	
			I-100088	RECHARGE PROJECT ADDENDUM	3,578.75

					3,578.75
052604	12/21/2012	R	004195	HOME DEPOT CREDIT SERVICES	
			I-HD1212	SHOP EXP/MAINLINE RPR/SM TOOLS	2,075.12

					2,075.12
052605	12/21/2012	R	005640	KILLER BEE PEST CONTROL	
			I-2446	BEE REMOVAL	70.00

					70.00
052606	12/21/2012	R	009897	THE MALLANTS CORPORATION	
			I-2560	TEMPORARY LABOR	3,103.79

					3,103.79
052607	12/21/2012	R	006504	MC CALL'S METERS, INC.	
			I-23286	CERTIFIED FLOW TEST	1,263.33

					1,263.33
052608	12/21/2012	R	000233	YUCCA VALLEY AUTO PARTS, INC.	
			I-013559	WELDING TRAILER REPAIR	21.03
			I-013597	VEHICLE PARTS	119.35
			I-013663	VEHICLE REPAIR	521.87
			I-013998	SMALL TOOL	7.17

					669.42
052609	12/21/2012	R	000159	OASIS OFFICE SUPPLY	
			I-01454	SHIPPING: D-1-1 FLOW METER	25.34

					25.34

CHECK NO	CHECK DATE	STATUS	VENDOR INFO		CHECK AMOUNT
052610	12/21/2012	R	000236	PAYPRO ADMINISTRATORS	
			I-PP122112	EE FSA DEDUCTIONS 12-21-12	774.17

					774.17
052611	12/21/2012	R	008300	POSTMASTER	
			I-SD121112	POSTAGE FOR WATER BILLING	3,000.00

					3,000.00
052612	12/21/2012	R	000250	PRIDE DIAMOND LLC	
			I-2027	MAINLINE/LEAK REPAIR SUPPLIES	1,304.96

					1,304.96
052613	12/21/2012	R	008415	PRUDENTIAL OVERALL SPLY.	
			I-20617119	SHOP EXPENSE	98.02

					98.02
052614	12/21/2012	R	000091	SAN BERNARDINO COUNTY RECORDER	
			I-SB121712	RELEASE OF A LIEN	11.00

					11.00
052615	12/21/2012	R	009880	SOUTHERN CALIFORNIA EDISON CO	
			I-SCE1212	POWER TO BUILDINGS - DEC 12	1,776.72

					1,776.72
052616	12/21/2012	R	003596	SUPERMEDIA LLC	
			I-SM1212	MORONGO BASIN ADVERT - DEC 12	22.50

					22.50
052617	12/21/2012	R	010690	TYLER TECHNOLOGIES	
			I-025-58145	CUSTOM PROGRAMMING- XLM FILE	5,000.00

					5,000.00
052618	12/21/2012	R	000013	U.S. POSTAL SERVICE	
			I-PO1212	PO BOX THROUGH 12/31/13	176.00

					176.00
052619	12/21/2012	R	010850	UNDERGROUND SERVICE ALERT	
			I-1120120323	TICKET DELIVERY SERVICE - NOV	277.50

					277.50

CHECK NO	CHECK DATE	STATUS	VENDOR INFO		CHECK AMOUNT
052620	12/21/2012	R	000247	UNITED STATES PLASTIC CORP	
			I-3579113	PORTABLE DISINFECTION SYSTEM	335.55

					335.55
052621	12/21/2012	R	010990	UTILIQUEST L.L.C.	
			I-188079-Q	CONTRACT LOCATING EXPENSE	139.21
			I-188317-Q	CONTRACT LOCATING EXPENSE	252.63
			I-188615-Q	CONTRACT LOCATING EXPENSE	160.14
			I-189632-Q	CONTRACT LOCATING EXPENSE	1,275.39
			I-189873-Q	CONTRACT LOCATING EXPENSE	794.70

					2,622.07
052622	12/21/2012	V			
			C-CHECK	VOID CHECK	0.00

					0.00
052623	12/21/2012	R	011101	VAGABOND WELDING SUPPLY	
			I-87520	SMALL TOOLS	309.61
			I-87609	SHOP EXPENSE	163.50

					473.11
052624	12/21/2012	R	003595	VERIZON CALIFORNIA	
			I-V1212	TELEPHONE (SHOP) - DEC 12	362.97

					362.97
052625	12/27/2012	R	1	CUSTOMER REFUNDS (MISC.)	
			I-000201212261934	SHOWELL, BRITTANY L :US REFUND	31.27

					31.27
052626	12/27/2012	R	1	CUSTOMER REFUNDS (MISC.)	
			I-000201212261935	STOVER, PHILLIP M :US REFUND	53.09

					53.09
052627	12/27/2012	R	1	CUSTOMER REFUNDS (MISC.)	
			I-000201212261936	AIM RENTAL PROPERTIE:US REFUND	62.68

					62.68
052628	12/27/2012	R	1	CUSTOMER REFUNDS (MISC.)	
			I-000201212261937	GILLMORE, KEITH :US REFUND	62.68

					62.68

CHECK NO	CHECK DATE	STATUS		VENDOR INFO	CHECK AMOUNT
052629	12/27/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212261938 SALAZAR, DARLENE :US REFUND	94.34 ----- 94.34
052630	12/27/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212261939 ADINOLFI, THOMAS :US REFUND	48.80 ----- 48.80
052631	12/27/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212261940 LINERBERGER, THOMAS :US REFUND	58.16 ----- 58.16
052632	12/27/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212261941 PITELL, MARK :US REFUND	7.38 ----- 7.38
052633	12/27/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212261942 CARDENAS, FRANK :US REFUND	40.83 ----- 40.83
052634	12/27/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212261943 KINSEY, FANI L :US REFUND	17.45 ----- 17.45
052635	12/27/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212261944 SCHAULS, MICHELLE R :US REFUND	51.98 ----- 51.98
052636	12/27/2012	R	1	CUSTOMER REFUNDS (MISC.) I-000201212261945 ALVAREZ, ERIC :US REFUND	193.99 ----- 193.99
052637	12/27/2012	R	000575	AFSCME LOCAL 1902 I-AFSCME1212 EE UNION DUES - DEC 12	429.00 ----- 429.00
052638	12/27/2012	R	000237	COLONIAL LIFE & ACCIDENT INSURANCE CO, INC. I-3990561-1205106 EE LIFE INSURANCE- DEC 12	669.62 ----- 669.62

CHECK NO	CHECK DATE	STATUS	VENDOR INFO		CHECK AMOUNT
052639	12/27/2012	R	009897	THE MALLANTS CORPORATION	
			I-2563	TEMPORARY LABOR	2,502.91

					2,502.91
*900311	12/06/2012	D	001517	CalPERS	
			I-PPE 11-30-12	PAY PERIOD ENDING 11/30/12	9,375.05

					9,375.05
900312	12/10/2012	D	004800	INTERNAL REVENUE SERVICE	
			I-IRS PD 12/7/12	FED W/H, SOC SEC, MEDICARE	13,855.73

					13,855.73
900313	12/10/2012	D	002822	EMPLOYMENT DEVELOPMENT	
			I-EDD PD 12/7/12	STATE & SDI W/H	2,909.33

					2,909.33
900314	12/14/2012	D	000248	PAYCHEX	
			I-9648832	TIME & LABOR ONLINE SET UP FEE	500.00

					500.00
900315	12/20/2012	D	001517	CalPERS	
			I-PPE 12-14-12	PAY PERIOD ENDING 12/14/12	9,207.45

					9,207.45
900316	12/24/2012	D	004800	INTERNAL REVENUE SERVICE	
			I-IRS PD 12/21/12	FED W/H, SOC SEC, MEDICARE	12,393.59

					12,393.59
900317	12/24/2012	D	002822	EMPLOYMENT DEVELOPMENT	
			I-EDD PD 12/21/12	STATE & SDI W/H	2,553.97

					2,553.97
900318	12/31/2012	D	000025	ICMA RC	
			I-900318	457 REMITTANCE - DEC 12	2,180.40

					2,180.40
900319	12/31/2012	D	000025	ICMA RC	
			I-900319	457 REMITTANCE - 2012 ER CONTR	564.25

					564.25
TOTALS:	116				590,449.45
				LESS - PRIOR MONTH VOIDS:	
				LESS - CURRENT MONTH VOIDS:	
					52587 (3,000.00)
					0.00

					587,449.45

DIRECTOR PAYROLL & REIMBURSEMENTS

DECEMBER 2012

<u>Check Date</u>	<u>Event Date</u>	<u>Event Description</u>	<u>Pay Description</u>	<u>Amount</u>
<u>COATE, PAUL F</u>				
12/07/2012	11/28/2012	JBWD BD MTG & CAC	DIRECTOR'S FEES	173.63
12/21/2012	12/03/2012	ACWA/JPIA CONFERENCE	DIRECTOR'S FEES	173.63
12/21/2012	12/04/2012	ACWA/JPIA CONFERENCE	DIRECTOR'S FEES	173.63
12/21/2012	12/05/2012	ACWA/JPIA CONFERENCE	DIRECTOR'S FEES	173.63
12/21/2012	12/06/2012	ACWA/JPIA CONFERENCE	DIRECTOR'S FEES	173.63
12/21/2012	12/03/2012	MILES TO ACWA/JPIA	REIMBURSEMENT	89.64
12/21/2012	12/06/2012	MILES FROM ACWA/JPIA	REIMBURSEMENT	89.64
12/21/2012	12/12/2012	JBWD SPECIAL MEETING	DIRECTOR'S FEES	173.63
Total:				<u>1,221.06</u> =====
<u>FULLER, VICTORIA J</u>				
12/21/2012	12/12/2012	JBWD SPECIAL MEETING	DIRECTOR'S FEES	173.63
Total:				<u>173.63</u> =====
<u>LONG, WILLIAM C</u>				
12/07/2012	11/15/2012	MWA MEETING	DIRECTOR'S FEES	173.63
12/07/2012	11/15/2012	MILES TO MWA BD MTG	REIMBURSEMENT	77.15
12/07/2012	11/06/2012	PUBLIC INFO MEETING	UNPAID	0.00
12/07/2012	11/08/2012	ABC & GRAY WATER MTG	UNPAID	0.00
12/07/2012	11/27/2012	ENG COMMITTEE MTG	UNPAID	0.00
12/07/2012	11/28/2012	JBWD BD MTG & CAC	DIRECTOR'S FEES	173.63
Total:				<u>424.41</u> =====
<u>LUCKMAN, MICKEY C</u>				
12/07/2012	11/28/2012	JBWD BD MTG & CAC	DIRECTOR'S FEES	173.63
12/21/2012	11/02/2012	NHCR COMMUNITY MTG	UNPAID	0.00
12/21/2012	11/03/2012	CMMC BRKFST/FRMR MKT	UNPAID	0.00
12/21/2012	11/05/2012	MWA TECH ADV COMMITT	UNPAID	0.00
12/21/2012	11/06/2012	PUBLIC INFO COMMITTE	UNPAID	0.00
12/21/2012	11/07/2012	OPEN SPACE MEETING	UNPAID	0.00
12/21/2012	11/08/2012	ABC'S OF WATER- JBWD	UNPAID	0.00
12/21/2012	11/09/2012	C-CERT MEETING	UNPAID	0.00
12/21/2012	11/17/2012	FARMER'S MARKET	UNPAID	0.00

<u>Check Date</u>	<u>Event Date</u>	<u>Event Description</u>	<u>Pay Description</u>	<u>Amount</u>
<u>LUCKMAN, MICKEY C</u>				
12/21/2012	11/19/2012	ASBCSD DINNER- MWA	UNPAID	0.00
12/21/2012	11/19/2012	ASBCSD DINNER	REIMBURSEMENT	31.00
12/21/2012	11/19/2012	MILES TO ASBCSD	REIMBURSEMENT	84.36
12/21/2012	12/02/2012	ACWA/JPIA CONFERENCE	DIRECTOR'S FEES	173.63
12/21/2012	12/03/2012	ACWA/JPIA CONFERENCE	DIRECTOR'S FEES	173.63
12/21/2012	12/04/2012	ACWA/JPIA CONFERENCE	DIRECTOR'S FEES	173.63
12/21/2012	12/05/2012	ACWA/JPIA CONFERENCE	DIRECTOR'S FEES	173.63
12/21/2012	12/06/2012	ACWA/JPIA CONFERENCE	DIRECTOR'S FEES	173.63
12/21/2012	12/03/2012	REIMB: LUNCH- ACWA	REIMBURSEMENT	9.75
12/21/2012	12/02/2012	REIMB: DINNER- ACWA	REIMBURSEMENT	27.79
12/21/2012	12/02/2012	MILES TO ACWA/JPIA	REIMBURSEMENT	81.03
12/21/2012	12/06/2012	MILES FROM ACWA/JPIA	REIMBURSEMENT	81.03
12/21/2012	12/12/2012	JBWD SPECIAL MEETING	DIRECTOR'S FEES	173.63
Total:				<u>1,530.37</u> =====
<u>REYNOLDS, MICHAEL P</u>				
12/07/2012	11/19/2012	SPECIAL DISTRICT MTG	DIRECTOR'S FEES	173.63
12/07/2012	11/19/2012	MILES: SPECIAL DIST	REIMBURSEMENT	89.58
12/07/2012	11/28/2012	JBWD BD MTG & CAC	DIRECTOR'S FEES	173.63
12/07/2012	11/28/2012	REIMB: MEAL	REIMBURSEMENT	24.99
12/21/2012	12/12/2012	JBWD SPECIAL MEETING	DIRECTOR'S FEES	173.63
Total:				<u>635.46</u> =====
<u>WILSON, GARY L</u>				
12/07/2012	11/28/2012	JBWD BD MTG & CAC	DIRECTOR'S FEES	173.63
12/21/2012	12/12/2012	JBWD SPECIAL MEETING	DIRECTOR'S FEES	173.63
Total:				<u>347.26</u> =====
Grand Total:				<u>4,332.19</u> =====

JOSHUA BASIN WATER DISTRICT
SUPPLEMENTAL DATA SHEET

Meeting of the Board of Directors

January 16, 2013

Report to: President and Members of the Board
From: Keith Faul *KF*

TOPIC: REQUEST OF WAIVER OF FIRE HYDRANT

RECOMMENDATION: That the Board deny the request for waiver of a fire hydrant for construction of a new home at 61160 Trentwood.

ANALYSIS: Ms. Doris Bridges owns the parcel at the northeast corner of Saddleback and Trentwood. The parcel on the corner has a pre-existing home where Mrs. Bridges lives. The parcel to the east on Trentwood has a home under construction by Ms. Darla Bridges, Ms. Bridges daughter-in-law.

In December 2010, Ms. Bridges asked the District expedite her "will-serve letter" since a new state law requiring all new single family residences was about to take effect on January 1, 2011. By expediting the "will-serve letter" she would be able to submit building plans to the County before January 1, potentially avoiding the need for sprinklers. The "will-serve letter" was issued on December 20, 2010.

As stated in the letter, the purpose of a "will-serve letter" is "to inform you that there is an ample supply of water within the Joshua Basin Water District (JBWD) to serve your project." The letter further states that the applicant "*must comply with the current rules, regulations and policies of the District, as they are amended or may hereafter be amended, whether written or otherwise in effect at the time of approval of the application;*" (see item 1). It also advises that "*The applicant will be served by a water meter of ¾" diameter for each dwelling unit unless otherwise stated. There may be existing fire hydrants in the immediate area; and additional fire hydrants required by the Fire Marshall will be the responsibility of the applicant....*" (see items 4 and 5).

A "will-serve letter" is typically issued at the very beginning of a development, often before plans are prepared. The purpose of a "will-serve letter" is *not* to enumerate all of the requirements of the District. When a new structure is located on property fronting an existing water line there are usually no additional requirements other than installation of a meter and payment of fees. At the other extreme, the installation of

mainlines, hydrants, wells, reservoirs, booster pumps and other facilities could be required for a development. It is not possible to identify all of these requirements at the "will-serve letter" stage and without engineering plans.

Before constructing the new house, Ms. Bridges was advised by the County Fire Department that she needed to install fire sprinklers (at a cost of \$16,000) because the new house was 30' too far from the existing hydrant. Recently, when Ms. Bridges submitted plans for a water line extension, the District advised her that a fire hydrant would be needed to meet District requirements, even though it was not required by the County Fire Department.

Ms. Bridges is asking the Board for a variance to not require a fire hydrant. Her estimate of the cost of the hydrant is \$6,000 in addition to the \$16,000 that she spent on sprinklers. If she had been aware of the need for a hydrant by the District, she would not have installed the sprinklers. The District's understanding is that since the fire flow at the nearest hydrant was 941 gallons per minute, lower than the required 1,000 gpm, the fire department policy would have called for sprinklers. They would not have had a choice.

Staff believes it is imperative that a hydrant be installed for both fire and water quality since it will be used to flush the dead-end line. Although the staff believes the cost of the hydrant should be the responsibility of the home builder, if the Board determines not to require the builder to install the hydrant, the District should install the hydrant.

file

PROGRESS REPORT: FY 12/13
Q2 JBWD CONSERVATION PROJECTS

JBWD

JAN 07 2013

RECEIVED BY: *dd*

Report to: Joe Guzzetta, General Manager, JBWD
From: Bollinger Consulting Group
Date: January 3, 2013

Progress on conservation programs during the month of December was focused on water loss control, modifying the garden interpretive plans, and updating residential program data. We met with ME Simpson, received information on various water loss control services they perform as well as costs of services, and made some initial recommendations. We also re-evaluated the garden improvement program, and modified the garden interpretation plan for review by the Public Information Committee. Working on the residential program we reviewed survey data and information provided by Mojave Water Agency to develop local landscape water use estimates for single family homes. We continued work on this year's Water Wise Water Course for schools, assisted staff with a customer question, and worked with the Department of Water Resources to replace sensors on the CIMIS station at Copper Mountain College.

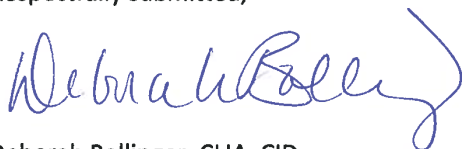
The following table describes our activities in each of the BMPs for water conservation as identified by the CUWCC and adopted by the DWR. Please note that "Progress to date" is limited to the current quarter.

PROJECT	DESCRIPTION
Water Survey for Residential Customers (BMP 1)	<p><i>Current activity:</i></p> <ul style="list-style-type: none"> ▪ Reviewed survey data and info provided by Mojave Water Agency to calculate a preliminary landscape water use estimate. <p><i>Progress this quarter:</i></p> <ul style="list-style-type: none"> ▪ Completed 1 residential landscape survey and prepared recommendations. ▪ K. Stewart completed 3 additional surveys. ▪ Completed 1 residential survey and prepared summary and recommendations. ▪ Collected number of surveys completed by JBWD staff in Q1 <p><i>Status:</i> 8 SF surveys completed or 13% of annual goal</p>
Residential Plumbing Retrofit (BMP 2)	<p><i>No new activity. Progress this quarter:</i></p> <ul style="list-style-type: none"> ▪ Completed fixture inventory and restocking. ▪ Collected fixture distribution from Public Information consultant <p><i>Status:</i> 56 low flow faucet aerators and 28 shower heads distributed</p>
System Water Audits (BMP 3)	<p><i>Current activity:</i></p> <ul style="list-style-type: none"> ▪ Met with ME Simpson and reviewed water loss services and costs. ▪ Collected additional information and made initial recommendations for water loss services to consider. <p><i>Current activity:</i></p> <ul style="list-style-type: none"> ▪ Coordinated a meeting with ME Simpson re water loss control program and provided info needed for proposal. ▪ Contacted consultants referred by AWWA for staff training

System Water Audits (BMP 3) – continued.	<ul style="list-style-type: none"> ▪ Consulted with other districts about water loss procedures, referrals. ▪ Met with staff to improve existing system audit process and prepare procedures for field staff. ▪ Collected system audit data.
Metering Program (BMP 4)	<p><i>No new activity. Progress this quarter:</i></p> <ul style="list-style-type: none"> ▪ Collected information on current meter testing program for CII customers. ▪ Researched status of CUWCC recommendations.
Large Landscape Conservation Programs (BMP 5)	<p><i>Current activity:</i></p> <ul style="list-style-type: none"> ▪ Met with DWR to replace sensors on CIMIS station at Copper Mountain College. <p><i>Progress this quarter:</i></p> <ul style="list-style-type: none"> ▪ Contacted Copper Mountain College re status of lawn conversion project. They decided against proceeding. ▪ Performed maintenance on CIMIS station and reported data to DWR. ▪ Reset data logger and discussed 1st year data issues with DWR.
High-Efficiency Washing Machine Rebate Programs (BMP 6)	<p><i>No new activity.</i></p>
Public Information (BMP 7)	<p><i>Current activity:</i></p> <ul style="list-style-type: none"> ▪ Re-evaluated garden improvement program and shade structure plans. ▪ Modified garden interpretation plan for presentation to PI Committee. ▪ Assisted staff with customer irrigation questions. <p><i>Current activity:</i></p> <ul style="list-style-type: none"> ▪ Worked on development of Interpretive Plan for Water Wise Garden. ▪ Promoted ABCs of Water presentation on graywater. ▪ Prepared Calculating Landscape Water Use presentation. ▪ Developed irrigation schedules and collected related materials. ▪ Worked on interpretive plan for demonstration garden. ▪ Provided press release for garden wildlife habitat certification. ▪ Made presentation at October 13 Landscape Lecture in partnership with AWAC and coordinated event.
School Education (BMP 8)	<p><i>Current activity:</i></p> <ul style="list-style-type: none"> ▪ Met with school docents to prepare for Water Wise Water Course. ▪ Coordinated docent training for January. <p><i>Progress this quarter:</i></p> <ul style="list-style-type: none"> ▪ Met with school docents to develop improved program and provide training. ▪ Received award for transportation grant for both elementary schools. ▪ Coordinated development and submittal of transportation grant for water wise water course. ▪ Scheduled 2013 Water Wise Watercourse ▪ Met with school docents to improve program.

Commercial, Industrial, and Institutional (CII) Accounts (BMP 9)	<p><i>No new activity. Progress this quarter:</i></p> <ul style="list-style-type: none"> ▪ Delivered Watermiser broom to Morongo Basin Humane Society shelter and provided info on other recommendations. ▪ 1 Commercial Audit completed by K. Stewart. ▪ Monitored installation of Commercial garden installed by Chamber of Commerce and provided irrigation recommendations. ▪ Collected number of audits completed by JBWD staff <p><i>Status: 4 commercial audits completed, water savings to be determined</i></p>
Wholesale Agency Assistance Programs (BMP 10)	<p><i>No new activity. Progress this quarter:</i></p> <ul style="list-style-type: none"> ▪ Collected quarterly data on events, time/cost breakdown, and ideas for past and future events.
Conservation Pricing (BMP 11)	<p><i>No new activity. Progress this quarter:</i></p> <ul style="list-style-type: none"> ▪ Confirmed schedule for rate study in early 2013.
Water Waste Prohibition (BMP 13)	<p><i>No new activity.</i></p>
Residential ULFT Replacement Programs (BMP 14)	<p><i>No new activity.</i></p>
Other projects:	<p><i>Current activity:</i></p> <ul style="list-style-type: none"> ▪ Meetings with staff and management to assess progress and determine conservation priorities. ▪ Design/build compost bin for green waste. <p><i>Progress this quarter:</i></p> <ul style="list-style-type: none"> ▪ Monitored garden maintenance work and met with contractor. ▪ Coordinated garden maintenance contract and related insurance and prevailing wage requirements.

Respectfully submitted,



Deborah Bollinger, CLIA, CID
 Conservation Coordinator

JOSHUA BASIN WATER DISTRICT
SUPPLEMENTAL DATA SHEET

Regular Meeting of the Board of Directors

January 16, 2013

Report to: President and Members of the Board
From: Joe Guzzetta, General Manager

TOPIC: AUTHORIZATION OF AGREEMENTS FOR BIOLOGICAL,
CULTURAL, AND NATIVE AMERICAN MONITORING DURING
CONSTRUCTION OF RECHARGE PIPELINE PROJECT

RECOMMENDATION: That the Board take the following actions:

- 1) Authorize an agreement with Circle Mountain Biological Consultants to provide tortoise monitoring and other biological services during the construction of the Groundwater Recharge Pipeline and Pond project at an estimated cost of \$115,000 for the pipeline and an optional \$5,000 for the pond including a 10% contingency; and
- 2) Authorize an agreement with Bonterra Consulting to provide cultural resources and Native American monitoring for the project at an estimated cost of \$69,000 for the pipeline and an optional \$21,000 for the pond, including a 10% contingency.

ANALYSIS: The Groundwater Recharge Project requires a biologist, cultural resources monitor, and Native American monitor to implement the Mitigation and Monitoring Plan that was approved as part of the Environmental Impact Report (EIR) and to meet the requirements of California Department of Fish and Wildlife and the US Department of Fish and Wildlife.

Actual costs for these services will depend on the actual construction time. The above costs were based on the engineer's estimate which is longer than the contractor's estimate. Based on the contractor's initial timetable these costs should be far less.

Hourly rates for biological services range from \$55 to \$65 per hour. Total cost for the biological monitoring for the pipeline is estimated at \$115,000 including a 10% contingency. Optional cost for the pond is estimated at \$5,000. The construction from Yucca Mesa Road to the cemetery will require daily biological monitoring. Once the project reaches the cemetery it should require only periodic monitoring and reporting.

Rates for the cultural resources and Native American monitoring range from \$65 to \$210 per hour with most of the hours billed at the \$65 per hour rate. Cultural resources and Native American monitoring is expected to be mostly on a periodic basis except for one location that will require full time monitoring for one or two days. There will be one monitor for the cultural resources and one monitor for Native American resources. Total cost for cultural resources and Native American monitoring for the pipeline is estimated at \$69,000. Optional cost for the pond is estimated at \$21,000 including a 10% contingency.

A Request for Proposal for these services was prepared and circulated by ESA Consulting, the firm that prepared the EIR for the District. Four proposals were received. They were reviewed by ESA biological and cultural resources staff and JBWD staff and the recommended consultants were the consensus of the evaluating team.

Circle Mountain Biological Consulting was rated highest for biological monitoring. It was part of the initial EIR team and had the most familiarity with the project, and assisted the District in discussions with California Fish and Wildlife, US Fish and Wildlife, and in the transplanting and removal of cacti from the recharge site. Circle Mountain was instrumental in obtaining agreement from US Fish and Wildlife in allowing periodic monitoring east of the cemetery, saving the District an estimated \$50,000. Biologists with this firm have tortoise-handling permits which is not the case with all of the consultants. When rates were reviewed they also had the lowest rates.

Bonterra Consulting was rated highest for cultural resources and Native American monitoring. They had the best understanding of the project and most complete approach. They also have a firm contract with the Agua Caliente Native Americans.

Approval of the agreements for these services will provide the District with biological, cultural resources, and Native American information and is important to properly following environmental requirements. Funds for this activity is included in the Ground Water Recharge Construction Project for this year.



January 4, 2013

Joe Guzzetta, General Manager
Joshua Basin Water District
61750 Chollita Road
Joshua Tree, CA 92252

RE: Proposal for Biological and Cultural Resources Monitoring for the Construction of a Groundwater Recharge Basin in Joshua Tree, California

Dear Mr. Guzzetta:

UltraSystems Environmental Inc. (UltraSystems) is excited to provide both biological and cultural resources monitoring for the planned groundwater recharge basin project being proposed by the Joshua Basin Water District (District). UltraSystems has current and relevant experience on similar projects in California. As requested in your RFP, the following information is provided:

Name, address and phone number of the consultant's contact person for the remainder of the selection process

UltraSystems Environmental (UltraSystems)
16431 Scientific Way, Irvine, CA 92618
T: 949/788-4900
Contact: Betsy A. Lindsay

Any qualifying statements or comments regarding the consultant's proposal, the information provided in the RFP or the proposed contract

We are confident that UltraSystems is well prepared to meet the needs of the District by dedicating a project team of seasoned biological and cultural monitoring individuals with the requisite technical and permitting experience to effectively perform and manage all required project conditions throughout the construction of this project with an expected duration of 36 months.

UltraSystems has been in business since 1994, and has prepared over 3,000 environmental documents and technical studies during those 19 years. Our firm **has not** merged or been acquired by others anytime during its history. UltraSystems continues to maintain its staff of 42 dedicated, fulltime working professionals. Additionally, we have approximately 30 experts in various disciplines that augment our in-house staff when needed.

Corporate Office – Orange County
16431 Scientific Way, Irvine, CA 92618-4355
Telephone: 949.788.4900
Facsimile: 949.788.4901
Website: www.ultrasystems.com

Some of UltraSystems long-term monitoring contracts that we currently hold include the following:

- Sunshine Canyon Landfill – 5 year contract to monitor 400 project conditions
- Imperial Solar Energy Center South – 3 year contract as Environmental Compliance Lead
- Imperial Solar Energy Center West – 3 year contract as Environmental Compliance Lead
- Gerald Desmond Bridge Replacement – 3 year contract as Environmental Manager for the project
- I-405 Freeway HOV Lanes | Kiewit – 3 year monitoring contract for Noise
- NextEra | Harper Lake Solar field – 10+ years quarterly monitoring contract for biological resources
- Orange County Public Works – Monitoring contract for Narco Channel for biological resources

Firm's Workload and Demonstrated Ability of Meet Schedules

UltraSystems currently has 25 active projects under contract with a value totaling **\$15 million**. Our clients can attest to UltraSystems' strong record of meeting project schedules. We keep projects on track through **constant** Team Communication and anticipating possible delays in the schedule. Before initiating a major project, the UltraSystems Team will hold a meeting to discuss work tasking and schedule constraints with the District. Minutes of that meeting will be circulated to all Team members for their review and concurrence. Schedules will be distributed to all parties via e-mail.

Most importantly, the schedule is more than simply a reporting tool. It is an **"early warning device"** to anticipate possible delays and proactively manage activities. Our "percent complete" schedule will realistically measure work progress. With such advance notice, each Team Leader can respond quickly to avoid task slowdowns and maintain schedule. UltraSystems typically holds Project Team meetings, which are scheduled weekly to keep a project "on target" and "on track."

Knowledge Related to San Bernardino County and the High Desert Environment

UltraSystems currently holds an existing Master Service Agreement (MSA) with the County of San Bernardino for environmental services, including environmental, resource and regulatory permitting services. We hold that contract because we have qualified staff and have historically worked for the County of San Bernardino on public works projects. We also have extensive experience working on linear projects, similar to the construction of this pipeline and recharge basin for public agencies. Additionally, for the past three years, UltraSystems has worked on many high desert projects through an existing on-call environmental services contract (held by AMEC) for Caltrans District 8. As part of this Caltrans contract, UltraSystems has been involved with several large-scale biological resource inventories (that included plants and animals) for several new corridors.

Key Personnel – Committed to Excellence

Ms. Betsy Lindsay will serve as the **Principal-in-Charge**, responsible for all contractual negotiations and the coordination of administrative resources. Ms. Lindsay is a seasoned Team Leader and Project Manager, and has prepared over 200 CEQA|NEPA environmental documents. She currently serves as the project manager for the LA-RICS telecommunication environmental project. That project encompasses Los Angeles County, and will eventually provide LTE and LMR systems for 34,000 first responders.

Ms. Lindsay is very well-versed in the preparation of CEQA and NEPA documents, and the implementation of mitigation monitoring and reporting programs and regulatory requirements. Ms. Lindsay was heavily involved with the Ft. Irwin Roadway Realignment Project for the County of San Bernardino. That project lasted over 1½ years and our firm provided 16 permitted biologists to handle all monitoring requirements pertaining to desert tortoises and Mohave ground squirrels.

Mr. Mike Lindsay will serve as the overall **Sr. Project Manager**. He will be the single point-of-contact for communications with the District. Mr. Lindsay has been actively involved in the field of environmental

consulting for over 15 years. He is an engineer by training, and has successfully been involved with nearly 50 environmental documents for a broad range of projects. The **QA/QC** of all work products will be performed by Dr. Elizabeth Kempton who has 10 years of scientific and technical expertise to aide in all reporting obligations.

Identification of Subconsultants

UltraSystems will utilize existing employees for this work assignment. No subconsultants will be utilized at this time.

Location of Firm Offices for Project Coordination and Services

UltraSystems will utilize personnel from its Irvine office for this project.

Additional Personnel with CEQA Expertise

UltraSystems is a full service environmental consulting firm, and can assist the District with respect to CEQA or NEPA related expertise. As such, UltraSystems’ in-house project team has the necessary expertise to perform the following technical studies for the District; they include:

AREAS OF TECHNICAL EXPERTISE	
<p><u>Planning Services</u></p> <ul style="list-style-type: none"> • General & Specific Plans • Zoning and Special Purpose Legislation • Opportunities and Constraints Analysis • Urban Land Use Studies • Graphics/Visual Impacts and Studies <p><u>CEQA/NEPA Compliance</u></p> <ul style="list-style-type: none"> • EIR and EIS Documentation • Mitigation Monitoring Implementation • Citizen Participation Stakeholder Outreach • Permits and Project Entitlements • Regulatory Compliance <p><u>Construction Environmental Management</u></p> <ul style="list-style-type: none"> • Stormwater Prevention Planning • Grading and Trenching Monitoring <p><u>Hazardous Waste</u></p> <ul style="list-style-type: none"> • Phase I, Phase II, Phase III Investigations • Remedial Action Plans • Health Risk Assessments 	<p><u>Technical Studies</u></p> <ul style="list-style-type: none"> • Aesthetics • Air Quality Studies • Archaeology and Paleontology • Biological Resources • Historic Preservation • Socioeconomics • Geotechnical Analysis • Hydrology • Infrastructure Capacity Analysis • Noise Evaluations and Analysis • Water Pollution Evaluation • Utility Studies <p><u>Industrial Hygiene and Indoor Air Quality</u></p> <ul style="list-style-type: none"> • Industrial Hygiene Practices • Indoor Air Quality (Mold) • Asbestos, Lead and Mold Abatement

Validity of our Proposal to the District

Our submittal will remain valid for a period of 90 days from the date of its submittal. By my signature below, I attest that all information submitted with this proposal is true and correct, and that I am authorized to bind and commit UltraSystems Environmental Incorporated to the terms of our Statement of Qualifications.

We appreciate this opportunity to be considered for this very important engagement, and look forward to providing mitigation monitoring services to the District.

Sincerely,



Betsy A. Lindsay
President/CEO

Attachments: Three hard-copies | One CD

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Appendix A: Resumes of Project Team Members

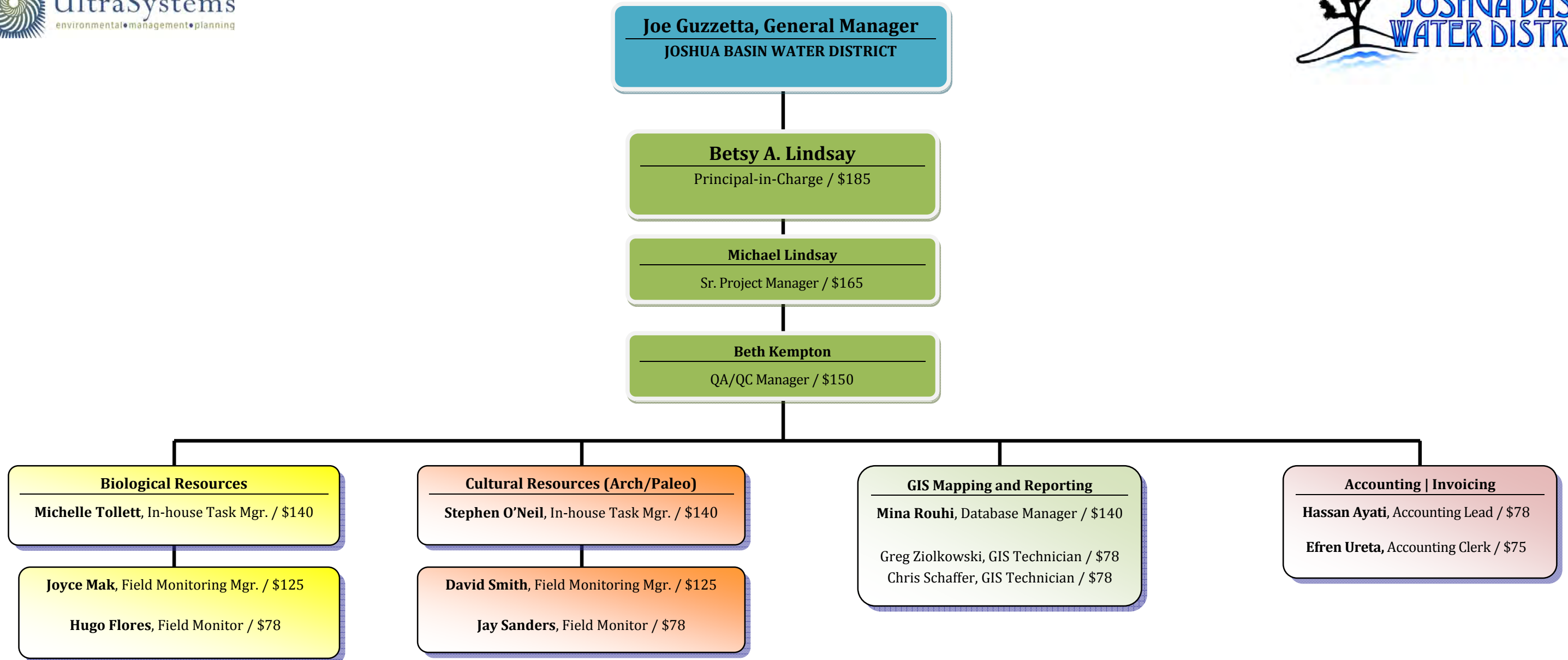
B. STATEMENT OF QUALIFICATIONS

UltraSystems views this work assignment as an important undertaking by the District. It requires substantial commitment, expertise, and **direct senior-level management**. Below is a list of the key personnel that would be assigned to this project. When considering the merits of our technical proposal, we believe the Applicant will share our opinion that UltraSystems is uniquely qualified to undertake and complete all necessary monitoring tasks that the District is required to fulfill for this project.

Below is UltraSystems’ Key Personnel table, which depicts the name of our assigned key personnel, their years of experience in the profession, their education and most importantly their specific role on this project.

The resumes for all personnel are included in the Appendix.

ULTRASYSTEMS KEY PERSONNEL			
Name & Office Location	Yrs. of Exp.	Education Permits*	Project Role
Betsy A. Lindsay Irvine, CA	30+	M.S., Urban and Regional Planning, California State Polytechnic University, Pomona B.A., Geography, California State University, Long Beach	Principal-In-Charge
Mike Lindsay Irvine, CA	16	B.S., Electrical Engineering and Technology, California Polytechnic University, Pomona	Project Manager
Elizabeth Kempton Irvine, CA	10	Ph.D., Botany, Claremont Graduate University, Claremont B.S., Biology, California State University, San Bernardino	QA/QC
Mina Rouhi Irvine, CA	6	M.S., Urban and Regional Planning, California State Polytechnic University, Pomona B.A., Psychology and Social Behavior, University of California, Irvine	GIS Mapping and Reporting
Cultural Resources			
Stephen O’ Neil, RPA Irvine, CA	30	M.A., Cultural Anthropology, California State University, Fullerton B.A., Anthropology, California State University, Long Beach	In-House Lead
David Smith Irvine, CA	24	B.S., Anthropology, University of California, Riverside	Field Lead
Jay Sanders Irvine, CA		M.A., Anthropology, Archaeology, University of California, Riverside B.A., Anthropology, University of Arizona	Field Monitor
Biological Resources			
Michelle Tollett* Irvine, CA	11	B.A., Botany and Environmental Science; University of Montana, Missoula, MT	In-House Lead
Joyce Mak* Irvine, CA	5	B.A., Environmental Analysis and Design, University of California, Irvine	Field Lead
Hugo Flores* Irvine, CA	5	B.S., Biology, University of California, Los Angeles	Field Monitor



ORGANIZATION CHART

KEY PERSONNEL - Bios

BETSY A. LINDSAY, M.S. – Principal in Charge

Ms. Lindsay is the founder and President/CEO of UltraSystems Environmental. She has led the firm's growth by focusing on quality and a service-driven approach for its clients. Ms. Lindsay brings 30 years of experience managing or providing principal oversight of environmental documents for various types of projects. Her primary responsibilities include business and project management, contract administration, resource allocation and quality control. She also manages all corporate endeavors and assists with the QA/QC process of many environmental documents. Ms. Lindsay's specific responsibilities include overall project management, preparation and processing of CEQA/NEPA documents, and associated entitlement obligations for large-scale public and private infrastructure projects. Ms. Lindsay also provides periodic CEQA training for graduate students at USC and Cal Poly, under the guise of Dr. Robert Manfred.

MIKE LINDSAY, B.S. – Project Manager

Mr. Lindsay has been specially trained in UltraSystems' QA/ QC Program. As QA/ QC officer, Mr. Lindsay will review the project scope, schedule and budget after the kick-off meeting; review progress at critical junctures of the project; make technical suggestions with the in-house leads for biological and cultural resources; and provide management recommendations. Mr. Lindsay will also review deliverables prior to submission to the District, and will periodically review the overall project to make certain that UltraSystems' and the District's high professional standards are being achieved. Another project function that Mr. Lindsay provides is overall document security, including password-protected file transfers using our secure FTP directory to transmit files from UltraSystems to the District.

Mr. Lindsay's recent project experience includes: compliance monitoring services for the Sunshine Canyon Landfill Project (Los Angeles County); permitting compliance and quality assurance for the Imperial Solar Energy Center Project (Imperial County); document control and project management for the communication system as part of the LA-RICS LA-SafetyNet Program Environmental Services Project (Los Angeles County); air quality and EMI/EMF analysis for the 29-mile long alignment part of the California High-Speed Rail Project, Anaheim to Los Angeles Section Project (Orange and Los Angeles County); air quality and noise analyses for the Whiteman Airport Master Plan Update (Los Angeles County); project management and quality control for the Sunrise Powerlink Mitigation Monitoring Project (Imperial and San Diego Counties); air quality and noise technical studies for the Calexico Landfill Project (Imperial County); and health risk assessment for the Los Angeles Unified School District School Sites Project (Los Angeles County).

ELIZABETH KEMPTON, PH.D. – Quality Assurance / Quality Control of Technical Reports

Biological Resources Project Manager Dr. Kempton has 10 years of field and research experience in the field of Biology, especially Botany. Dr. Kempton has a broad scope of environmental consulting responsibilities and experiences ranging from general project management and technical writing to special-status species surveys and construction monitoring. Dr. Kempton also possesses several years of academic experience in the field of botany, specializing in the systematics of buckwheats and spineflowers of the western United States. She is adept with the flora and fauna of Southern California, especially the Mojave Desert, and has conducted numerous field visits to regions in the Joshua Tree area for work and personal research.

Dr. Kempton's experience includes floristic surveys; special-status species and preconstruction surveys for rare plants, desert tortoise and burrowing owl; habitat restoration planning and monitoring; wetland delineations; weed management/control planning; mitigation and construction monitoring; conservation assessments for rare plant species; and preparation of technical reports. She has authored and coauthored numerous technical reports and conducted surveys and monitoring in compliance with NEPA, CEQA, ESA, CESA, CWA, and other federal, state, regional, and local laws and regulations. Dr. Kempton is an active

member in the field of botany. She is a board member of the Southern California Botanists and a member of the California Native Plant Society. Dr. Kempton possesses a California Department of Fish and Wildlife Permit to collect and survey for rare plants.

Dr. Kempton's responsibilities at UltraSystems include management of biological resources tasks for multiple projects, writing and QA/QC of technical documents, coordinating field surveys and construction monitoring, and leading field efforts for special-status species surveys and habitat restoration monitoring. She has worked for projects with clients in both the public and private sectors, including alternative energy, energy transmission, U.S. Forest Service, parks, public works, and water resources.

Dr. Kempton's recent project experience includes: biological resources management for mitigation monitoring at the Imperial Solar Energy Center Project (Imperial County); project management and habitat monitoring for the Warm Springs Habitat Restoration Project (Los Angeles County); project management and monitoring for the Santa Ana River Arundo Removal and San Diego Creek Mitigation Projects (Orange County); construction monitoring for the Sunrise Powerlink Mitigation Monitoring Project (Imperial and San Diego Counties); rare plant surveys for the Catalina and Calaveras Alternative Energy Projects (Kern County); rare plant surveys for the Timber Hills Wind Energy Project (Shasta County); pre-construction/activity surveys for special-status plants (including those projected by the California Desert Native Plants Act), desert tortoise, and burrowing owl for the Catalina, Pacific Wind, and Tylerhorse Alternative Energy Projects (Kern County); plant surveys for Owens Lake Mitigation Project (Inyo County); biological monitoring for met tower and solar radar installation for potential projects of Enel Green Power (San Bernardino County); habitat monitoring for mitigation sites at Talbert Regional, W.R. Mason Regional, and Fairview Parks (Orange County); special-status plant surveys for California High Speed Rail, Los Angeles to Palmdale Section (Los Angeles County); plant surveys for Reche Canyon Road and Pigeon Pass Road Expansion Projects (Riverside County); conservation status assessments for rare plants (multiple locations within U.S. Forest Service, Region 5); and rare plant surveys and monitoring (San Bernardino, Angeles, and Cleveland National Forests).

MINA ROUHI, M.S. – GIS MAPPING AND REPORTING

Ms. Rouhi oversees the GIS group at UltraSystems. She provides mapping and analytical services for a wide range of projects. She has assisted with the graphical presentation of environmental documents, including Initial Studies and Preliminary Environmental Studies based on the provisions of the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Ms. Rouhi has prepared maps utilizing ArcGIS in order to illustrate potential project impacts to sensitive environmental concerns. Her skills extend to GPS data transfer to GIS as well as analyzing impacts through spatial relationships. Her GIS experience extends to data management cartography, ArcGIS extensions, and geoprocessing tools. Ms. Rouhi's GIS skills include file conversion from various data sources (i.e. AutoCAD, Google Earth) to GIS; manipulating and digitizing data including parcels; utilizing U.S. Census socioeconomic data for graphical presentations; and utilizing geoprocessing tools to analyze project impacts. Her responsibilities include project management, data acquisition, cartographical analysis and map creation. Ms. Rouhi serves as task manager to GIS staff technicians, which requires in-depth technical knowledge, clear communication, and strong project management skills.

Ms. Rouhi's recent project experience includes: GIS mapping and data analysis for the Imperial Solar Energy Center Project (Imperial County); GIS spatial analyses and project management for the communication system as part of the LA-RICS LA-SafetyNet Program Environmental Services Project (Los Angeles County); GIS data management, cartography, and analysis for the 29-mile long alignment part of the California High-Speed Rail Project, Anaheim to Los Angeles Section Project (Orange and Los Angeles County); GIS spatial analyses and socioeconomic analysis for the communication towers part of the Recovery Act: Edward Byrne Memorial Justice Assistance Grant (JAG) Project (Los Angeles County); environmental compliance monitor coordination and GIS data management for the Sunrise Powerlink Mitigation Monitoring Project (Imperial and San Diego

Counties); GIS mapping and project management for the Wistaria Solar Project (Imperial County); GIS data management, mapbook creation, and spatial analysis for the Pine Canyon Road Project (Los Angeles County).

MICHELLE TOLLETT, B.A. – Biological Resources In-house Lead

Ms. Tollett has 10 years of environmental consulting experience in the public and private sectors. Ms. Tollett has held a variety of environmental compliance management responsibilities, from planning to post-construction project phases, throughout Southern and Central California. Ms. Tollett is a project manager with specific expertise in field biology, **construction monitoring**, environmental regulatory compliance and general biological consulting, including permitting and mitigation planning. Her responsibilities include supervision of various projects, including field lead and staffing for habitat assessments, reconnaissance field surveys for special-status species, and focused special-status species surveys. Her experience includes projects involving water, oil and gas, transmission lines, alternative energy, and various other on-call military and governmental as-needed projects.

Ms. Tollett's experience includes invasive species control, mitigation monitoring and planning, construction monitoring, and the preparation of biological reports and environmental documents for compliance with NEPA and CEQA and FESA and CESA. She currently volunteers with many herpetological research projects and has made contributions to the California Natural Diversity Database hosted by the California Department of Fish and Game. She is an active member of the Orange County Society of Conservation Biology, California Native Plant Society, and Sea & Sage Audubon Society. Ms. Tollett is permitted to handle desert tortoises.

Some of Ms. Tollett's recent projects include: Biological Mitigation Monitoring, Sunrise Powerlink Project, San Diego County, CA. Ms. Tollett oversaw the mitigation monitoring of the construction and laydown yards, which involves the construction electric transmission lines between the Imperial Valley substation near El Centro in Imperial County to San Diego Gas & Electric's Sycamore Canyon Substation in coastal San Diego County. The project extended approximately 118 miles on 23 construction sites and cross traversed private and public lands. Reconnaissance Biological Surveys, Habitat Suitability Surveys, Mitigation Reports, and Data Management to support the Devers to Palo Verde 500kV Transmission Line Project (DPV2), Riverside County, CA. Ms. Tollett conducted and prepared Reconnaissance Biological Surveys, Habitat Suitability Surveys, Mitigation Reports, and Data Management efforts for Southern California Edison's DPV2 Transmission Line, with construction phasing anticipated over 5 years. The DPV2 Project spans 153 miles from eastern to western Riverside County. Ms. Tollett participated in the planning, preparation, and submittal of several Mitigation Plans. Bakersfield Cactus and Desert Tortoise Surveys, Alta Wind Farm, Tehachapi, CA. Ms. Tollett participated in Desert Tortoise Surveys and Bakersfield cactus surveys on the Alta Wind Farm Project. A team of four Biologists surveyed discrete locations using alternating belt transects with a handheld Trimble sub-meter GTX unit. High Desert Corridor Project, Desert Tortoise (*Gopherus agassizii*) Presence/Absence Surveys, Mojave Desert, San Bernardino County, CA; Hwy 395 Widening Project, Desert Tortoise (*Gopherus agassizii*) Presence/Absence Surveys, vicinity of Kramer Junction, San Bernardino County, CA; and the Haller, Rojo & Clipper Valley Wash Bridges Replacement Project, Desert Tortoise (*Gopherus agassizii*) Presence/Absence Surveys, vicinity of Essex, San Bernardino County, CA.

JOYCE D. MAK, B.A. – FIELD LEAD

Ms. Mak provides biological and construction monitoring, permit compliance and technical writing for biological reports. She has implemented nesting bird and roosting bat deterrence programs and conducted nesting bird surveys in support of infrastructure improvement projects around Los Angeles County. She has supported water quality and storm water prevention programs and contributed to restoration and re-vegetation efforts. This work has included native plant installation and chemical weed treatment and removal. She is knowledgeable about native and non-native California plant and wildlife species, having worked in upland and riparian habitats throughout Southern California, including Los Angeles, Orange, Riverside, San Diego, Imperial and San Bernardino Counties.

Some recent projects of Ms. Mak include: Wildlife Surveys and Monitoring Services to support Imperial Solar Energy Center (CSOLAR) Project in Imperial County, CA. Ms. Mak performed burrowing owl foraging surveys on owls' behaviors and activities. Ms. Mak has also helped trapped animals out from unsealed fence pole openings, flat-tailed horned lizard monitoring, and general construction monitoring. Biological Mitigation Monitoring, Sunrise Powerlink Project, San Diego County, CA. Ms. Mak provided mitigation monitoring of construction for project laydown yards which involved the construction of electric transmission lines between San Diego County and Imperial County in special habitat such as Desert Salt Scrub, Peninsular Juniper-Woodland and Scrub, Sonoran Desert Scrub, Big Sagebrush Scrub, Redshank Chaparral, and Scrub Oak/Chamise Chaparral habitat within the Sonoran Desert. Quarterly Wildlife Monitoring Surveys, Yearly Macro-Invertebrate Sampling, and Reporting, NextEra Energy Operating Services Project, San Bernardino County, CA. Ms. Mak has conducted over the last 5 years quarterly bird count and identification surveys on evaporation ponds and monitor the perimeter around the facilities to confirm that the desert tortoise fence remains buried. Reconnaissance Biological Surveys, Habitat Suitability Surveys, Mitigation Reports, and Data Management to support the Los Angeles Regional Interoperable Communications System Project, Los Angeles County, CA. Ms. Mak has been conducting biological surveys for evaluation of biological resources for potential sites and preparing technical reports for each site within Los Angeles County in different habitats including the Mojave Desert area, Angeles Forest area, foothills, coastal areas and Catalina Island which are homes of several special status species including but not limited to desert tortoise, Coachella Valley fringe-toed lizard, Mexican spotted owl, least Bell's vireo, and coastal California gnatcatcher. The main focus of the LA-RICS project is to provide a highly coordinated emergency communications system to all first-responders to natural and man-made disasters throughout Los Angeles County.

HUGO FLORES, B.S. – FIELD MONITOR

Mr. Flores has conducted comprehensive literature reviews, general biological surveys, and vegetation mapping to determine the presence or potential occurrence of sensitive biological resources. Mr. Flores serves as the primarily **field monitoring biologist** for many construction monitoring projects across Southern California. He assists in preparing biological technical reports and recommends appropriate mitigation measures to reduce impacts to less than significant levels in accordance with CEQA and NEPA. Mr. Flores is permitted to handle desert tortoises.

Some of Mr. Flores' recent projects include: the High Desert Corridor Project, Desert Tortoise (*Gopherus agassizii*) Presence/Absence Surveys, Mojave Desert, San Bernardino County, CA; Hwy 395 Widening Project, Desert Tortoise (*Gopherus agassizii*) Presence/Absence Surveys, vicinity of Kramer Junction, San Bernardino County, CA; and the Haller, Rojo & Clipper Valley Wash Bridges Replacement Project, Desert Tortoise (*Gopherus agassizii*) Presence/Absence Surveys, vicinity of Essex, San Bernardino County, CA.

STEPHEN O'NEIL, M.A., RPA – In-House Cultural Resources Lead

Mr. O'Neil, UltraSystems' Cultural Resources Manager, is responsible for project investigation and management involving Archaeological, Ethnographic, Historical and Paleontological Resources. He has 30 years of experience as an archaeological and cultural anthropologist in California. He has archaeological experience in excavation, survey, monitoring and project management, with particular expertise in the use of mission records for the study of population and social networks. Mr. O'Neil is also familiar with ethnobotany, family reconstruction, and rock art investigations. His archaeological experience is concentrated on Native American prehistoric sites, but has included Spanish, Mexican and American period adobe sites. He has extensive experience in Phase I Environmental Site Assessments, archaeological resource assessment surveys, management of monitoring for prehistoric and paleontological resources, and cultural background studies for EIRs. Mr. O'Neil has worked for several cultural resource management firms, as well as government agencies and Native American entities. He has prepared numerous technical reports as well as published journal articles.

Some of Mr. O'Neil's recent projects include: Cultural Mitigation Monitoring, Alton Parkway Extension Project, Orange County, CA. Mr. O'Neil oversaw the mitigation monitoring of the construction, which involved the construction of a six-lane highway connecting the cities of Irvine and Lake Forest in central Orange County. Along the route were two known prehistoric sites which were excavated and monitored, resulted in the finding of several hearth features which were identified and then reported. Cultural and Paleontological Resource Mitigation Plans and Programs, with Monitoring Oversight, to support the Imperial Solar Energy Center South solar panel and transmission line project in Imperial County, CA. Mr. O'Neil prepared monitoring programs, tribal participation plans and long-term management plans, and oversaw preparation of paleontological survey reports and monitoring programs for the 950-acre solar generating facility project near El Centro, Imperial County. He also has managed the on-going cultural, Native American and paleontological monitoring taking place there. Potential Human Remains Field Assessment and Reporting, for the Los Angeles Unified School District South Regional High School #15 and Central Regional 9th Street K-8 School construction projects, and for the Los Angeles Union Station Platform 7 construction project, Los Angeles, CA. Mr. O'Neil conducted on-call site evaluations to determine if found faunal remains were of human origin, and was able to make on-site determinations supported by timely excavation and laboratory analysis. Field evaluations were followed by letter report preparation with supporting data. Cultural and Paleontological Resources Field Survey and Report for the Wistaria Ranch Solar Energy Project, Imperial County, CA. Mr. O'Neil provided project management of two surveys for environmental resources on the 3,650-acre project area and prepared the cultural resources survey report in support of the project's Environmental Impact Report. A team of seven archaeologists surveyed the entire project area for artifacts and fossils with handheld Trimble sub-meter GTX unit. Several historic site records were updated and three isolated artifacts were recorded.

DAVID SMITH, B.S. – FIELD LEAD

Mr. Smith has 24 years of experience as a cultural resources principal investigator, field director, project archaeologist and project manager. His project experience has included Department of Interior, Department of Defense, Bureau of Land Management (BLM) and Bureau of Reclamation (BOR) managed properties, pipelines, transmission lines, facilities, mines, and parks. He has expertise in NEPA/CEQA compliance involving surveys, inventories, monitoring, testing and data recovery, and Native American consultation. He is a certified archaeologist for Riverside County and has completed Riverside County cultural sensitivity training. He has extensive experience as a field and laboratory supervisor. He has conducted archaeological surveys in California, Nevada and Arizona encompassing over 50,000 acres of private and public lands. Agencies include the San Bernardino National Forest; the BLM in Arizona, California and Nevada; the Prescott National Forest; the Cleveland National Forest; the Angeles National Forest; the Coconino National Forest; Department of Defense (DOD); California State Lands Commission (CLSC); Arizona State Museum; the United States Army Corps of Engineers (USACE); and numerous municipal, county and state agencies. Mr. Smith has considerable experience with linear projects, including petroleum and natural gas pipelines and transmission corridors. These include projects in San Bernardino, Los Angeles, Ventura, San Luis Obispo and Riverside Counties in California.

Some of Mr. Smith's projects include: Cultural Resources Pipeline Survey for the **Transwestern** natural gas pipeline, Arizona. He managed the survey crew for a Class III Cultural Resources Survey for the 280-mile gas pipeline; all work was conducted pursuant to Section 106 of the National Historic Preservation Act (NHPA). Approximately 200 historic and prehistoric sites were recorded during the survey. Subsequent work included an additional 100 miles of access roads and 50 one-acre staging areas. Jurisdictions included National Forest lands, BLM lands, Arizona State Lands, and privately-owned lands. Cultural Resources Pipeline Survey and Report Preparation for numerous petroleum pipeline projects for **Kinder Morgan** in California and Arizona, involving Class III Cultural Resources Inventories for 12 separate pipeline repair locations on the CalNev Pipeline segment from Colton, CA to Las Vegas, NV. The inventories were conducted pursuant to Section 106 of the National Historic Preservation Act. Mr. Smith was the Project Archaeologist for the Cultural Resources Initial Study for the **WesPac** Los Angeles International Airport fuel pipeline in Los Angeles County. The pipeline extended from the harbor in Wilmington to LAX. The IS was accomplished to

determine if existing historic or prehistoric sites would be directly impacted by the construction of a petroleum pipeline. Studies included records and literature reviews for archaeological and paleontological resources. Mr. Smith conducted a Cultural Resources Transmission Line Survey for the **Southern California Edison** Ivanpah-Eldorado Transmission Project between Victorville, San Bernardino County, CA and Primm, NV. This 51-mile survey was documented in a Class III Cultural Resources Inventory. He also conducted Cultural Resource Transmission Line Surveys and Report Preparation for the **AT&T** fiber optics project extending from Los Angeles to San Luis Obispo in Southern and Central California. The project included extensive records searches, Native American coordination, and planning with Los Angeles, Ventura, and San Luis Obispo Counties. This survey was documented in a Class III Cultural Resources Inventory. **Archaeological Monitoring San Luis Obispo Creek (2007)**. Conoco Phillips. Mr. Smith coordinated archaeological monitoring during excavations along the western bank of San Luis Obispo Creek. Excavations were conducted to determine the nature of an oil seep in the western bank of the creek. Petroleum pipelines owned by Conoco Phillips were buried in the bank. Excavations ultimately revealed the oil seep to be natural. The pipelines were intact. Mr. Smith worked closely with representatives from Conoco Phillips, the City of San Luis Obispo, the Nature Conservancy, and the Northern Chumash Tribe. No archaeological materials were discovered during monitoring.

JAY K. SANDER, M.A. – FIELD MONITOR

Mr. Sander has 18 years of experience as a cultural resources project archaeologist, field director, crew chief, and project manager. He has participated in and supervised all aspects of archaeological fieldwork, including field survey, construction monitoring, and test excavation. He has prepared documents to meet lead agency requirements for the U.S. Forest Service, Caltrans, Bureau of Land Management (BLM), National Park Service, Federal Communications Commission, and the Army Corps of Engineers. Mr. Sander is a Riverside County Certified Archaeologist. He has expertise in NEPA/CEQA compliance involving surveys, inventories, monitoring, testing and data recovery, and Native American consultation. He has conducted archaeological surveys in California, Nevada and Arizona encompassing over 4,300 acres of private and public lands. Mr. Sander has experience with linear projects, including fiber optic and petroleum pipelines and transmission corridors. These include projects in San Bernardino, Riverside, Los Angeles, San Diego, Washoe and Ventura Counties in California.

Some of Mr. Sander's projects include: Cultural Resources Transmission Line Survey for **enXco Development**, Desert Center in Riverside County, CA. He was the field director for a BLM Class III survey of 1,700 acres for a proposed power station and surveyed an associated 12 linear mile transmission line. Cultural Resources Transmission Line Survey and Report Preparation for the **Southern California Edison** Eldorado-Ivanpah Transmission Line Upgrade Project between Victorville, San Bernardino County, CA and Primm, NV. This survey covered 51 miles of transmission line and associated roads with reports prepared for review by the Las Vegas Nevada and Needles California BLM offices. Mr. Sanders was the Senior Archaeologist and Field Director for the **BLM-Palm Springs-South Coast Field Office** Coachella Valley Management Plan Archaeological Survey. This consisted of a BLM Class III survey of 4,350 acres as part of the Coachella Valley Management Plan located between Desert Hot Springs and the Salton Sea, Riverside County, CA. He also conducted Cultural Resource Fiber Optics Line Surveys and Report Preparation for the **AT&T** fiber optics project extending from Los Angeles to San Luis Obispo in Southern and Central California. The project included extensive records searches, Native American coordination, and planning with Los Angeles, Ventura, and San Luis Obispo Counties, CA. This survey was documented in a Class III Cultural Resources Inventory.

SIMILAR MONITORING PROJECTS

Project: Imperial Solar Energy Center South

Client: Tenaska, Inc. and CSolar IV South, LLC

Contact: Fred Straus, Director of Environmental Programs | T: 402/691-9736

Contract Duration: May 2012 – Present

Project Value: \$3,287,023

Work Scope: UltraSystems Environmental under contract to Tenaska, Inc. (one of the largest US independent power producers) will be implementing CSolar's Environmental Compliance Program and Permitting Compliance conditions. As part of this project, UltraSystems is conducting biological and cultural field monitoring services during pre-construction and construction activities planned for CSolar's projects, which are located near the Mexican border in the unincorporated Mt. Signal area, in Imperial County, California.



The Imperial Solar Energy Center (ISEC) South project is a 200+ MW solar facility using photovoltaic technology, on approximately 1,640 acres of land. The ISEC West project is an approximately 200+ MW solar facility on 1,714 acres of land. In addition, the ISEC South project will require construction of a transmission line that would interconnect to the existing Imperial Valley electrical substation, which is located on lands administered by the Bureau of Land Management (BLM).

The solar energy facilities interconnect to the utility grid at the 230 kV side of the Imperial Valley Substation. The use of an existing dirt road is proposed for construction and maintenance access to the western portion of the solar energy facility. A portion (1,258 feet) of the 1.1-mile-long access road is located within BLM lands. Therefore, the project requires Right-of-Way (ROW) approval from the BLM. The project plans to use a 120-foot-wide ROW from the project site along BLM land to the Imperial Valley Substation in order to accommodate the transmission corridor (approximately 82.7 acres). As part of our monitoring work for CSolar, a Research Design Plan was prepared to authorize work within the BLM right-of-way. The plan detailed the conditions necessary for paleontological work within existing transmission line corridors.

UltraSystems is managing field monitoring personnel (up to four biologists, and two cultural resource monitoring, including one tribal observer) and assumes responsibility for all required mitigation measures for CSolar, including: biological, archaeological and paleontological monitoring over the duration of project construction, estimated to last approximately 24-30 months.

To implement the project condition of the required Mitigation Monitoring, Compliance, and Reporting Program (MMCRP), UltraSystems has developed project tools, including: field monitoring protocols and training requirements; daily call-in procedures to ensure monitor safety; project resource and tracking tools; and GIS resource mapping for in-house database use.

The ISEC South project required an approval of a Conditional Use Permit (CUP) from the County of Imperial, and a project variance to allow the transmission towers to exceed the 120-foot height limit on the private land portion of the project. The proposed transmission towers would be a maximum of 140 feet in height.

The County of Imperial has served as the Lead Agency for the project. All monitoring activities will be performed under provisions of the California Environmental Quality Act, the National Environmental Policy

Act, the State Historic Preservation Act and the California Endangered Species Act. Additionally, the biological monitoring will also comply with all standards, guidelines and regulations of the BLM in the Flat Tailed Horned Lizard (FTHL) Management Area. Listed below are some of the key highlights of this project.

Project Highlights

- Prepared Paleontological Resources Assessment Report
- Prepared Pesticide Use Plan (PUP)
- Prepared Archeological Monitoring Program
- Prepared Paleontological Monitoring Report during Geotechnical Investigation
- Prepared Biological Monitoring Report during Geotechnical Investigations
- Prepared Invasive Weed Survey Report
- Prepared Tribal Participation Plan (TPP)
- Prepared Waste Management Plan (WMP)
- Prepared Stormwater Pollution and Prevention Plan
- Prepared Fire Management Plan
- Prepared Hazardous Materials and Management Plan
- Prepared Health and Safety Plan
- Prepared Facility Business Emergency Plan
- Prepared Worker Education and Awareness Plan
- Prepared Burrowing Owl Preconstruction Survey
- Prepared Mortality Reporting Plan
- Prepared BUOW Relocation Plan
- Prepared Inadvertent Discoveries Treatment Plan
- For Monitoring – prepared daily log sheets, weekly, monthly and quarterly reports

Project: Biological Monitoring Services for the Sunrise Powerlink Project

Client: Total Transportation Services Inc. (TTSI)

Contact: Marc L. Gennette, Vice-President, Operations | T: 619-933-3547

Contract Duration: December 2009 – December 2012

Contract Amount: \$1,142.872

Work Scope: UltraSystems Environmental Inc. (UltraSystems) provided biological mitigation monitoring services on behalf of Total Transportation Services Inc. (TTSI) for the Sunrise Powerlink Project. The Project included the construction of new electric transmission lines between the existing Imperial Valley Substation near El Centro in Imperial County to SDG&E’s Sycamore Canyon Substation in coastal San Diego County. The entire Project extends approximately 118 miles on twenty-three project sites, and traverses private and public lands. Specifically, UltraSystems was contracted to provide biological monitoring during TTSI’s fencing and brush clearing activities on all twenty-three sites.



Project Role: UltraSystems’ biologists provided monitoring to ensure that construction activities conformed to the measures of the Mitigation Monitoring, Compliance, and Reporting Program and the recommendations of the Project’s environmental documents. Monitoring included sensitive floral and faunal species, as well as sensitive habitats on/and in the vicinity of the construction laydown yard sites. Monitors were present during grading, clearing, and fencing activities at all sites to ensure that sensitive species would not be disturbed.

As a subcontractor to TTSI, UltraSystems monitoring activities included being present on each project site during construction, including pre- and post-construction activities. Monitors provided daily reports to TTSI of their observations. The standard schedule was 10 hours/each day, and included 6-day work weeks. The work was initiated in June 2010, with the placement of two biological monitors to observe work on two project sites (Yards 8 and 19—Rough Acres and Alpine). Additional monitors were placed on-site as the project expanded to additional construction yards. UltraSystems personnel successfully achieved delivery of the project within the constraints and requirements of safety, quality, budget, schedule and environmental regulations.

Project Highlights

- Prepare biological preconstruction survey reports for 18 construction yards to identify existing conditions with photographs and vegetation GIS mapping
- Comply with project mitigation requirements and permit conditions
- Conduct daily biological sweep surveys (including identification of nesting birds) on construction yards prior to initiating work
- Maintain communication with avian biologists in regards to nest buffer designations during nesting season
- Prepare daily biological monitoring reports to log construction activities and environmental compliance, which were filed and tracked in the office on a daily basis
- Address environmental compliance concerns and issues immediately and keep records of non-compliance activities
- Maintain effective/daily communication with project management regarding project progress and field concerns
- Attend weekly environmental meetings with project management
- Provide multiple biologists simultaneously for monitoring construction activities six days per week

Project: Environmental Monitoring Services, Alton Parkway Extension, Orange County, CA

Client: Orange County Public Works

Contact: Kasey Nielsen, P.E., Project Engineer |T: 714/834-4786

Contract Duration: July 2010 – October 2012

Contract Amount: \$357,170

AWARD WINNING PROJECT – Alton Parkway Extension was named the “2012 Project of the Year” by the Southern California Chapter of the American Public Works Association (APWA).

Work Scope: UltraSystems was hired by the OCDPW to conduct endangered species surveys and construction monitoring for the Alton Parkway Extension Project. The project involved construction of a six-lane divided roadway from Irvine



Boulevard to Towne Centre Drive between the cities of Irvine and Lake Forest. Other improvements, such as drainage facilities, flood-control improvements, and an on-road bikeway, would be implemented during the road construction. The project would construct a critical gap closure to alleviate traffic congestion and accommodate the traffic generated by developments planned for the area.

Project Role: UltraSystems conducted 10a permitted biologist surveys and cultural resource surveys and mitigation monitoring to help retain the sensitive natural and cultural resources of the project alignment. The 2011 nesting season was an achievement with 5 nesting pair of California coastal gnatcatcher and 1 nesting pair of least Bell’s vireo successfully nesting. In addition, UltraSystems prepared and presented a Worker’s Education and Awareness Program (WEAP) to provide training to the managers, supervisors, and inspectors of the Alton Parkway Extension Project.

Project Highlights

- Preparation and presentation of the Worker’s Education and Awareness Program (WEAP)
- Conducted biological USFWS protocol-level preconstruction surveys and construction monitoring for the coastal California gnatcatcher, the least Bell’s vireo, and other sensitive wildlife
- Conducted biological construction monitoring on sensitive biological resources onsite over a 13-month period and coordinated with construction crews and OCPW to avoid stopping construction and comply with regulations.
- Provided daily or on-call cultural resources monitoring services during construction.



Project: Construction Management and Archaeological Resources Services, Owens Lake, Inyo County, CA
 Contact: Sami Reeves, President |T: 818 /241-0800
 Contract Duration: November 2008 – May 2010
 Contract Amount: \$1,176,437

Work Scope: UltraSystems Environmental provided construction management services for Phase 7 of the Owens Lake Dust Abatement Project, a long-term program conducted by the Los Angeles Department of Water and Power (LADWP) to mitigate the effects of extreme dust pollution blowing across the Owens Lake bed and the surrounding region, through the use of Dust Control Measures (DCMs).

Phase 7 is primarily concerned with the southwestern and southern edges of the lake, constructing 20 sites with a combination of shallow ponds and moat-and-row, involving a total of 15.1 square miles (9,664 acres). The entire lake area covers approximately 110 square miles, or 70,000 acres. The area is home to prehistoric sites along the edges of the lake and several historic mining-related sites along the edges and out into the old lake bed, requiring mitigation. A cultural resources survey prior to the start of Phase 7 recorded 15 sites and 223 isolated artifacts within its scope.

Project Role

UltraSystems archaeological monitoring included:

- Being present on Owens Lake in support of grading and trenching construction work to ensure compliance with government regulations;
- Conducting surveys of areas prior to ground-disturbing activities;
- Monitoring of subsurface grading and trenching of native soil; observing evidence of prehistoric activities as possible sites to be recorded, tested and evaluated prior to possible disturbance;

- Recording and collection of historic and prehistoric artifacts likely to be destroyed by the construction activities; and
- Provide daily reports to KDG of UltraSystems observations.

The primary role of UltraSystems' Native American monitors was to document that cultural resource monitoring was taking place and consult on the disposition of any prehistoric findings.

UltraSystems was on-call to provide the following construction monitoring services:

- Implementation of project coordination procedures;
- Project scheduling;
- Training on safety, budgeting, environmental protection;
- Recording project progress and preparing progress reports for LADPW;
- Describing the work and percentage completed; and
- Maintaining project documentation at the site, including change order documents, drawings, contracts, specifications, and project correspondence.



Project: Biological Monitoring Services for Fort Irwin Road Widening, San Bernardino, CA

Client: County of San Bernardino

Contact: Frank Molina, Supervising Planner | T: 909/387-8104

Contract amount: T&M

Project Value: \$586,757

Work Scope: Fort Irwin Road is a 22-mile long County-maintained road between Interstate 15 and the U.S. Army Fort Irwin National Training Center. The road serves civilian and military traffic going to and from Fort Irwin. There are serious traffic safety concerns along Fort Irwin Road. In order to improve safety and driver comfort, the County, in cooperation with the U.S. Army, is repaving and widening the road, and adding passing lanes at strategic points.

Fort Irwin Road is located in the heart of the West Mohave Plan area and within a proposed Desert Wildlife Management Area (DWMA), as identified in the Draft West Mohave Coordinated Management Plan. The West Mohave Plan is currently being prepared as a comprehensive interagency program for the conservation of biological resources identified in the region. The road improvements will occur within known habitat of the desert tortoise (*Gopherus agassizii*), a federally and State-listed threatened species, and the Mohave ground squirrel (*Spermophilus mohavensis*), a State-listed threatened species. The County has been granted incidental take permits for these species by U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).

UltraSystems understands both the need to improve the safety of the Road and to comply with the federal and state incidental take permits to protect the tortoise and ground squirrel. In order to assure that the County complies with the federal and state incidental take permits, UltraSystems is currently monitoring construction of the exclusion fence and cattle guards, and will remain on site during working hours until the permanent desert tortoise fencing has been completely installed.

Once the permanent desert tortoise fencing is installed, UltraSystems will perform weekly compliance inspections to ensure that signs, stakes, and fencing are still intact, and that human activity has been

restricted in all protective zones. Additionally, UltraSystems will have a biological monitor on-call during all aspects of construction to attend to any non-compliance issues that may arise.

Project Highlights

- Assembled a team of 16 USFWS and CDFG approved biologists to monitor, handle, and relocate – if necessary – desert tortoises and Mohave ground squirrels.
- Conducted a pre-project orientation to educate the construction crew of the biology of the desert tortoise and Mohave ground squirrel, the habitat needs of these species, the status under the California Endangered Species Act, and the management measures provided in the CDFG 2081 Incidental Take Permit.
- Provided biological monitoring to ensure compliance with a USFWS Biological Opinion and a CDFG 2081 Incidental Take Permit.

Species of Primary Concern

- Desert Tortoise
- Mohave Ground Squirrel

C. PROJECT UNDERSTANDING AND TYPICAL APPROACH

UltraSystems would take the lead in managing field monitoring personnel and assume responsibility for required mitigation measures, including: biological and archaeological monitoring. The following monitoring components describes how UltraSystems would specifically implement your Compliance Program for mitigation measures.

Development of a Worker Education and Awareness Program (WEAP)

UltraSystems will develop a WEAP in accordance with any permits conditions for this project. The WEAP will include both biological and cultural resources, and any other mitigation requirements for the project as described in the permits. The program prepared will be in a digital and hard-copy format. The digital format will be a PowerPoint slide presentation that can be utilized by laptop in the field. A required signature form will be prepared, which will need to be signed by all workers who enter the project site. A summary tri-fold handout will also be prepared and hardhat stickers will be provided to all personnel completing the program.

UltraSystems will present the WEAP training to the contractor and their construction staff prior to the start of construction. This will provide an opportunity to review and finalize the program, and make any needed modifications.

UltraSystems shall present the WEAP training to all personnel entering the construction areas at the start of construction work. After successfully completing the WEAP training each worker will sign the roll sheet and receive the tri-fold summary brochure to keep with them, and a hardhat sticker to show they have completed the training. A modified/shortened version of the training shall be presented each week at the construction site at the “tailgate” construction safety meetings for the duration of the project. These meetings will provide WEAP training to new personnel, reinforce the biological and cultural mitigation requirements, and present new information as mitigation requirements change and new areas of the project site are opened up.

Project Communication – Field Monitoring Protocols

- At the start of construction, and with regular updates as needed thereafter, field monitors (includes biological and archaeological monitors) will be provided with sensitive species location maps overlaid with generic cultural sensitivity areas.
- At each tailboard meeting in the morning, environmental sensitive areas (ESA) locations and their

associated restrictions will be discussed with the construction contractor for that work day.

- Biological and archaeological monitors will be notified **NO LESS THAN 36 HOURS** to mobilization of crews within and/or adjacent to established ESAs.
- A single point of contact (UltraSystems PM) will be established and required for an end-of-work day phone call to discuss construction schedules for the following day. This person will contact the construction contractor manager, UltraSystems' assigned PM and individual monitors to determine work status. During the call, a start time(s) and location(s) will be established for monitors to meet the following day, usually at the tailboard meeting location.
- The Field Monitor Manager will participate in weekly monitoring meetings/conference calls with UltraSystems, the construction contractor and the District to review monitoring efforts, and resolve any issues and miscommunication.

Daily Construction Meetings

UltraSystems' PM will attend daily construction contractors meetings and afterwards will hold their own a brief meeting with its monitors before dispersing its staff to the various field locations and/or monitoring sites.

Daily Call-in Procedures

ALL UltraSystems staff associated with the Project (excluding the construction contractor) must follow the mandatory requirements listed below to ensure **safety** when working (or visiting) the project site. Contact the Project Trailer by telephone prior to entering the project site.

- Provide your name and cellular number where you can be reached.
- Provide the location where you will be in the project area. If you will be moving from site-to-site, include that information.
- When moving from one site to another site, call or radio the Project Trailer to inform them of your move.
- Contact the Project Trailer when leaving the project area **for any reason**. If leaving the project area with no plan to return later the same day, contact the Project Trailer to inform them that you are off of the project area for the remainder of the day.
- Contact the Project Trailer and the UltraSystems PM Lead at the end of the day when leaving the project area.

The Project Trailer will monitor all employees' project area activities to ensure everyone is safe and accounted for at the end of the day. A spreadsheet will be provided which lists the radio and cell phone coverage within the project area. Strict adherence to the daily communications procedure is mandatory. There will be zero tolerance for non-compliance and violations could result in removal from the Project.

Everyone working on the project should fill out and keep current at all times, the Emergency Contact Card. This will be kept on file in Dispatch (Field Trailer). Please fill the form out in its entirety and return ASAP to the Office.

Project Resources and Tracking

Microsoft Project Manager™ will provide the most accurate information on project scheduling and status available on a daily basis to our working crews. A copy of this web-based application will be made available to monitors to use as a tool for checking the construction status of individual towers, locating resource sensitivities, and viewing project documentation such as permits, Notice to Proceed (NTP), and variances applicable to each work site. All field staff will be provided updates from the Contractor.

The field monitors will have access to a wide variety of plans/resources that have been developed for the Project and various plans/reports prepared in compliance with the mitigation measures for their field work.

Databases

UltraSystems staff will enter their Daily Reports and Incident Reports directly into a web-based project database. Copies of NTPs, permits, the Construction Plans, and other project documentation will be entered. This information can be viewed or downloaded remotely at any time by staff. All monitors on the project are required to complete a daily log report of their monitoring activities. Their log reports will include a summary of the monitor's activities for the day (crew monitoring, survey activities, interactions with construction crews, agency coordination, etc.), and a report on all mitigation measures that were applicable for what was being monitored. Daily reports are required to be submitted daily, and no later than the next morning.

All monitors will be equipped with recreational grade (± 30 feet) GPS unit that will allow them to collect high accuracy GPS locations in the field.

GIS Resource Maps

GIS Resource maps (via laptops) depicting biological sensitivities, bird nests, and the general location of areas of cultural concern will be available to each on-site monitor. Maps will initially be compiled based upon existing biological surveys, and preconstruction clearance surveys, then modified as additional observations are made. All new observations will be posted to the GIS server and updated to the monitors' on a daily basis, allowing them access to current, up-to-date information that will assist in keeping the project in compliance.

Look Ahead – Construction Schedule (One Month)

This type of Construction schedule will incorporate any restrictions and will allow the construction contractor and its subcontractors to plan their activities around any potential biological and/or cultural restrictions. This will also give field monitors a forecast of activities where monitoring and communication will be needed with the Contractor and District.

Monitors Roles and Responsibilities – Definition of Roles

The role of the **Field Monitor Manager** is to:

- Ensure compliance with the Construction Plan and Mitigation Monitoring Plans for all environmental aspects of project execution.
- Serve as the Environmental Field Representative per adopted mitigation measures.
- Provide direction, planning, expectations, and general oversight for the field monitoring effort.
- Be available at all times during daily construction activities to answer specific questions, and to relay information between the field and UltraSystems management to inform every one of issues and changes in a timely manner.
- Provide a contact point for the District, its contractor and CDFG, and USFWS to coordinate work and provide reports should changes or incidents arise.
- Provide immediate assistance to field monitors, as needed.
- Keep management informed of project changes, issues, spills, and other incidents as they occur.
- Initiate daily contact calls with construction staff and convey changes to construction protocol or timing to the appropriate contractor staff and field monitors.
- Participate in weekly and monthly monitoring meetings.

The role of the **Field Monitoring Lead** is to:

- Ensure compliance with the Construction Plan and Mitigation Monitoring Plans for all environmental aspects of project execution.

- Provide direction, set expectations, and provide oversight for the field monitoring effort on their assigned construction segment.
- Be available at all times during the construction day to answer questions, and to relay information between the field and the Field Monitor Manager so that everyone is kept informed of problems and changes in a timely manner.
- Ensure that monitors are properly equipped and have all necessary documentation on hand to understand and perform their jobs.
- Initiate daily contact calls with construction staff and convey changes to construction protocol or timing to the appropriate Contractor staff and field monitors.
- Attend daily tailboard meetings to coordinate monitoring efforts with the field monitors and construction personnel
- Keep construction personnel informed of all ESA's and the timing of if/when they will be released.
- To be present at each daily meeting and present any new information or updates that will assist the construction crews in avoiding impacts to natural resources and to minimize impacts to natural resources in general.
- To coordinate with the construction contractor concerning any proposed changes to the project scope or design, ensure those changes are properly documented and approved, and to relay those changes to the appropriate levels of construction, environmental management, and environmental compliance staff.
- To provide a reference point for any questions about environmental compliance.

The role of the **Biological Field Monitor(s)** is to:

- To be present at each daily meetings and present any new information or updates that will assist the construction crews in avoiding impacts to natural resources and to minimize impacts to natural resources in general.
- Ensure that BMPs are maintained, and in-place.
- To provide a reference point for any questions about environmental compliance.
- To monitor compliance with mitigation measures including Biology, Cultural Resources, Hazardous Materials, etc.
- To report to the Field Monitor Lead, as needed.
- Ensure that work areas are clearly delineated and crews are staying within those areas.
- Continually checking for new sensitive resources within the work areas (e.g. plants, animals, cultural, and artifacts) and the surrounding work area.
- Coordinate with the crew you will be monitoring – find out what they will be doing daily and that they know the limits of their work area. Inform them of any sensitivity in the area (i.e. ESAs that they need to stay out of). Provide clear, consistent, and constant information to crews about requirements for resource protection.
- If sensitive plant resources are to be removed, make sure to take photos and count the number of plants that are removed.
- Take before and after photographs of areas where disturbance will occur.
- Take detailed notes of all activities for the day (what you saw, what you did, who you talked to, etc.).
- If any new sensitive resources are found, contact your Field Monitoring Lead. If a no construction buffer zone is needed (i.e., an active nest is found), inform the crew of the new work limits or if construction needs to stop in the area until further notice.
- Daily Reports of the monitoring activities are to be completed at the end of each day. They are due **DAILY** and no later than the next morning.

The role of the **Archaeological Field Monitor(s)** is to:

- Ensure compliance with the Archaeological Monitoring and Treatment Plan.

- Be present at daily meetings, when applicable to work areas designated as sensitive for cultural resources, and present any new information or updates that will assist the crews in avoiding impacts to said resources.
- Ensure that work areas are clearly delineated and crews are staying within those areas.
- Provide detailed information to the crews regarding protective measures such as Environmentally Sensitive Areas, within or adjacent to construction locations.
- Temporarily suspend work in an area where an unanticipated find is identified. Assess the find and consult with the Field Monitoring Lead.
- Coordinate monitoring activities with the construction contractor concerning any proposed changes to the project scope or design, ensure those changes are properly documented circulated to other archaeological monitors in the field.
- Provide a reference point for any questions about archaeological monitoring and compliance.
- Report to the Field Monitoring Lead or Field Monitor Manager, as needed.
- Daily Reports of your monitoring activities are to be completed at the end of each day. They are due **DAILY** and no later than the next morning.

Training Requirements

The monitor must participate in training classes required by UltraSystems, which includes, but is not limited to, viewing the WEAP video, participating in safety training, and mitigation measure monitoring training. Each field monitor must also review the MMRP and familiar with all mitigation measures for the project.

Field Monitor Responsibilities – Identification of Sensitive Resources

Sensitive resources have been identified for all project proposed work areas. These resources are discussed in survey reports and each identified resource has been mapped. Each monitor is responsible for reviewing survey reports and maps in order to be familiar with sensitive areas in and around the work area and ensure that these resources are being protected as required by the appropriate mitigation measures and associated treatment and management plans. In addition, each monitor is responsible for identifying previously unidentified resources discovered by any person working on the project.

Sensitive resources will be prominently flagged for avoidance with yellow flagging or T-bar posts/stakes with yellow nylon rope/flagging to identify the limits of encroachment.

Clearance Surveys

An initial clearance survey will be performed within ten calendar days prior to ground disturbance of a work site or anytime that an approved change in the project disturbance area is made. Reports on clearance surveys will be submitted prior to ground disturbance to the District. If construction has not begun in the surveyed areas within ten calendar days of the clearance survey, the survey must be repeated and a report of any changes must be submitted prior to ground disturbance to the District.

Daily Site Sweeps

Prior to starting work, the on-site monitor must perform a site sweep. This ensures that any ESAs are properly marked and no additional resources are present that are not accounted for. If new resources are found, the monitor must contact the UltraSystems Field Monitoring Lead to discuss how work may proceed. When work has concluded at a site, a monitor will sweep the site for any trash or construction debris that needs to be picked up. If trash or construction debris is found, the construction contractor will be contacted to remove such material.

Presence of a Monitor

A biological monitor should be present under the following circumstances:

- Vegetation clearing and brushing or grading.

- Activities in the vicinity of an active bird nest.
- Excavation activities.
- Soil stockpiling – Monitors will assist in the selection of adequate stockpiling sites, and ensure that topsoil is handled as per the specifications provided in the Construction Plan.

An archaeological monitor must be present under the following circumstances:

- Construction activity in proximity to previously identified cultural resources and/or isolates.
- Construction activities in proximity to previously identified areas of high cultural sensitivity.

Reporting Procedures - Spills

If you witness a spill (diesel, gasoline, hydraulic fluid, anti-freeze, or engine oil), discover a spill that you did not witness, or are informed of a spill that has occurred, contact the Field Monitoring Lead immediately with:

- The approximate time the spill occurred
- The source of the spill
- The quantity of the spill
- The location where the spill occurred and on what type of substrate
- The plan to clean up the spill or what actions have already been taken to clean up the spill

Any amount spilled should be reported. This same procedure applies to any leaking equipment or vehicles. The construction contractor is responsible for cleaning the spill and completing an Incident Report with the Field Monitor Manager. An initial report via email must be made by the Environmental Monitor Manager stating the Incident Report will be forthcoming. The information will be provided within 72 hours after discovery of the spill.

Environmental Precautions

Field Monitors must continually check the project for violations to construction site environmental measures included in environmental training wallet cards. Any violation to these rules must be brought up to the on-site foreman and depending on severity and frequency of the violation, appropriate action must be taken.

Typical Activities – Daily, Weekly and Monthly

UltraSystems believes that the following services would be necessary for a project of this magnitude; they include: 1) Project Management and Project Administration; 2) Project Scheduling and Coordination; 3) GIS Coordination, 4) Document Control, Implementation and Verification for the project would be necessary.

Below is an outline of the typical procedures we would utilize for this project.

PROJECT MANAGEMENT / PROJECT ADMINISTRATION ACTIVITIES

1. Communication between UltraSystems and District, including e-mail, correspondence, and team communication (internal/external as necessary) – *daily*
2. Project team meetings via conference call with Client staff – *weekly*
3. Conference calls with the District about project field status/monthly and quarterly reports to CDFG and USFWS – *as necessary*
4. Coordination, when necessary with District – *daily/weekly*
5. Established team meetings with Contractors for the project – *weekly*
6. Internal staff meetings by disciplines (Biological, Cultural, GIS, Document Control/Scheduling) – *weekly*

7. Project chronology updates with significant milestones – *weekly*
8. Coordination with CDFG and USFWS, and other entities relevant to the project, and as directed by District – *weekly*
9. Coordination with field personnel / UltraSystems – *daily/weekly*
10. Coordination with site field personnel of District and Contractor – *weekly*
11. Establish, maintain and provide a project contact list of UEI personnel and all regulatory staff – *as necessary*
12. Provide relevant resumes and other material to CDFG and USFWS for Designated Field Contacts (Biological/Cultural) – *as necessary*

PROJECT SCHEDULING AND COORDINATION ACTIVITIES

1. Updates to UEI project schedule – *weekly*
2. Relevant milestones, authorized task orders depicting critical schedule – *weekly*
3. Field schedule by disciplines – *weekly*
4. Updates, as needed, from UEI to Contractor(s) – *weekly*

GIS / GRAPHICS COORDINATION ACTIVITIES

1. GIS mapping for all project-related work – *as necessary*
2. GIS mapping as required by District, or its Contractor(s) – *as necessary*
3. Graphics / video imaging / illustration for work products – *as necessary*

PROJECT DOCUMENT SETUP, IMPLEMENTATION AND VERIFICATION

1. Project-related data for District for recordkeeping – *as necessary*
2. Project-related data/reports for CDFG and USFWS, and other entities, via weekly or quarterly reporting – *weekly*
3. Field personnel uploads – *daily, weekly, monthly*
4. IT to set up VPN line for document transfer – *as necessary*
5. Preparation of Verification forms to District, based on monitoring compliance – *as necessary*

D. COSTS – FULLY BURDENED RATES and FEES

<u>Professional Staff</u>	<u>Hourly Rates</u>
Principal	\$185.00
Project Director / Regulatory Compliance	\$175.00
Senior Principal Engineer	\$165.00
Senior Environmental Scientist / Engineer	\$165.00
Senior Project Manager / QA-QC	\$150.00
Project Manager / In-house Task Mgr.	\$140.00
Scientist / Engineer	\$130.00
Principal Investigator / Field Monitoring Mgr.	\$125.00
Senior Planner	\$119.00
Senior Biologist	\$114.00
Field Monitoring Lead (Biological Cultural)	\$114.00
Database Manager (GIS)	\$100.00
Associate Planner	\$100.00
Assistant Planner / Environmental Analyst	\$ 98.00
Staff Biologist / Field Monitors	\$ 78.00
 <u>Support Staff</u>	
Computer Illustrator / Video Imaging	\$ 88.00
Graphic Illustrator / GIS Technician	\$ 78.00
Word Processor / Accounting Lead/Invoicing	\$ 78.00
Technician / Accounting Clerk	\$ 75.00
Intern	\$ 47.00
Computer for CAD/GIS Application (per hr. rate)	\$ 16.50
Computer for Engineering / Environmental / Word Processing	\$ 10.50
Photo Copier – B/W	\$.10 per sheet
Photo Copier – Color	\$ 1.00 per sheet

Reimbursables

Consultant support (printing, reproduction and other direct expenses) will be billed at a rate of cost plus ten (10) percent. Automobile mileage will be charged at IRS standard rates. Travel time will be billed as indicated in the hourly rate schedule above. Authorized overtime for support staff will be billed at one and one-half (1½) times the standard billing rate.

Per Diem

Per Diem is billed when any employee or consultant is required to spend extended time in the field or the night away from our office (more than 100 miles). When per diem is in effect the maximum allowable reimbursable expense will be \$130.00 per day, which is intended to cover hotel and food expenses.

Overtime

Clients will be charged time and a half for hours worked in excess of 40 hours per week.

Statements are payable upon receipt, and will be submitted monthly for work in progress and at completion of contract obligations. Fees not paid within thirty (30) days of invoice date will be assessed an interest charge of one and one-half (1½) percent per month, from the date due (net 30). Attorney fees and court costs incurred for collection of delinquent accounts will be borne by the client.

Betsy A. Lindsay

Principal-in-Charge, Contract Administrator, QA/QC

Education

- Graduate Program, Public Policy and Administration, California State University, Long Beach, 1992
- Graduate Program, Business Administration, Pepperdine University, Irvine, 1989-91
- M.U.R.P., Master of Urban and Regional Planning, California State Polytechnic University, Pomona, 1989
- B.A., Geography, California State University, Long Beach, 1978

Professional Registrations, Licenses, and Affiliations

- American Planning Association, Former Director of Professional Development
- Urban Land Institute
- Association of Environmental Professionals
- National Association of Women Business Owners
- National Association for Female Executives
- OCTA Small Business Roundtable
- Commercial Real Estate Women

Professional Experience

Ms. Lindsay is the founder and chief executive of UltraSystems Environmental. A building industry veteran, she has more than 25 years of experience in environmental planning and permitting, redevelopment, fiscal impact analysis, economic development, and facility planning. Her background includes work on more than 45 construction-related projects. At UltraSystems, her day-to-day responsibilities include business and project management, contract administration, resource allocation, and quality control. She is responsible for overall project management, the preparation and processing of CEQA/NEPA documents, and associated entitlement obligations for large-scale public and private infrastructure projects. Ms. Lindsay manages all corporate endeavors involving the permitting and processing of solid waste facilities (e.g., Class III landfills, transfer stations, and material recovery facilities). Since launching her company in 1994, Ms. Lindsay has developed strong working relationships with Southern California public agencies, notably the Los Angeles County Metropolitan Transportation Authority.

SELECT PROJECT EXPERIENCE

Technical Studies, Hay Ranch Water Extraction and Delivery System Project Environmental Assessment, Inyo County, CA

Ms. Lindsay served as the Principal-in-Charge and Contractual Administrator for the project. She assisted the designated Project Manager with technical QA/QC review and the coordination of the project team and schedule. The Hay Ranch project was proposed for approximately 15 miles northeast of Ridgecrest, CA, in an unincorporated area of Inyo County. Detailed technical studies for biological and cultural resources were conducted as part of the environmental documentation. Hydrological studies were conducted to verify that the wells would produce sufficient fluids over the expected life of the project, and to demonstrate that the waters were from the same hydrologic basin.

ES, Southern Nevada Water Authority Treatment and Transmission Facility, Las Vegas, NV

Ms. Lindsay served as Principal-in-Charge for this project involving a traffic analysis for a major water facility infrastructure that would supplement the existing Southern Nevada Water System during periods of curtailed production, or system failures, to provide the State of Nevada full access to its Colorado River water entitlement.

Environmental Impact Report (EIR), Baldwin Park Operable Unit Water Delivery Plan, Baldwin Park, CA

Ms. Lindsay served as Principal-in-Charge for this project involving the treatment of contaminated groundwater. The UltraSystems team evaluated six alternatives to construct water treatment plants and extraction wells, installing new pipelines to transport raw water to treatment plants and treated water to distribution pipelines, and to construct new facilities used to replace extracted water with recharge water.

Revegetation Project, Wilmington Drain Outlet, Alhambra, CA

Ms. Lindsay was responsible for providing environmental services for the Wilmington Drain Outlet Clearing project in Los Angeles County. UltraSystems prepared and implemented the revegetation program for this project. The project site encompassed approximately three acres within Kenneth Malloy Regional Park (City of Los Angeles). This revegetation project was very unique, as it involved oversight by several regulatory agencies. These agencies included the U.S. Army Corps of Engineers, the California Department of Fish and Game, and the City of Los Angeles Department of Recreation and Parks. Approximately, 2,000 willows and other plant species were planted at the mitigation site. The monitoring of this revegetation area spans a five-year period.

NEPA and CEQA Documentation, Los Angeles Regional Interoperable Communications System (LA-RICS), Los Angeles County, CA

Ms. Lindsay was the UltraSystems' Principal-in-Charge of this major program, overseeing technical studies and preparation of NEPA and CEQA documentation toward the construction of LA-RICS, an \$800-million emergency communications system due to be operational in 2016. LA-RICS will provide a highly coordinated emergency communications system to all first-responders to natural and man-made disasters throughout Los Angeles County. The company's technical team of more than 20 professionals assessed the potential environmental impacts from the construction of approximately 260 proposed communications towers in urban and rural areas. UltraSystems' studies include: aesthetics and visual resources, land use, socioeconomic, human health and safety, air quality/greenhouse gas, noise, infrastructure (services and utilities/site access); historic and cultural resources, geology and soils, and biological resources. Ms. Lindsay was instrumental in working with outreach to key public agencies and regulatory agencies that were involved with this project.

NEPA / CEQA Documentation, Justice Administration Grants (JAG), Los Angeles, CA

Ms. Lindsay serves as Principal of the JAG project. Under her direction, she works with internal staff during the development of both NEPA and CEQA documentation for five project sites. Those project sites include Mt. Luken, San Vicente Peak, Mt. Lee and Kenneth Hahn Regional Park. The communication projects include the development of a new 180 foot lattice communication tower at Mt. Luken, San Vicente Peak and Verdugo Peak existing telecommunication project sites and the construction of a new equipment shelter at Mt. Lee and within the Kenneth Hahn Regional Park (Baldwin Hills area). It is assumed that the equipment shelters will be constructed within the fenced communications sites.

Sunrise Powerlink Cultural Surveys, Imperial County, CA

As Principal-In-Charge, Ms. Lindsay's primary responsibilities included business and project management, contract administration, resource allocation, and quality control. She also managed all corporate endeavors and assisted with the QA/QC process of many environmental documents. Specific responsibilities included overall project management, preparation and processing of CEQA/NEPA documents, and associated entitlement obligations.

Environmental Documentation, SR-55 Downtown Gateway Project, Costa Mesa, CA

UltraSystems prepared the Caltrans Preliminary Environmental Study (PES) which analyzed the environmental impacts and mitigation for the proposed project. An Aerial Deposited Lead (ADL) study was conducted as part of UltraSystems services. To accomplish this task, UltraSystems coordinated work with the client, CNC Engineering, and the City of Costa Mesa. The project was located along a quarter mile segment at the terminus of the SR-55 Freeway, north of 19th Street, within the median in Costa Mesa. The project included the enhancement of landscaping and irrigation, replacing the damaged concrete K-rail with a new decorative barrier, a decorative pavement band along the perimeter of new landscaping, and construction of an entry monument sign.

Ms. Lindsay served on this project as UltraSystems' Principal-in-Charge. The company was hired to prepare the environmental document for this project. UltraSystems was responsible for preparing the PES analyzing and describing the environmental impacts and mitigation for the proposed project.

Seal Beach Regional Trail, Seal Beach Boulevard to Anderson Street (Phase I), Seal Beach, CA

Ms. Lindsay acted as Principal-in-Charge for this project involving plans by the City of Seal Beach for a regional trail for recreational bicyclists and pedestrians. This trail would be adjacent to the southbound lanes of Pacific Coast Highway, from Seal Beach Boulevard to Anderson Street. UltraSystems helped the City prepare a Caltrans Preliminary Environmental Study (PES), Water Quality Evaluation Study, Floodplain Evaluation Report, Historic Property Survey Report, Historical Resources Evaluation Report, and Archaeological Survey Report.

APE Mapping, Talbot Street Slope Restoration, San Diego, CA

As Principal-in-Charge, Ms. Lindsay oversaw this project involving preparation of an APE map and searches of paleontological resource records at the San Diego Natural History Museum and the Natural History Museum of Los Angeles County. UltraSystems provided paleontological monitoring during exploratory borings and test pits to obtain soil property information required to design the retaining wall.

Mitigated Negative Declaration (MND), Canyon Springs Specific Plan, Riverside, CA

Ms. Lindsay served as Principal-in-Charge, providing QA/QC for the preparation of a Mitigated Negative Declaration for the City of Riverside. UltraSystems provided: a Phase I Environmental Site Assessment (ESA), Traffic/Circulation Study, and an Air Quality Assessment. The proposed development consists of approximately 85 acres of retail, office, and residential uses to be located at the southeast corner of State Highway 60 and Interstate 215 within the City of Riverside.

Environmental Impact Report (EIR), Falcon Ridge Town Center, Fontana, CA

Serving as Principal-in-Charge, Ms. Lindsay provided QA/QC for preparation of a focused EIR for the development of a 31.5-acre sub-regional shopping center. The center would provide a range of commercial and retail services to nearby neighborhoods. The site is within the north portion of the Westgate Specific Plan area, a 954.1-acre master-planned community integrating a business park, commercial, retail, offices, and 2,457 homes.

Section 404 Individual Permit Application, Residential Development, Canyon Lake, Riverside County, CA

Ms. Lindsay served as Project Manager for the preparation of the Section 404 Individual Permit application, public notice and Section 401 Water Quality Certification for development of 133 homes. UltraSystems conducted site review with the U.S. Army Corps of Engineers, developed mitigation measures for impacts to the streambed, and negotiated conditions of approval for construction.

Technical Studies, California High-Speed Rail Project, Anaheim to Los Angeles Section, Orange and Los Angeles Counties, CA

Ms. Lindsay served as UltraSystems' Principal-in-Charge for this project, providing QA/QC for the team's work. She coordinated and directed the activities of UltraSystems' professional staff members while working collaboratively with STV, Inc., the High-Speed Train Authority and FRA, to produce a comprehensive environmental document.

Environmental Impact Report (EIR) US-395 Realignment, San Bernardino County, CA

Ms. Lindsay was the Principal-in-Charge and Contractual Administrator for the UltraSystems' contract for this multi-year realignment project. Ms. Lindsay provided QA/QC review of all technical studies and reports in support of the environmental document, including those prepared by subconsultant partners. UltraSystems provided environmental documentation and all supporting technical studies on behalf of San Bernardino Associated Governments (SANBAG) for the proposed realignment of US-395 from I-15 in Hesperia to north of Desert Flower Road in Adelanto and for a potential alignment of the proposed High Desert Corridor (HDC) between US-395 and the proposed realignment of US-395. UltraSystems was responsible for the preparation of a Program EIR on a maximum of four alternative alignments. The Program EIR would be based on the conceptual plans prepared by Caltrans. These alignments would all assume a right-of-way width of 360 feet. A minimal 500-foot wide swath around the centerline, including the footprint of potential interchanges, and would be examined for purposes of the EIR. Because of the multiple alternatives involved, the total length of the corridor for the Program EIR investigation could total up to 60 center line miles.

Technical Studies, Los Angeles County Development Projects, CA

Ms. Lindsay served as an Assistant Project Manager responsible for several asset-management development projects. These included site review, economic analysis, entitlement processing, environmental review, and overall project coordination on over 15 industrial, commercial, and residential housing projects throughout the County of Los Angeles. Some of those projects included: Del Air, a 30-acre mixed-use business park consisting of the development of 1.5 million square feet; Perez Place, a 6-acre light industrial site; Lennox, a 10-square mile Revitalization Strategy; and Sunol, a 1.5-acre site developed into 75 low-income senior housing units.

ER/EIS for Improvements to Interstate 215, San Bernardino and Riverside Counties, CA

Ms. Lindsay was Principal-in-Charge for this project to produce technical studies for circulation and land use impacts for an ER/EIS assessing the proposed widening of approximately 17 miles of existing urban freeway as well as improving associated overcrossings, interchanges, and adjacent roadways.

Los Angeles County Metropolitan Transportation Authority (Metro) Addendum/Modified Initial Study for Access Road to the Tillman Sewage Septage Receiving Station, Los Angeles, CA

Ms. Lindsay was Principal-in-Charge for this project involving an Addendum/Modified Initial Study for the development of a new access road to the City of Los Angeles Tillman Sewage Septage Receiving Station and Air National Guard facility. The MTA's San Fernando Valley Bus Rapid Transit (BRT) Project required this access. The new access road would be on land owned by the U.S. Army Corp of Engineers (Corps), and the project required the conveyance of several properties between the MTA, the Corps, and the City of Los Angeles.

Initial Study/Negative Declaration, Bolsa Chica Channel Constructed Wetlands Project, Orange County, CA

Ms. Lindsay was Principal-in-Charge for this project for the Orange County Resources and Development Management Department. As of the proposed project required U.S. Navy authorization, UltraSystems coordinated extensively with the U.S. Naval Weapons Station in Seal Beach to prepare environmental documentation addressing its concerns. The County wanted to evaluate potential environmental impacts from construction and operation of a wetlands treatment system to divert and treat urban runoff (dry weather flow) from the Bolsa Chica Channel. 2/11/05-5/31/06

ER/EIS, Ballona Lagoon Improvement Project, Marina del Rey, CA

Ms. Lindsay served as Principal-in-Charge for preparation of surface vehicle and ship traffic analyses and a preliminary movable bridge conceptual study for a proposed small craft harbor development perpendicular to the Marina del Rey Main Channel.

Addendum to Revegetation Plan, Soledad Canyon Revegetation, Alhambra, CA

Ms. Lindsay supervised the preparation of an addendum to an existing revegetation plan; bridge construction monitoring, and approached roadway for compliance with the revised revegetation plan. UltraSystems' staff prepared the biological resources survey report to identify the location of sensitive plant species, conducted a pre-construction conference with the contractor, and flagged plant species populations in the field. UltraSystems also conducted long-term monitoring and weeding over three years, submitting the final reports to the California Department of Fish and Game and the U.S. Army Corps of Engineers.

Mike Lindsay

Operations Manager

Air Quality and Noise Impact Scientist, QA/QC and Document Control

Education

- B.S. Electrical Engineering and Technology, California Polytechnic University, Pomona, CA
- A.A. Mathematics, Saddleback College, Mission Viejo, CA

Certification and Patent

- LabVIEW Developer Certification, AutoCAD, SolidWorks, Mathcad, MATLAB
- Patent Co-Holder, U.S. Patent 7,101,487: "Magnetorheological Fluid Compositions and Prosthetic Knees"

Professional Affiliation

- Southern California Engineering Technologists Association (SCETA)

Computer Skills

- Languages: C, C++ , FORTRAN, VISIO, Java
- Applications: Microsoft Office Suite, Lotus Notes, Adobe Suite, ArcView 10
- Design: LabVIEW, PADS, PowerPCB, OrCAD, SolidWorks, AutoCAD, MathCAD
- Modeling: TNM 2.5, URBEMIS 2007, CalEEMod, EMFAC2007, OFFROAD2007, CALINE4, EDMS 5.1.3

Professional Experience

Mike Lindsay is an environmental engineer with UltraSystems' Air and Noise Group. In that capacity, he prepares air quality impact analyses, either as inputs to CEQA documents (such as EIRs) or as stand-alone reports. He is proficient in the air emissions inventory software package URBEMIS 2007, as well as its core programs, EMFAC2007 (a model for on-road vehicle emissions) and OFFROAD2007 (a model for off-road vehicle emissions).

Mr. Lindsay is responsible for noise impact analyses for CEQA documentation and other purposes. He specializes in the design and execution of ambient noise sampling programs and in using traffic noise models, including TNM 2.5. His noise services also include computation of both project and existing ambient noise levels for use in noise assessments under CEQA and NEPA. Additionally, Mr. Lindsay specializes in EMI / EMF and light / glare measurement, modeling and analysis.

Mr. Lindsay is also a dynamic R&D engineer and technologist with 16 years of experience and a history of improving P&L by developing innovative engineering solutions and by generating new business. He is a strategic thinker with record of enhancing products, systems and processes in multiple environments and industries, including medical devices (co-holder of a patent), energy, transportation, and logistics.

SELECT PROJECT EXPERIENCE

Compliance Monitoring Services, Sunshine Canyon Landfill, Los Angeles, CA

Working with Los Angeles County, the City of Los Angeles and Republic Services, the landfill operator, Mr. Lindsay is providing permit condition compliance services for the Sunshine Canyon municipal landfill. He is focused on air quality issues and mitigation measures, such as odor, particulate matter (PM10), flare efficiency and biogas collection systems. There are about 400 permit compliance issues that the UltraSystems multi-disciplinary team is tracking, and Mr. Lindsay is helping to develop a compliance database to aid various regulatory agencies make sound decisions regarding landfill operations. In order to help assess the light and glare impacts from a newly installed biogas flare, Mr. Lindsay developed an ambient and post-construction light measurement protocol to help delay concerns of the adjacent residential neighborhood. He also makes

bimonthly site visits to assess permit conditions, writes the air quality monthly report and finalizes pertinent GIS measurement location maps and tables.

Permitting Compliance, Imperial Solar Energy Center South, Imperial County, CA

The Imperial Solar Energy Center South (ISECS) project involves the construction of almost 1000 acres of photovoltaic solar arrays, an electrical substation and a 1.6-mile-long transmission line in Imperial County. Mr. Lindsay is responsible for project coordination, report presentation, document control and quality assurance for this large-scale solar development. As the primary document controller, Mr. Lindsay's duties include providing credential-based project file access for remote users via our virtual private network (VPN), and establishing file naming conventions for the thousands of project files. Mr. Lindsay also provides the top-level quality assurance for all client-delivered documents.

NEPA and CEQA Documentation, Los Angeles Regional Interoperable Communications System (LA-RICS), Los Angeles County, CA

Mr. Lindsay is part of the UltraSystems team that is preparing technical studies and NEPA and CEQA documentation toward the construction of LA-RICS, an \$800-million emergency communications system due to be operational in 2016. LA-RICS will provide a highly coordinated emergency communications system to all first-responders to natural and man-made disasters throughout Los Angeles County. The company's technical team of more than 30 professionals is assessing the potential environmental impacts from the construction of approximately 366 proposed communications towers in urban and rural areas. UltraSystems' studies include: aesthetics and visual resources, land use, socioeconomic, human health and safety, air quality/greenhouse gas, noise, infrastructure (services and utilities/site access); historic and cultural resources, geology and soils, and biological resources. Mr. Lindsay is providing top-level quality assurance, logistics support, document control and database design for this important project.

Air Quality and Noise Analysis, Whiteman Airport Master Plan Update, Pacoima, CA

Mr. Lindsay completed extensive air quality analysis using the URBEMIS 2007 emissions model, including 12 separate construction phases, each with its own set of equipment, traffic counts and overlapping phase lengths. He created all of the site noise measurement reports, graphs and tables that established the baseline ambient noise levels. Mr. Lindsay also provided Quality Assurance (QA) on the noise analysis, and researched potential noise mitigation measures for airports.

Sand Canyon Wind Farm, Kern County, CA

The proposed project consists of approximately 100 acres within the Kern County General Plan. The project entails the installation of up to 17 wind turbines, producing up to 40 megawatts of wind power. The facility would include wind turbines, two substations or switchyards, above and below-ground transmission lines, dirt access roads, and four meteorological towers. Mr. Lindsay is part of the UltraSystems team that is preparing CEQA documentation for the project. He is responsible for the air quality and noise section of the EIR.

Air Quality and Noise Impact Memoranda, Rancho Diamante Specific Plan, Calexico, CA

A proposed 1,042-acre residential and commercial development northeast of Calexico, California needed its environmental analysis updated due to a two-year project delay. Mr. Lindsay's specific assignment was to compare the existing regulatory analysis with ones performed by UltraSystems for two neighboring projects, to ensure that all three were consistent; re-do the construction emission calculations with the URBEMIS 2007 emissions model; and re-do the traffic noise impact modeling using updated traffic data and the Federal Highway Administration's Traffic Noise Model (TNM) version 2.5. Extensive TNM analysis was performed due to the large number of roadways that surround the project. Noise predictions were made for future years 2015 and 2035, both with and without the proposed project. Mr. Lindsay included sound wall noise attenuation modeling in his analysis.

Air Quality and Noise Technical Studies, Calexico Landfill, Calexico, CA

Calexico Solid Waste Site is a Class III landfill owned and operated by the County of Imperial Department of Public Works. The primary purpose of the project was to address the directives issued by the Imperial County Department of Environmental Health regarding problems with the landfill's operational permit. Mr. Lindsay and the UltraSystems air and noise group prepared stand-alone technical assessments for the topical issues relative to air quality and noise impacts. The air quality study addressed effects of the proposed project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthful pollutant concentrations. This was of special concern because two residences were located within 1,000 feet of the site's boundary. For the noise analysis Mr. Lindsay conducted on-site measurements to establish existing ambient noise levels for the landfill's surrounding area. Through careful analysis it was concluded that construction noise impacts would be mitigated to a less-than-significant level upon implementation of mitigation measures, and that operational noise impacts due to project-generated traffic would not result in a significant increase in ambient noise levels at project build-out. Therefore no mitigation was necessary.

Air Quality and Noise Impact Analysis, Proposed Holiday Inn Hotel, Imperial, CA

This project includes a Holiday Inn hotel, two restaurants and an office building on a 25-acre site in Imperial, California. Mr. Lindsay used the URBEMIS 2007 emissions model, along with traffic projections, to estimate air pollutant emissions from construction and operation of the proposed project. Mr. Lindsay also performed specialized noise modeling for each floor of the hotel to ensure that future occupants would not be impacted by the expected growth of traffic noise. Extensive TNM analysis was applied utilizing custom roadway configuration inputs, including existing sound wall designs. After it was discovered that a particular residence close to the proposed project would be impacted by noise levels higher than the City's regulations allow, Mr. Lindsay presented a sound wall design analysis which offered the builder a cost-effective solution.

Air Quality and Noise Impact Analysis, Pico Park, Pico Rivera, CA

The proposed project comprise the demolition and reconstruction of an existing public park that will include sports fields, playgrounds, restrooms, concession facility, storage and maintenance facilities, picnic area, lighting and parking lots. Mr. Lindsay served as an Air Quality and Noise Impact Scientist for a Mitigated Negative Declaration for the Pico Park Master Plan. The project involves 14.5 acres of existing park and adjacent school grounds. For the noise analysis, Mr. Lindsay identified sensitive receptors, measured existing ambient noise levels, and determined that the project would produce a less than significant noise impact with recommended mitigation measures.

Noise Impact Analysis, Hotel Angeleno, Los Angeles, CA

Kiewit Infrastructure West Company is currently adding a 10-mile high-occupancy vehicle (HOV) lane on the northbound I-405 between the I-10 and US-101 freeways. The Hotel Angeleno sits adjacent to the Sunset Avenue Bridge, which was scheduled for partial demolition and reconstruction. In order to evaluate the noise impact of demolition and pile driving, Mr. Lindsay conducted specialized frequency-specific noise measurements on the interior and exterior of the hotel to assess the existing attenuation provided by the building's structure and room features. He prepared a detailed noise report that included a sound measurement database for all the frequency-noise charts, a frequency distribution data table, and a noise attenuation-by-frequency table. Mitigation measures were also explored, with predicted results.

Air Quality Analysis, California High-Speed Rail, Los Angeles to Anaheim Corridor, Los Angeles and Orange Counties, CA

Mr. Lindsay was part of the team that prepared technical documents to support the California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) analysis. Mr. Lindsay identified the potential EMF sources and sensitive receptors, and designed and implemented a field measurement program to characterize existing exposures at representative EMF-related sites along the right-of-way and proposed power lines. Mr. Lindsay also assisted in preparing the air quality technical study for the project.

Heacock Street Bridge Replacement Project, Moreno Valley, CA

The City of Moreno Valley plans to replace a portion of the Perris Valley Storm Drain and an overlying two-lane bridge with a newly configured storm drain and a four-lane bridge. Mr. Lindsay assisted with preparing an air quality technical report for submittal to the California Department of Transportation. He was also responsible for preparing a "PM Conformity Hot Spot Analysis Project Summary Form" for submittal by the Riverside County Transportation Commission to the Transportation Conformity Working Group, so that the project could be certified not to be a "Project of Air Quality Concern" (POAQC).

Draft Environmental Impact Report (ER), Proposed Target Store, San Clemente, CA

Mr. Lindsay served as an Air Quality and Noise Impact Specialist for a Final ER for a proposed 142,000-square-foot Target retail store, recently approved by the San Clemente City Council. He was a member of a six-person team of UltraSystems technical specialists who assessed the project's potential impacts on the environment. Following the public comment period, the Final ER identified project impacts such as increased traffic, and impacts on biological resources, aesthetics, noise, air quality, soils and geology.

Air Quality Impact Analysis, Proposed Triangle Elementary School, Anaheim, CA

Mr. Lindsay used the URBEMIS 2007 emissions model to approximate air pollutant emissions from both short term and long term sources of a proposed elementary school in Anaheim's "Platinum Triangle" area. He also conducted a localized significance analysis to determine exposures of nearby populace to various pollutants from on-site sources during construction.

Air Quality Impact Analysis, Proposed Upland Manor Senior Housing Project and Upland Brethren in Christ Church Expansion, Upland, CA

Mr. Lindsay used the URBEMIS 2007 emissions model, along with traffic projections, to estimate air pollutant emissions from construction and operation of two neighboring facilities: a new independent and assisted living residential complex for senior citizens and an expanded church and preschool. He also conducted a localized significance analysis to determine exposures of nearby residents to nitrogen oxides, carbon monoxide and particulate matter from on-site sources during construction.

Application for Permit to Construct Soil Vapor Extraction System, Modesto, CA

Mr. Lindsay helped prepare an application to the San Joaquin Valley Air Pollution Control District for permits to construct a soil vapor extraction (SVE) system and associated air pollution controls.

Health Risk Assessment, Los Angeles Unified School District School Sites, Los Angeles County, CA

The Los Angeles Unified School District (LAUSD) required a quantitative health risk assessment to determine the risk to children attending a proposed new school. Mr. Lindsay conducted field surveys to obtain data for dispersion modeling, including locations and equipment characteristics for toxic air contaminant emission sources surrounding the school.

Lighting Systems Design for Bikes, Lindsay Systems, Mission Viejo, CA

Mr. Lindsay also implemented innovative engineering solutions for various projects as a contract design engineer. These included potential improvements in motorcycle safety by bolstering taillight effectiveness through design of a dynamic / adaptive brake light strobe; and by designing and building an innovative microprocessor / lithium-ion lighting system with remote control capability for mountain bikes. Extensive light level measurements were taken and analyzed, maximizing the effectiveness of each system.

Elizabeth Ashley Kempton

Senior Biologist

Education

- Ph.D., Botany, Claremont Graduate University, Claremont, 2010
- B.S., Biology, California State University, San Bernardino, 2003

Professional Certifications, Trainings, and Permits

- Introduction to Surveying, Monitoring and Handling Techniques Workshop, Desert Tortoise Council, 2012
- 38-hour Army Corps of Engineers Wetland Delineation Training, Certificate No. 6425, 2012
- California Rapid Assessment Method (CRAM) Training, 2012
- California Department of Fish and Game Plant Voucher Collection, Permit No. 2081(a)11-40-V
- Geographic Information Systems (GIS) Certificate, California State University, San Bernardino, CA, 2004

Professional Affiliations

- Southern California Botanists, 2012 Board Member
- California Native Plant Society
- American Society of Plant Taxonomists
- Society for Conservation Biology

Professional Experience

Dr. Kempton is responsible for tasks including biological surveys, report preparation, client and agency coordination, conservation and management of natural resources, agriculture, forestry, horticulture, and biotechnology. Her regional field experience covers the western United States through northern Mexico. Dr. Kempton also possesses several years of experience in teaching, presentations, and publishing in the field of botany.

SELECT PROJECT EXPERIENCE

Habitat Restoration, Warm Springs Rehabilitation Center Project, Los Angeles County Department of Public Works, Lake Hughes, CA

Dr. Kempton is managing a riparian and transitional upland restoration project adjacent to Elizabeth Creek near the Los Angeles County Health and Human Services Warm Springs Rehabilitation Center. Dr. Kempton is responsible for coordinating team efforts, field inventories, client coordination, and reporting associated with the habitat monitoring program. The project has involved restoration efforts including planting seeds and container-grown plants, removal non-native plants, recording detailed field data, and evaluation of restoration in light of success criteria.

Pine Canyon Road Expansion, Lake Hughes, CA

Dr. Kempton is managing biological surveys and reporting associated with a road expansion project associated with Pine Canyon Road, Lake Hughes, California. Dr. Kempton is responsible for managing and coordinating field efforts and quality control of final reports, as well as leading botanical surveys in the field. Habitat assessments and jurisdictional delineations have been completed for the project, and protocol-level surveys for several species are anticipated to be performed this year.

NEPA and CEQA Documentation, Los Angeles Regional Interoperable Communications System (LA-RICS), Los Angeles County, CA

Dr. Kempton is responsible for managing the preparation of biological portions of a combined EA/ES for the Los Angeles Regional Interoperable Communications System (LA-RICS). The project includes detailed analyses of impacts to biological resources at hundreds of disjunct locations within Los Angeles County, across a wide range of habitats, and ecologically sensitive or important areas.

ADDITIONAL EXPERIENCE

Senior Botanist, Sapphos Environmental, Inc., Pasadena, CA

Dr. Kempton served as senior botanist (and Senior Resources Coordinator) responsible for leading special-status plant surveys and plant community mapping surveys; writing proposals and contract amendments; managing field schedule and budgets for botanical portions of projects; and coordinating with subcontractors. She authored various resource management plans (i.e., habitat restoration, mitigation, habitat conservation) and biological portions of technical documents in compliance with federal (e.g., NEPA, ESA), state (e.g., CEQA, CESA), and local environmental regulations. In addition to work on botanical projects, Dr. Kempton also participated in surveys and habitat assessments for other conspicuous animals (i.e., desert tortoise, burrowing owl) of the Mojave Desert.

Rare Plant Botanist, Rancho Santa Ana Botanic Garden, Claremont, CA

Dr. Kempton served as rare plant botanist writing and updating numerous conservation assessments (i.e., reviews of taxonomy, distribution, status, etc.) for many plant species of special concern distributed within southern California. She also authored a detailed conservation assessment for Mosquin's Clarkia (*Clarkia mosquinii*).

Senior Botanist, URS Corporation, Santa Ana, CA

Dr. Kempton served as senior botanist conducting rare plant surveys and plant community mapping surveys; performed regular ecological and monitoring at habitat restoration sites; authored plant survey reports for compliance documents; and edited/reviewed environmental documents (e.g., records, plans, permit applications, and reports) for compliance with federal, state, and local environmental regulations.

Pre-doctoral Fellow and Research Assistant, Rancho Santa Ana Botanic Garden, Claremont, CA

During doctoral studies Dr. Kempton received a pre-doctoral fellowship to complete phylogenetic analyses of molecular (genetic) and morphological data as well as dissertation writing. Her dissertation project concerned *Eriogonoideae* s.s. (a.k.a. wild buckwheats [e.g., *Eriogonum*] and spineflowers [e.g., *Chorizanthe*, *Oxytheca*, *Dodecagema*] of Polygonaceae); over 165 field-collected specimens were included and multiple phylogenetic analyses were performed in order to evaluate the taxonomy of the group. A subproject concerned phylogenetic and correlation analyses of population-level data (microsatellite-based ISSRs) and GIS-based ecological data (precipitation and temperature) in order to assess infraspecific relationships between taxa of *Eriogonum* section *Latifolia*.

Also during doctoral studies Dr. Kempton served as research assistant and was responsible for various molecular laboratory and research duties for plant systematics projects. Projects included the following: (1) Revisionary systematics of *Passiflora* subgenus *Decaloba*; (2) Sequencing of chloroplast and nuclear regions in the genus *Iris*; (3) Phylogenetics of the *Tetramerium* lineage (Acanthaceae); (4) Microsatellites in *Sclerocactus* (Cactaceae); (5) Low copy nuclear markers in *Sclerocactus* (Cactaceae); (6) The Trinity Project (Herbarium, Seed and Living Collections); (7) Microsatellite cloning for mapping in *Argyroxiphium* (Asteraceae).

Assistant Botanist, Rancho Santa Ana Botanic Garden, Claremont, CA

Dr. Kempton served as assistant field botanist assisting with rare plant surveys and rare plant population census monitoring within Pacific Southwest Region 5 National Forests.

Intern, Student Conservation Association, Boise, ID

Dr. Kempton served as intern performing plant and ecological surveys in Southern California and Southern Wyoming for a fire-fuels and vegetation mapping project.

GIS Intern, Santa Ana Watershed Project Authority, Riverside, CA

Dr. Kempton served as intern conducting Geographic Information Systems (GIS) data mapping and analysis.

Botany Research Intern, Rancho Santa Ana Botanic Garden, Claremont, CA

Dr. Kempton served as student intern collecting comparative micro-anatomy and morphology data for the systematic study of Hawaiian silverswords (*Dubautia* spp.) (Asteraceae).

Mina Rouhi

Senior Planner/GIS Analyst

Education

- Master of Urban and Regional Planning, California State Polytechnic University, Pomona, CA, 2010
- B.A., Psychology and Social Behavior, University of California, Irvine, CA, 2003

Coursework

- | | |
|---|--|
| <ul style="list-style-type: none"> ▪ Urban Growth Management (CEQA) ▪ GIS ▪ Graduate Planning Studio ▪ Land Use Planning and Design ▪ Graphic Communication and Design ▪ Environmental Policy for Planning ▪ Environmental Factors in Planning ▪ Urban and Regional Planning Research Methods | <ul style="list-style-type: none"> ▪ Social and Political Planning Policy ▪ Legal Foundations of Urban and Regional Planning ▪ Planning Administration and Professional Practice ▪ Policy Analysis, Implementation, and Evaluation ▪ Economic, Social, and Environmental Context ▪ Redevelopment |
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Professional Certificates, and Affiliations

- Geographic Information Systems, Certificate, California State Polytechnic University, Pomona, 2012
- Member of SoCal URISA (Southern California Chapter Urban and Regional Information Systems Association)

Professional Experience

As a Senior Planner for UltraSystems, Ms. Rouhi assists in evaluating project environmental impacts for significance by utilizing thresholds set forth in public documents. She has assisted in the preparation of environmental documents, including Initial Studies and Preliminary Environmental Studies based on the provisions of the California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA). In her role with UltraSystems, she has acted as a liaison between environmental monitors and project management. Her environmental impact research extends to land use, socioeconomic impacts, rail transit ridership, and sensitive receptors. In addition, she has prepared maps utilizing ArcGIS in order to illustrate potential project impacts to sensitive environmental concerns. In her role as GIS Analyst, Ms. Rouhi serves as task manager to GIS staff technicians, which requires in-depth technical knowledge, clear communication, and strong project management skills. Her Geographic Information Systems (GIS) experience extends to data management, cartography, ArcGIS extensions, and geoprocessing tools. Specifically, Ms. Rouhi's GIS skills include file conversion from various data sources (i.e. AutoCAD, Google Earth, Coverage) to GIS; manipulating and digitizing data including parcels; utilizing Census socioeconomic data for graphical presentation; and utilizing geoprocessing tools to analyze project impacts. Her responsibilities include project management, data acquisition, cartographical analysis and map creation.

SELECT PROJECT EXPERIENCE

Imperial Solar Energy Center South Permitting Compliance, Imperial County, CA

The Imperial Solar Energy Center South (ISECS) project involves the construction of almost 1000 acres of PV Solar arrays, a substation, and a 1.7-mile long transmission line in Imperial County. Ms. Rouhi assists with project coordination, report coordination, and GIS mapping for this 1000 acre solar development. As a Compliance Coordinator, Ms. Rouhi's responsibilities included researching Project permit conditions for various compliance measures, building compliance matrices, and acting as a meeting recorder. She also acted as a liaison between field staff, internal staff, and the client to ensure that all Project documents were circulated accordingly. In addition, Ms. Rouhi is the GIS Task Manager who she manages the GIS geodatabase for the ISECS project. Ms. Rouhi's role in GIS includes mapping of cultural and biological resources within the project area (i.e. Burrowing Owls and noxious weeds). In addition, she converts multiple AutoCAD datasets for utilization in ArcGIS and provides project figures for various reports and presentations.

Imperial Solar Energy Center West, Imperial County, CA

The Imperial Solar Energy Center West (ISECW) project involves the construction of almost 1,130 acres of PV Solar arrays, and approximately 5.6-mile-long, 230-kilovolt, electrical Transmission Interconnection Line on federal and private lands in Imperial County. Ms. Rouhi assists with project coordination, report coordination, and GIS mapping for this solar development. As a Compliance Coordinator, Ms. Rouhi's responsibilities included researching Project permit conditions for various compliance measures, building compliance matrices, and acting as a meeting recorder, and managing the compliance database. She also acts as a liaison between field staff, internal staff, and the client to ensure that all Project documents were circulated accordingly. In addition, Ms. Rouhi is the GIS Task Manager who manages the GIS geodatabase for the ISECW project. Ms. Rouhi's role in GIS includes mapping of cultural and biological resources within the project area. In addition, she converts multiple AutoCAD datasets for utilization in ArcGIS and provides project figures for various reports and presentations.

Wistaria Solar Project, El Centro, CA

Ms. Rouhi served as a GIS Task Manager/GIS Analyst for this 3,600 acre project southwest of El Centro, California. She utilized ArcGIS to prepare field maps for archaeological and paleontological survey for over 30 parcels. In addition, she assisted in preparing a spatial analysis to regionally assess Burrowing Owl behavior in the Imperial Valley based on field surveys from seventeen Environmental Impact Reports in the region. As a part of this assessment, she assisted in preparing a document discussing the methodology and findings of the GIS spatial study.

Sunshine Canyon Landfill, Sylmar, CA

As part of the UltraSystems team working on this major ongoing monitoring engagement, Ms. Rouhi serves as a GIS Analyst/GIS Task Manager and develops figures to support the monthly compliance reporting to the County and City of Los Angeles. In the process, Ms. Rouhi manages the GIS geodatabase and converts the GPS data collected for photographed viewpoints into GIS datasets to be utilized for project figures. This project straddles two jurisdictions, 542 acres of which are located in unincorporated County areas and 494 acres in the City.

NEPA and CEQA Documentation, Los Angeles Regional Interoperable Communications System (LA-RICS), Los Angeles County, CA

Ms. Rouhi served as a GIS Task Manager/GIS Analyst for the LA SafetyNet project and assisted in the environmental analysis for each LA-RICS project site through graphic representation. GIS services were provided through mapping potential environmental concerns for aesthetics, biological resources, cultural resources, socioeconomic resources, human health and safety, land use and water resources. Specifically, Ms. Rouhi assisted with the following: supervising GIS staff; graphically portraying each LA-RICS project site onto aerial imagery; calculating environmental impacts posed by each project site; digitizing field surveys; and graphically presenting the information for visual interpretation of the project EA and technical appendices.

Environmental Assessment (EA) and Technical Studies, Biggs Cardosa Associates, Huntington Bridges Reconstruction Project, Huntington Beach, CA

Ms. Rouhi managed the GIS geodatabase for this project, which involved three bridge reconstructions in vicinity to important sensitive habitats. As a GIS Analyst/GIS Task Manager, Ms. Rouhi converted engineered AutoCAD drawings into a GIS data format, which was utilized to visually illustrate the project impact analyses in support of the Technical Studies of the EA.

Glendale Avenue – Hyperion Boulevard BR and Viaduct Complex Improvement Project, Los Angeles, CA

Under UltraSystems' subcontract with MGE Engineering, Inc., Ms. Rouhi utilized ArcGIS to prepare maps illustrating land use, aesthetics, and biological impacts for a historical bridge structure located in the City of Los Angeles with Caltrans right-of-way. The project was in conjunction with the California Department of Transportation and the Federal Highway Administration, and proposed to modify the Viaduct Complex to correct existing geometric and operational deficiencies, address pedestrian issues, meet current seismic performance

standards, and restore original design details to the railings. Ms. Rouhi also utilized ArcGIS to analyze parcel ownership in proximity to the project site for the purpose of notice distribution of the ISEA.

California High-Speed Rail Project, Anaheim to Los Angeles Section, Orange and Los Angeles Counties, CA

As a GIS Analyst, Ms. Rouhi assisted the UltraSystems project team in spatially analyzing the compatibility of the proposed development with the existing land uses. She mapped the potential impacts of the proposed project for both land use and aesthetics for the 13 jurisdictions located along the alignment using ArcGIS. In addition, she utilized her GIS knowledge and experiences to analyze data and prepare maps for the Community Impact Assessment, Land Use, Aesthetics, Hazardous Materials, and Cultural Resource sections of the EIR/EIS document. Specifically, Ms. Rouhi's GIS skills included the following: converting AutoCAD data to ArcGIS; utilizing editing tools to manipulate data including parcels; inputting socioeconomic data into GIS formatted data; and utilizing geoprocessing tools to analyze project impacts.

Lompoc Wind Energy Project, Santa Barbara County, CA

UltraSystems provided Biological Resource Analysis and Monitoring services for a proposed Wind Farm, near the City of Lompoc. This task required focused surveys of sensitive species listed in the California Natural Diversity Database and Mitigation and Monitoring Plans. Ms. Rouhi assisted senior staff in overseeing mapping and spatial analysis using GIS. Specifically, the GIS tasks included the following: utilizing field data to digitally input the context using GIS; converting engineered AutoCAD drawings to GIS format; projecting spatial data accurately; inputting GPS data into GIS format. This mapping and analysis facilitated field work, environmental analysis and presentation of data within technical documents.

Uptown Orange Residential Project IS/MND, Orange, CA

As a GIS Analyst, Ms. Rouhi managed the GIS geodatabase, which aids in assisting with the preparation of an Initial Study and Mitigated Negative Declaration (MND) in compliance with the California Environmental Quality Act (CEQA) to evaluate the environmental effects of constructing and operating a mixed use residential complex in the City of Orange, CA. Ms. Rouhi converted engineered AutoCAD drawings into a GIS data format, which was utilized to prepare project location figures. She also used ArcGIS digitizing tools to identify construction haul routes during grading and earthwork activities.

Recovery Act: Edward Byrne Memorial Justice Assistance Grant (JAG), Los Angeles, CA

Ms. Rouhi is part of the UltraSystems team preparing technical studies and NEPA and CEQA documentation toward the construction of five communications sites throughout the City of Los Angeles' jurisdiction. The American Reinvestment and Recovery Act (ARRA) Justice Assistance Grant (JAG) is a public safety grant being utilized to develop and improve existing City communications sites. As GIS Analyst/GIS Task Manager, Ms. Rouhi is responsible for managing the GIS database and mapping project impacts related to land use, aesthetics, and socioeconomics section of the Environmental Assessment. She also assisted in the preparation of the socioeconomic impact section of the EA.

Doheny Hotel ER, Dana Point, CA

The proposed project includes the development of a five-story hotel complex, which will contain 258 guest rooms, business/conference rooms, a restaurant, a rooftop bar/lounge, rooftop pool, deck area, and an underground off-site parking. As GIS Analyst for the Doheny Hotel, Ms. Rouhi utilized ArcGIS geoprocessing tools to prepare land use impact maps as well as project location figures. She also managed the GIS geodatabase and coordinated with City staff for data acquisition.

Sunrise Powerlink Project, San Diego County, CA

UltraSystems provided biological mitigation monitoring services on behalf of Total Transportation Services Inc. (TTSI) for the Sunrise Powerlink Project. The Project includes the construction of new electric transmission lines between the existing Imperial Valley substation near El Centro in Imperial County to SDG&E's Sycamore Canyon Substation in coastal San Diego County. The entire Project will extend approximately 118 miles on 23 project sites, and traverse private and public lands. Ms. Rouhi served as the Environmental Compliance Coordinator,

acting as a liaison between TTSI, SDG&E, and the biological monitors. Serving as a Senior Planner, Ms. Rouhi assisted in ensuring that project updates and data were forwarded appropriately to biological monitors as well as TTSI. Her responsibilities included attending all environmental team meetings and preparing meeting notes to ensure proper distribution of project information. In addition, she utilized ArcGIS to prepare biological field maps and vegetation maps to assist monitors with their daily activities and pre-construction surveys.

Pine Canyon Road Project, Department of Public Works, County of Los Angeles, CA

As a GIS Analyst, Ms. Rouhi converted engineered AutoCAD drawings into a GIS data format, which was utilized for creating project figures. She managed the file geodatabase, and made project location maps for identification of construction impacts to biological resources within the project vicinity. This process involved the creation of an 84-page mapbook of the 10-mile roadway. In addition, she prepared precision GPS equipment for field surveys to identify sensitive biological resources. She also extracted and processed the GPS data, and utilized it for GIS for map making, and data analysis.

HUD Environmental Assessment, Orange County, CA

UltraSystems is assisting Neighborhood Housing Services of Orange County (NHSOC) in preparing Environmental Assessment (EA) documentation for proposed properties in the Orange County region. The EA preparation allows NHSOC to request funding from the U.S. Department of Housing and Urban Development (HUD) under the Neighborhood Stabilization Program (NSP). NHSOC purchases residential foreclosed properties and rehabilitates them for resale at affordable rates for low-income individuals. As a Senior Planner, Ms. Rouhi is preparing the Environmental Assessment documentation for HUD to achieve categorical exclusions for each acquired property.

Owens Lake Dust Mitigation Project, Phase VII, Inyo County, CA

UltraSystems provided cultural resource monitors on behalf of KDG for Phase 7 of the Owens Lake Dust Abatement Project in Owens Valley, Inyo County. The Owens Lake Dust Abatement Project is being conducted by the Los Angeles Department of Water and Power (LADWP) to mitigate the effects of extreme dust pollution blowing across the Owens Lake bed and into the surrounding region through implementation of Dust Control Measures (DCMs). As a Senior Planner, Ms. Rouhi acted as a liaison between KDG and the cultural resource monitors present on the Owens Valley construction site. She has kept accurate records of monitoring reports, and assisted the cultural resource monitors in their timely submittals of requested information.

Environmental Planning Services, Environmental Impact Report (EIR), Target Store, San Clemente, CA

Ms. Rouhi has served as a Senior Planner for an EIR on a proposed 142,000-square-foot Target retail store, now under consideration by the San Clemente City Council. She was a member of a six-person team of UltraSystems technical specialists who assessed the project's potential impacts on the environment. The Draft EIR has identified project impacts such as increased traffic, and impacts on biological resources, aesthetics, noise, air quality, soils, and geology.

Stephen O’Neil, M.A., RPA

Cultural Anthropology/Archaeology Manager

Education

- M.A., Cultural Anthropology, California State University, Fullerton, CA, 2002
- B.A., Anthropology, California State University, Long Beach, CA, 1979

Professional Registrations and Affiliations

- Register of Professional Archaeologists (No. 16104), 2006
- City of Laguna Beach Environmental Sustainability Committee, Appointed Member (2012)
- Riverside County, CA, Cultural Resource Consultant (No. 259)
- California Mission Studies Association
- Capistrano Indian Council; Board Member
- Orange County Natural History Museum; Board Member
- Pacific Coast Archaeological Society; Past President
- Society of California Archaeology

Professional Experience

Mr. O’Neil has 30 years of experience as an anthropologist in California. He has researched and written on ethnography, archaeology, and history. His supervisory experience includes excavation and survey crew chief and project director of an adobe house excavation. Mr. O’Neil has extensive expertise in Phase I and II Environmental Site Assessments, archaeological resource assessment surveys, salvage operations, and cultural background studies for various ER projects. Mr. O’Neil has worked for several cultural resource management firms, as well as government agencies and Native American entities. The greater part of his work has concerned the ethnohistory of Southern California tribal people. His work has entailed the use of directed and open-ended interviews with Native community members, as well as archival research. Mr. O’Neil has particular expertise in the use of mission records for the study of population and social networks. Mr. O’Neil has archaeological experience in excavation, survey, monitoring, and lab works.

SELECT PROJECT EXPERIENCE

Task Order EP09-024, Archaeological Monitoring, Trancas Canyon Water Main, Los Angeles County, CA

On behalf of Los Angeles County Department of Public Works, Mr. O’Neil conducted monitoring of trenching activities, evaluation of historic artifacts finds, and preparation of the mitigation report. The project is a waterline replacement project, located in Malibu along Pacific Coast Highway, near Trancas Canyon Road and a trail between Paseo Canyon Drive and Morning View Drive. The project included the excavation of a steel waterline extending about 500 feet along Pacific Coast Highway and 500 feet along the trail. A section of a concrete V-ditch was to be removed and replaced in kind. Mr. O’Neil’s tasks included: 1) Providing a monitor during excavation activities and recommending a monitoring schedule for the project for ground-disturbing activities during construction; 2) Contacting Caltrans, should archaeological resources be discovered; 3) Completing day log sheets and providing an archaeology monitoring report to the County.

Cultural Resource Monitoring, Owens Lake Dust Mitigation Phase VII, Inyo County, CA

Mr. O’Neil directed and conducted archaeological field monitoring for Phase 7 of the Owens Lake Dust Abatement Project. Using Dust Control Measures (DCMs), the Los Angeles Department of Water and Power was conducting a long-term program to mitigate the effects of extreme dust pollution blowing across the Owens Lake bed and the surrounding region. Mr. O’Neil served as Principal Cultural Monitor at the Owens Valley construction site during 2009.

NEPA and CEQA Documentation, Los Angeles Regional Interoperable Communications System (LA-RICS), Los Angeles County, CA

Mr. O'Neil was the cultural and historical resources studies team leader, directing five researchers. These studies included coordination of field visits to all 260-plus locations for an archaeologist and/or an architectural historian with agency escorts to observe and record any on-site prehistoric and historic features, performing records and literature searches at archaeology information centers and local archives, contacting local agencies for historically listed structures and districts, coordinate public notices of the project throughout Los Angeles County, consultation with the Native American Heritage Commission and all local tribal organizations, and direct consultation with the California State Historic Preservation Officer (SHPO). This information was compiled by Mr. O'Neil and is used to prepare FCC historical resource forms which were submitted to the SHPO for review. This work was conducted in coordination with FCC and Department of Commerce Historical Resource Specialists.

Archaeological Survey, Widening of Vermont Street Bridge Over U.S. 101, Los Angeles, CA

Mr. O'Neil performed Phase I cultural resources survey and prepared subsequent report, on behalf of the Los Angeles County Department of Public Works. The work was in response to plans by the City of Los Angeles to widen the Vermont Avenue Bridge from the existing 70-foot facility to a 90-foot roadway, providing an additional northbound left-turn lane on Vermont Avenue onto the northbound 101 Freeway. UltraSystems prepared the CEQA documentation for the City and a Caltrans PES and addressed a variety of issues.

Cultural Resources Evaluation for Mitigation Work Plan, Crenshaw Corridor Light Rail Alternative, Los Angeles, CA

On behalf of the Los Angeles Metropolitan Transit Authority (MTA), UltraSystems provided cultural resource services as part of its assignment to assess the potential environmental impacts of route alternatives for the Crenshaw Transit Corridor light-rail line. Mr. O'Neil evaluated construction design to determine scope of mitigation work, archaeological and paleontological monitoring needs, and required budget. This analysis will help complete and gain approval of the project's Environmental Impact Report/Environmental Impact Study. The company's team is responsible for preparing the environmental documents, in coordination with the client and METRO.

Cultural Resources Studies, Whiteman Airport Master Plan Update, Los Angeles County, CA

Mr. O'Neil led cultural resource studies for this project on behalf of the Los Angeles County Department of Public Works. In that capacity, he led a literature review, surface examination of the project area, and report preparation. Whiteman Airport is a 187-acre, publicly owned facility in an unincorporated portion of Los Angeles County near Pacoima. The update to the Airport Master Plan covered proposed improvements for the airport over a 20-year planning period. Mr. O'Neil used his literature review and record searches to determine the existence of previously recorded cultural resources within the project boundaries, plus a one-mile radius. His plans included a records search for archaeological and historical resources at the South Central Coastal Information Center at California State University, Fullerton. He utilized maps, local museums, and the Native American Heritage Commission to obtain more information.

Ethnographic and Historic Research of Traditional Cultural Properties, Liberty Quarry, Temecula, CA

Mr. O'Neil was responsible for an investigation of Luiseño tribal sacred sites and landscape for National Register of Historic Places evaluation as Traditional Cultural Properties. This involved field observation, archival research and interviews. For possible development of a quarry in Rainbow Canyon, Riverside County.

Cultural Resource Updates to ICRMP Management Plans for Camp Roberts, Monterey and San Luis Obispo Counties; Fort Hunter-Liggett, Monterey County, CA; and Moffett Federal Field, San Jose County, CA

Mr. O'Neil completed this project on behalf of the U.S. Army's Fort Hunter Liggett Cultural Resources Management Office. The work involved preparing cultural information for each report concerning prehistory, ethnography, and history of the three regions; evaluation of cultural resource survey reports and archaeological

excavation reports for summary descriptions of all work conducted on the each base; categorization of recorded site types and locations for cultural management plans. Fort Hunter Liggett and Moffett Field required updates of their Integrated Cultural Resource Management Plans (ICRMPs). Past ICRMPs were evaluated and updated with all federal regulations passed the intervening years, and all cultural resource management surveys and archaeological excavations that had been conducted in the past were summarized, evaluated and included. Camp Parks (Alameda County) required an ICRMP drafted based on new research. Co-ordination of these plans was conducted through the Cultural Resource Manager at Fort Hunter Liggett.

Site Assessment of Historic Cemetery, Mission San Juan Capistrano, Orange County, CA

As Ethnohistoric consultant, researched and prepared a report on the history and cultural significance of the original cemetery at Mission San Juan Capistrano for the Executive Director of the Mission San Juan Capistrano. Responsibilities included on site observation and recordation, archival research, and conducting interviews with stakeholders in the historical, Native American and church communities.

Cultural Resources Survey, Ortega Highway Residential Project, Orange County, CA

On behalf of the U.S. Forest Service, Mr. O'Neil served as Crew Chief of Survey for prehistoric, historic and paleontological; material on private and public lands, conducted interviews, prepared subsequent report. The project entailed plans for a housing development in the Santa Ana Mountains on private land within the Cleveland National Forest and a proposed swap of private and federal forest lands. A Phase I cultural resources survey was conducted on both the private and Forest Service lands potentially included in the swap.

Archaeological Class III Inventory and Evaluation for the Travertine Development Project, La Quinta, CA

Mr. O'Neil completed this project, located in Riverside County, for the U.S. Bureau of Land Management (BLM). Mr. O'Neil served as Crew Chief for the Phase I survey of the parcel and crew chief of the Phase II test excavation. He co-authored a report evaluating sites with mitigation recommendations. The Travertine development project constituted a 985-acre parcel along the edge of ancient Lake Cahuilla on a mix of private, BLM, and State of California lands. Prehistoric/Proto-Historic sites along the lake edge would have been impacted, and sites on the boundary of federal forest lands had to be precisely located. Extensive Native American consultation was required.

Cultural Resource Monitoring and Site Evaluation, Los Pinos Youth Conservation Camp, Cleveland National Forest, Orange County, CA

Mr. O'Neil was the crew chief of Phase II prehistoric site excavation to evaluate the size and possible disturbance of CA-ORA-35, an acorn gathering camp in the Santa Ana Mountains. This site is at the County of Orange juvenile probation facilities' Los Pinos Conservation Camp. He prepared the site evaluation report. Following the Phase II work he then monitored all subsequent foundation retrofitting of several bungalows and administrative buildings of the Camp and modification of the water system ponds. As required for working at the youth facility, Mr. O'Neil went through a background check with the County of Orange Probation Department.

Cultural Resource Monitoring, St. Jachim Elementary School, Costa Mesa, CA

He provided monitoring services for mitigation during trenching for utility lines and grading for building expansion, at St. Jachim Elementary School, Costa Mesa, Orange County. He prepared the subsequent report, as well as a site record for the 50+ year old school structure.

Ethnography and Archaeology, Various Projects, Southern CA

Mr. O'Neil has provided excavation, site survey, monitoring, artifact laboratory work and production of technical reports. He has performed or supervised field surveys and cultural background studies for various EIR projects, including Talega Community development (San Clemente, County of Orange), Sunrise PowerLink (Imperial and San Diego Counties), Mojave River Water Replenishment project (San Bernardino County), Dayton Canton Canyon community development (Chatsworth, County of Los Angeles), and various monitoring, survey and site report studies in Riverside, San Bernardino, San Diego and Orange counties.

Ethnohistory of Native American Societies, Marine Corp Base Camp Pendleton, North San Diego County, CA

On behalf of the Santa Barbara Museum of Natural History, Mr. O'Neil conducted research to reconstruct the pattern of villages, where were once located on what is now the U.S. Marine Corps base in Camp Pendleton in North San Diego County. The project's purpose was to determine the cultural affiliation of these populations, tracing modern families with ancestry dating back to those villages. His work included archival research and interviews with members of the Luiseño and Acjachemen tribal groups. Mr. O'Neil ultimately created a database containing more than 4,500 mission register entries. He co-authored two reports on the findings of this research with his colleague, Dr. John R. Johnson.

Ethnographic Consulting, Jet Propulsion Laboratories (NASA), Pasadena, CA

Mr. O'Neil was retained as an ethnographic consultant to JPL's cosmology ("star lore") education project and represented the agency by attending the Sun Dance ceremony on the Navajo Reservation (Pinon, Arizona).

SELECT PUBLICATIONS

- 2012 Dancing to Heaven: Star Traditions of the Acjachemen: Part I. *News from Native California* 25(2):4-5, 36-38
- 2011 A Solstice Marker: the Swansea Petroglyph Site CA-INY-432. *Pacific Coast Archaeological Society Newsletter* 49(3):4-5.
- 2008 Luiseño Traditional Cultural Properties, a NRHP Evaluation. Cultural Resources Component of the Liberty Quarry Environmental Impact Report. Prepared for: Liberty Quarry, Temecula, CA.
- 2007 *Mission San Juan Capistrano Rectory Garden: Cultural - Historical Research on the Old Mission Cemetery, Mission San Juan Capistrano*. Prepared for Mission San Juan Capistrano. Costa Mesa, California: Chambers Company.
- 2006 *The Village of Acjachme: Placement and History. Ortega Highway Realignment ER*. Prepared for ECORP, Santa Ana, California. Mission Viejo, California: SWCA Environmental Consultants.
- 2005 *Report on the History and Significance of the New Cemetery of Mission San Juan Capistrano*. Santa Ana, California: ECORP Consulting, Inc.

SELECT PRESENTATIONS

- 2008a *Socio-political Implications Derived from the Military Report of a Planned Acjachemen Uprising Against Mission San Juan Capistrano, A.D. 1778*. Paper read at the Society for California Archaeology 42nd Annual Meeting, Burbank, California. April 19, 2008.
- 2008b *Ethnographic Associations of Tomato Springs (Usrovana)*. Paper read at the Society for California Archaeology 42nd Annual Meeting, Burbank, California. April 20, 2008.
- 2008c *Landscape Aspects of Rock Art in the Southern Santa Ana Mountains*. Paper read at Rock Art 2008 Symposium, Museum of Man. San Diego, California. November 1, 2008.
- 2001 *The Acjachemen and Mission San Juan Capistrano, 1776-1801: The First Quarter Century of Impact*. Paper read at the 16th Annual California Indian Conference and Gathering, California State University, Sacramento. October 13, 2001.

David M. Smith

Anthropologist

Education

- B.S., Anthropology, University of California, Riverside, 1991

Certifications and Permits

- OSHA HAZWOPER Refresher, 2012
- Certified Orange County Archaeologist, 2003
- Riverside County Certified Archaeologist, 228
- Riverside County Cultural Sensitivity Training, 2007
- San Luis Obispo County, Archaeological Monitor Certification, 2006
- Nevada Antiquities Permit No. 508. Authorized as Principal Investigator and Field Director to work on Federal and State lands in Nevada, 2005
- Arizona Antiquities Act Blanket Permit No. 2005-075bl. Authorized as a Project Director, 2006
- BLM Cultural Resource Permit No. 03-06. Permitted to work as Principal Investigator in Southern California and the California Deserts, 2009

Professional Experience

Mr. Smith has over 24 years of experience as a principal investigator, field director, project archaeologist, and project manager. His project experience has involved Bureau of Land Management (BLM) and Bureau of Reclamation (BOR) managed properties, pipelines, transmission lines, facilities, mines, and parks. He has expertise in NEPA/CEQA compliance involving surveys, inventories, monitoring, testing and data recovery, and Native American consultations. He is a certified archaeologist for Riverside County and has completed Riverside County cultural sensitivity training. He has extensive experience as a field and laboratory supervisor. He has conducted archaeological surveys in CA, NV, and AZ encompassing over 40,000 acres of private and public lands. Agencies include the BLM in AZ, CA, and NV; the Prescott National Forest; the San Bernardino National Forest; the Cleveland National Forest; the Angeles National Forest; the Coconino National Forest; Department of Defense (DoD); the BOR; California State Lands Commission (CLSC), Arizona State Lands; Arizona State Museum; the United States Army Corps of Engineers (USACE); and dozens of municipal, county, and state agencies.

SELECT PROJECT EXPERIENCE

Topanga Forks-Topanga Oaks Water Main Replacement, Los Angeles County Department of Public Works, Los Angeles, CA

Mr. Smith conducted a pedestrian survey of the project area to determine the level of archaeological monitoring that would be required during excavation. The subject of the survey was the segment of Topanga Canyon Road between Old Topanga Canyon Road and Hillside Drive, and the entire length of Topanga School Road.

Target Zone Disturbance Zone Analysis, Indian Springs Valley and Cactus Flats Playas, Nellis Air Force Base, Nevada, United States Army Corps of Engineers

Mr. Smith was the Project Archaeologist and he conducted field surveys in the Indian Springs Valley and Cactus Flat. The NAFB initiated this project in order to streamline the identification of cultural resources in playa areas to quickly clear them for training and ensure compliance with the Cultural Resources Management Plan (CRMP, NAFB, 1998). The Dry Lake Hydrological Disturbance Evaluation Model quantitative process was utilized by the archaeology team to assess whether a cluster of artifacts was an intact, culturally significant site, or merely the eroded remains of several sites, using concepts of geomorphology, hydrology, and statistics, minimizing the need for intense field surveys. Using the findings of surveys in Cactus Flat and Indian Springs, including a database of 60 previously identified sites. The following facts were determined. Firstly, intact sites are rare to non-existent on the playa surface, dunes, and lower bajada, and more common in the upper bajada. Secondly, landform, erosion rates, and the degree of site integrity are statistically correlated in micro-drainage areas. Finally, artifacts are scattered or absent in higher elevations and clustered in lower elevations as they erode downstream coming to rest on the playa and margins. It was recommended that the model be used to guide future investigations, which

should focus away from the playa and margins, toward the bedrock outcrop areas of the bajada. The model can also be used to methodically evaluate the integrity of new archaeological finds.

Class III Cultural Resources Inventory: Cajon Pass Washouts, San Bernardino County, United States Forest Service, United States Army Corps of Engineers

Mr. Smith conducted a Class III Cultural Resources Inventory pursuant to Section 106 of the National Historic Preservation Act. The inventory consisted of a records search, Native American notifications, a pedestrian survey, and a written technical report documenting the results of the inventory.

Archaeological Monitoring, Camp Pendleton

Mr. Smith provided archaeological monitoring during the removal of old drain pipes and the installation of a new drainage system. No archaeological materials were observed during the monitoring.

Angeles National Forest Fork Road over East Fork San Gabriel River Project, Los Angeles County Department of Public Works, Los Angeles County, CA

Mr. Smith conducted a records search at the South Central Coastal Information Center, California State University, Fullerton, and the Angeles National Forest Heritage Resources Center in Arcadia, California. A field permit was issued by the USFS to conduct a survey of the site. Mr. Smith contacted the Native American Heritage Commission which prepared an Archaeological Survey Report. An architectural historian performed a site visit to evaluate bridge characteristics and completed the Caltrans Bridge Evaluation Short Form. The project was approved by Caltrans.

Wistaria Solar Project, El Centro, CA

Mr. Smith served as the crew chief for the archaeological survey of this 3,600 acre project southwest of El Centro, California. Leading a field crew of 6 archaeologists, Mr. Smith conducted a methodical survey of over 30 parcels. Several historic sites were recorded during the survey. These sites consisted of historical residences and a large linear water conveyance system known to have been functional since the 1940's. Mr. Sites recorded all of the sites on Department of Parks and Recreation site record forms.

Cameron Ranch Specific Plan. San Jacinto Mountains. Kojima Development Company, Newport Coast,

UltraSystems Environmental was hired by the Kojima Development Company to prepare an Environmental Impact Report (EIR) and associated studies for the Cameron Ranch Specific Plan Project. The County of Riverside Planning Department is the Lead Agency under the California Environmental Quality Act. Mr. Smith served as the Crew Chief for the archaeological survey of 609 acres near Banning, California. His responsibilities included coordinating survey methods, recording and documenting historic resources greater than 45 years in age.

Testing and Data Recovery at 25 Sites, The Shady Canyon Archaeological Project, City of Irvine, CA

Mr. Smith managed the Phase II Testing and Evaluations for numerous sites and the Phase III Data Recovery for 25 sites located in Shady Canyon, County of Orange, California. Duties included field and laboratory management, Native American reburial coordination, technical writing, and technical editing.

Phase I Cultural Resources Survey, Planning Area 27 (800 acres), The City of Irvine, CA

Mr. Smith conducted a Phase I Cultural Resources Inventory pursuant to Section 15064.5 of the State CEQA Guidelines. The inventory consisted of a records search, Native American notifications, a pedestrian survey, and a written technical report documenting the results of the inventory.

Phase I Cultural Resources Survey, Civic Plaza (5 acres), City of Newport Beach, CA

Mr. Smith conducted a Phase I Cultural Resources Inventory pursuant to Section 15064.5 of the State CEQA Guidelines. The inventory consisted of a records search, Native American notifications, a pedestrian survey, and a written technical report documenting the results of the inventory.

Cultural Resources Assessment: An Archaeological Test Excavation of the Northern Locust of the Historic Village of 'U'UUMAY (CA-RIV-366)

This project consisted of a Phase II Test and Evaluation for a portion of a historic Native American village east of Temecula. Mr. Smith was responsible for overseeing the survey, test excavations, artifact analysis, and report production. Archival studies were performed at the Eastern Information Center, UC Riverside, and the San Bernardino County Museum.

Environmental Impact Evaluation: An Archaeological Data Collection for Archaeological Site Riv-1427, Santa Rosa Plateau

This project consisted of a Phase II Test and Evaluation of a prehistoric site on the Santa Rosa Plateau, overlooking Temecula. Mr. Smith was responsible for overseeing the survey, test excavations, artifact analysis, Native American coordination, and report production. Archival studies were performed at the Eastern Information Center, UC Riverside. A human burial was discovered during testing and was exhumed under the direction of the Most Likely Descendent from the Luiseno Tribe from the Pechanga Reservation in Temecula. The remains were re-buried on the reservation.

Phase I Cultural Resources Survey, CA-Riv-237, The City of Temecula, CA

Mr. Smith conducted a Phase I Cultural Resources Inventory pursuant to Section 15064.5 of the State CEQA Guidelines. The inventory consisted of a records search, Native American notifications, a pedestrian survey, and a written technical report documenting the results of the inventory. The project area contained a large ethnohistoric archeological site, CA-RIV-237, which Mr. Smith re-recorded.

Class III Inventory for the Chemehuevi Casino, Barstow, California. (50 ac.) Bureau of Land Management, Barstow Resource Area

Mr. Smith conducted a Class III Cultural Resources Inventory pursuant to Section 106 of the National Historic Preservation Act. The inventory consisted of a records search, Native American notifications, a pedestrian survey, and a written technical report documenting the results of the inventory.

Phase I Cultural Resources Inventory 80 Acres, Desert Hot Springs, Brian Arnold, Riverside County

Mr. Smith served as the project manager for this inventory. The inventory was conducted to determine whether prehistoric, historic, or paleontological resources were present on the subject property. Initial services included records searches at the San Bernardino County Museum and the Natural History Museum of Los Angeles County to determine if any of those resources were already recorded on the property. Subsequently, Mr. Smith and a Chambers Group paleontologist conducted a pedestrian survey of the property. Mr. Smith subsequently notified the Native American Heritage Commission of the project and produced a technical report with the results and recommendations.

Phase I Cultural Resources Inventory, Industry Trade Center Specific Plan (400 acres), Palmdale, CA

This project consisted of a Phase I Cultural Resources Inventory pursuant to Section 15064.5 of the State CEQA Guidelines. The inventory consisted of a records search, Native American notifications, a pedestrian survey, and a written technical report documenting the results of the inventory.

Archaeological Survey, Potrero Ranch, Riverside County (9,600 acres), Lockheed Development.

Mr. Smith conducted a Phase I Cultural Resources Inventory pursuant to Section 15064.5 of the State CEQA Guidelines. The inventory consisted of a records search, Native American notifications, a pedestrian survey, and a written technical report documenting the results of the inventory. Nine archaeological sites were recorded during the survey. The report and site records were filed with the Eastern Information Center, University of California, Riverside, California.

Class III Survey (280 miles), LNG Pipeline, Transwestern, Arizona

As the Crew Chief, Mr. Smith managed one of two survey crews for a Class III Cultural Resources Survey for a natural gas pipeline in Arizona. All work was conducted pursuant to Section 106 of the National Historic Preservation Act. The survey consisted of a records search, Native American notifications, a pedestrian survey,

site records and a written technical report documenting the results of the inventory. Jurisdictions included National Forest lands, BLM lands, Arizona State Lands, and privately owned lands.

Class III Cultural Resources Inventory, Eight Pipeline Repair Excavations on the Calnev Pipeline, Bureau of Land Management, Barstow Resource Area, California and Nevada

Mr. Smith conducted Class III Cultural Resources Inventory for eight pipeline repair excavations on the Calnev Pipeline, Colton to Las Vegas. Conducted a Class III Cultural Resources Inventory pursuant to Section 106 of the National Historic Preservation Act. The inventory consisted of a records search, Native American notifications, a pedestrian survey, and a written technical report documenting the results of the inventory.

SFPP, Line Section 6/7 between Tucson and Phoenix, Arizona State Lands, Kinder Morgan

Mr. Smith conducted archaeological surveys for pipeline maintenance primarily on Arizona State Lands in Pinal, Gila, and Maricopa Counties. Conducted a Class III Cultural Resources Inventory pursuant to Section 106 of the National Historic Preservation Act. The inventory consisted of a records search, Native American notifications, a pedestrian survey, and a written technical report documenting the results of the inventory.

Archaeological Survey and Test, Lake Arrowhead Community services Pipeline, City of Lake Arrowhead.

As the Field Director, Mr. Smith conducted an archaeological survey for three potential pipeline routes in the mountains near Lake Arrowhead. Discovery of prehistoric sites resulted in extensive testing along a portion of the alignment to ensure cultural resources were not impacted by the construction.

Class III Cultural Resources Inventory Cathode Protection Station No. 1930. Riverside County. (2.75 ac.), Bureau of Land Management, North Palm Springs

Mr. Smith conducted a Class III Cultural Resources Inventory pursuant to Section 106 of the National Historic Preservation Act. The inventory consisted of a records search, Native American notifications, a pedestrian survey, and a written technical report documenting the results of the inventory.

Cultural Resources Records Search, P & V Enterprises Land Exchange (13,000 ac.), Bureau of Land Management, Barstow Resource Area, San Bernardino County

Mr. Smith conducted a records search and summary letter report documenting 90 archaeological sites on the subject property.

Class III Cultural Resources Inventory for the Coral Mountain Regional Park (123 acres), Bureau of Reclamation, Coachella Valley Parks and Recreation, La Quinta, Riverside County

This project consisted of a Phase I Cultural Resources Inventory and included a literature review, field survey, and report for 123 acres in La Quinta, California.

NEPA and CEQA Documentation, Los Angeles Regional Interoperable Communications System (LA-RICS), Los Angeles County, CA

Mr. Smith conducted over 200 records and literature searches at the South Central Coastal Information Center, California State University, Fullerton. Tasks included identification of historically significant resources within ½ mile radius of each subject record search. This work was conducted in coordination with FCC and Department of Commerce Historical Resource Specialists.

Jay K. Sander

Senior Archaeologist

Education

- M.A., Anthropology, University of California, Riverside; 1998
- B.A., Anthropology, University of Arizona; 1993

Professional Registrations and Affiliations

- Riverside County and San Bernardino County Registered Archaeological Consultant
- Society for American Archaeology
- Society for California Archaeology

Professional Experience

Mr. Sander has 20 years of cultural resources experience in California. His principal focuses are on lithic technology, the strategies of desert-focused hunters and gatherers, and the development of sedentism and social complexity. Mr. Sander has participated in and supervised all aspects of archaeological fieldwork, including survey, test excavation, data recovery, and construction monitoring. He has surveyed over 60,000 acres and excavated nearly 120 archaeological sites in the Great Basin, Mojave, Sonoran, and Colorado Deserts. He has conducted numerous evaluations of archaeological sites and historic architectural resources for eligibility to the National Register of Historic Places (NRHP), and the California Register of Historical Resources (CRHR).

SELECT PROJECT EXPERIENCE

Lake Mathews Survey, Riverside County – Metropolitan Water District

As Archaeologist/Crew Chief, Mr. Sander conducted the survey of the 3,000-acre shoreline around Lake Mathews for the Metropolitan Water District, Riverside County. He also served as contributing author to the final report.

Sepulveda Basin Water Recycling Project

As Senior Archaeologist and Field Director, Mr. Sander surveyed approximately 2.7 miles of a proposed recycled water pipeline to be constructed in the Sepulveda Dam Recreation Area in the Encino-Tarzana community of the city of Los Angeles. He also prepared the technical report.

CEQA Compliance Services for Five Water and Wastewater Projects in the City of Colton

As Field Archaeologist, Mr. Sander was responsible for the record searches; field surveys; and preparation of the technical reports; and cultural and paleontological resources sections for five water and wastewater projects in the City of Colton. All of these documents were completed on a fast-track basis because of funding and construction deadlines. Projects included new water and wastewater lines, new water wells, and two wellhead treatment systems.

Kern Delta Water Banking Survey, Bakersfield – Kern Delta Water District

As Archaeologist/ Crew Chief, Mr. Sander conducted the Kern Delta Water Banking Survey for the Kern Delta Water District.

Archaeological and Paleontological Monitoring, Beaumont, Retail Development, Riverside County: 361 Group.

Mr. Sander provided archaeological and paleontological monitoring services for 361 Group at their 150-acre project area during construction grading. As Project Manager, Mr. Sander coordinated field checks of Project Archaeologists and Paleontologists as required. Also oversaw the completion of the technical report documenting project activities and results.

Cultural Resources Inventory in Support of Construction of a Reservoir in Imperial County, California

As Senior Archaeologist, Mr. Sander conducted the archaeological record search, field survey, and preparation of the technical report for a proposed reservoir to be located in the City of Calexico in the County of San Bernardino.

Cultural Resources Survey of the 25-acre Proposed Pomona Reservoir 11-H Site, Pomona, Los Angeles County, California

As Senior Archaeologist and Field Director, Mr. Sander conducted the cultural resources survey of a 25-acre parcel in support of the City of Pomona's New Reservoir 11-H Project. He also authored a technical report describing the methods and results for the City of Pomona, as well as the relevant portions of the required CEQA Initial Study.

Archaeological and Paleontological Monitoring, Victorville, Residential Developments, San Bernardino County: American Housing Group

Mr. Sanders provided on-call archaeological and paleontological monitoring services for American Group at seven different project areas during construction grading. As Proposal and Project Manager, Mr. Sander coordinated field checks of Project Archaeologists and Paleontologists as required. Also oversaw the completion of the technical report documenting project activities and results.

Cultural Resources Monitoring of Barton and Iowa—Citrus Investors, LLC, Redlands

As Proposal and Project Manager, Mr. Sander oversaw a cultural resources monitoring project in the vicinity of the Redlands Zanja on a 10-acre parcel at Barton and Iowa, Redlands. Also coordinated and approved the monitoring report for delivery to the City of Redlands.

Los Angeles County Department of Public Works

As Senior Archaeologist and Field Director, Mr. Sander surveyed over 45 linear miles of roads and 10 acres of land throughout the Angeles National Forest in support of 14 separate road maintenance projects.

Leisure World Monitoring

As Senior Archaeologist, Mr. Sander monitored the excavation of a utilities trench in Laguna Hills, Orange County, California. Project was conducted for Verizon Wireless.

Cultural Survey, Desert Ranch Yellowstone Oasis Section 16 Project, Salton Sea, Riverside County—Blixeth

Mr. Sander served as Field Director for this project that consists of approximately 7-square-miles of desert overlooking the Salton Sea. Chambers Group is providing a Phase I Cultural Resource Inventory in Riverside County, immediately west of the north end of the Salton Sea. Over 40 sites have been recorded and excavation of several is anticipated. In addition to surveys, the project involved consultation with the local Indian tribes. The project is the first of four separate contracts for the Desert Ranch project; a 5,000+ acre parcel near the Salton Sea.

Paleontological Assessment, Andresen Property, Fontana, San Bernardino County—Andresen Architecture

As Project Manager, Mr. Sander directed a vertebrate paleontologist to satisfy City of Fontana requirements to conduct a field assessment of 2 acres to determine if the potential for the presence of paleontologic resources is high or low. The surveyor closely examined the ground surface, nearby landforms, and soil profile exposures for evidence of paleontologic sensitivity. A letter report was then submitted to the client and the City with a summary of findings and recommendations.

Leatherneck Fiber-Optic Project—Southern California Edison (SCE)

Mr. Sander served as Senior Archaeologist and Primary Author to Conduct a Class III cultural resources inventory of an approximately 54-mile long portion of the Devers- Yucca Valley- -High Desert-Carodean 115 kV transmission lines. This is an existing transmission line primarily on Bureau of Land Management land between the Devers Substation near Desert Hot Springs, Riverside County and Yucca Valley, San Bernardino County. This line generally follows State Route 62 through Morongo Valley, approximately 15 miles north of Palm Springs and

40 mile east of the city of San Bernardino, California. The proposed SCE project will attach fiber-optic telecommunications cable to existing wood-pole transmission lines in support of the Leatherneck Substation Project.

Cultural Resources Survey, Track Upgrade from Thermal to Araz, California—Union Pacific Railroad, Yuma Subdivision

The project included initial consultation and coordination with local, state, and/or federal agencies, as appropriate, the SHPO, UPRR, and other relevant agencies to develop a Programmatic Memorandum of Agreement for considering the cultural resources associated with the project. As Field Director, Mr. Sander led a crew on an intensive pedestrian cultural resources survey of the 100-mile long area of potential effect. There were 36 newly discovered cultural resources discovered in the project area that were then recommended for potential eligibility as appropriate.

Cultural Resources Inventory for the Lake Esinore Advanced Pumped Storage Project, Orange, Riverside, and San Diego Counties, California

Mr. Sander served as Senior Archaeologist and Field Director for the Lake Esinore Advanced Pump Storage (LEAPS) Project and its associated 30± miles of above ground, high-voltage transmission lines, substations, switchyards, and other appurtenant facilities in Riverside and San Diego Counties, California; and the Talega-Escondido/Valley-Serrano 500-kV (TEVS) Interconnect Project which constitutes a stand-alone high-voltage transmission line following the same transmission right-of-way as associated with the LEAPS Project.

Archaeological and Paleontological Monitoring, Victorville Residential Development, San Bernardino County: Woodside Homes

Mr. Sander provided archaeological and paleontological monitoring services for Woodside Homes at their 70-acre project area during construction grading. As Proposal and Project Manager, Mr. Sander coordinated field checks of Project Archaeologists and Paleontologists as required. Also oversaw the completion of the technical report documenting project activities and results.

Cultural Resources Survey of Approximately 300 Acres in Support of Construction of On and Off Ramps at the Junction of Interstate Highway 15 and La Mesa / Nisqualli Road in Victorville, San Bernardino County – City of Victorville

As Deputy Project Manager, Mr. Sander was responsible for the survey of approximately 300 acres and field recordation of four historic-period archaeological sites in support of construction of freeway on and off ramps in Victorville, San Bernardino County. Also, he ensured field and site recordation procedures were completed in accordance with CalTrans standards.

Environmental Services on the SR-125 Project, San Diego County, California

Mr. Sander served as Field Director and contributing report author for a test program for a prehistoric archaeological site as part of a larger project to provide environmental services for construction of a toll road in San Diego County. The purpose of the test program was to evaluate the eligibility of the site for the National Register of Historic Places in compliance with Section 106 procedures. Also, he conducted the flaked and ground stone analysis and interpretation.

Cultural and Paleontological Resources Inventory, Desert Vista Project—Griffin Communities, Victorville

As Proposal and Project Manager, Mr. Sander conducted a cultural and paleontological resources study for 160 acres, in the City of Victorville, San Bernardino County, California. Coordinated the activities of the field crew and ensured quality control of the final report. This work was reviewed and accepted by the City of Victorville for CEQA compliance.

Sempra Line 85 Survey and Testing

As Senior Archaeologist and Field Director, Mr. Sander conducted the survey of 23 linear miles (280 acres) of natural gas pipeline in the Grapevine, Gorman, and Tejon Ranch areas. He also conducted the testing of two of the three archaeological sites found. Project was conducted for the Southern California Gas Company, owned by Sempra Energy.

Michelle B. Tollett

Senior Biologist

Education

- B.A., Botany and Environmental Science; University of Montana, Missoula, MT, 2000

Professional Certifications and Affiliations

- Certified Volunteer Naturalist, Newport Bay Conservancy 10-week Naturalist Training 2012
- Western Pond Turtle Workshop, Elkhorn Slough Coastal Training Program 2012
- Learning California Bird Sounds Workshop, Sea and Sage Audubon Org, Huntington Beach 2012
- Flat-tailed Horned Lizard Training, Southwest Partners in Amphibian and Reptile Conservation
- Certified CRAM Assessor, California Rapid Assessment Method (CRAM) Training 2012
- Western Spadefoot Toad (*Spea hammondi*) research support, USGS and Cal State Fullerton 2011-2012
- Scientific Collection Permit, California Department of Fish and Game
- Wetland Regional Seminar and Field Practicum Training, Wetland Training Institute, Certificate 2011
- Difficult Wetland Situations Seminar Training, Wetland Training Institute, Certificate 2011
- Desert Tortoise Surveying, Monitoring, and Handling Techniques Workshop, November 2011
- Birds of Southern California 10 week course, Sea and Sage Audubon, Sylvia Gallagher Instructor 2011
- Western Mountains and their Birds Workshop, Sea and Sage Audubon Org, Huntington Beach 2011
- 40-hour OSHA Training, Certificate, 2010
- 40-hour Wetland Delineation Training, Wetland Training Institute, Certificate 2005
- 24-hour HazComm Hazardous Materials Training, Certificate 2004

Professional Experience

Ms. Tollett is a biological scientist with eleven years of environmental consulting experience in the public and private sectors in central and southern California. Her responsibilities include habitat suitability assessments, biological constraints surveys, reconnaissance field surveys for special-status species, and focused special-status species surveys. She has held a variety of environmental compliance management responsibilities, from planning to post-construction phases of projects. Ms. Tollett has experience conducting and supervising several mitigation monitoring projects ranging from simple to complex within riparian, wetland, coastal sage scrub, chaparral, desert, and other sensitive habitat areas throughout Southern California and the northern Rocky Mountains.

Specifically, Ms. Tollett understands the regulatory framework and field identification and planning necessary for the preparation of biological reports and environmental documents for compliance with NEPA and CEQA / FESA and CESA, invasive species control, mitigation monitoring and planning, construction monitoring and post-construction restoration and reporting. Prior to her biological consulting experience, she specialized in storm water and hazardous materials management, as well as environmental training and education.

Ms. Tollett's industry experience includes oil and gas transmission lines, energy transmission lines, wind and solar alternative energy, private development, transportation, flood control, and various military and governmental projects.

SELECT PROJECT EXPERIENCE

Joshua Tree Mitigation Monitoring, Hyundai Corporation, Mojave, CA

Ms. Tollett was contracted to conduct post-project mitigation monitoring for translocated Joshua Trees (*Yucca brevifolia*). This work followed the installation and widening of the Hyundai Corp. proving grounds and road testing station in the Mojave Desert. General health ratings were applied to the individual plants, with counts of arms, pups, and various general conditions noted. Transplanting of the Joshua Trees proved highly successful. A Biological Survey Report, with field forms, was written and submitted to the client.

Biological Mitigation Monitoring, Sunrise Powerlink Project, San Diego County, CA

Ms. Tollett is overseeing mitigation monitoring of the construction and laydown yards, which involves the construction electric transmission lines between the Imperial Valley substation near El Centro in Imperial County to San Diego Gas & Electric's Sycamore Canyon Substation in coastal San Diego County. The project will extend approximately 118 miles on 23 sites and cross traverse private and public lands.

Restoration and Mitigation Monitoring for CSUCI Long Grade Canyon Creek Project, Camarillo, CA

Ms. Tollett conducted post-construction mitigation monitoring of Long Grade Canyon Creek to record the restoration success of a concreted, riprap waterway to a more natural watercourse through breaking of concrete and planting of native trees, such as California Sycamore (*Plantus racemosa*), Coast Live Oak (*Quercus agrifolia*), and various willow species. Success was determined by factors such as tree and shrub height, circumference, overall health, and recruitment of other native riparian species. This project was considered a success at the time of the monitoring, although two years of monitoring were still required.

Preliminary Environmental Study (PES), Natural Environment Study (NES), Initial Study / Mitigated Negative Declaration (ISMND), Resource Agency Permitting, Bird and Sensitive Wildlife Surveys, Worker Environmental Education and Awareness Program, and Mitigation Monitoring and Reporting, Huntington Bridges Project, City of Huntington Beach, CA (current)

Ms. Tollett is supervising the planning of 3 bridge repair and maintenance Projects for the City of Huntington Beach within 3 ecological preserves consisting of salt marsh and coastal sage scrub habitat types, as well as areas containing eel grass beds within tidal waters. Each site requires preparation of a PES, ISMND, NES, permitting (USACE 404, RWQCB 401, Rivers and Harbors Act Sections 9 and 10, CDP) and potential for a consultation with the USFWS. Ms. Tollett is lead liaison between the client and resource agencies and is advising on avoidance and minimization measures within habitats known to support listed species, such as the Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), coastal California gnatcatcher (*Polioptila californica*) and Least Tern (*Sternula antillarum*) within a highly visible and potentially controversial project.

Cameron Ranch Biological Assessment, Jurisdictional Delineation, and Tree Inventory, Riverside County, CA

Ms. Tollett joined several surveys for this 600 acre project located south of Banning, north of San Jacinto State Park on private land dominated by Manzanita and chamise chaparral communities. The project included a biological assessment, jurisdictional delineation and tree inventory performed by a team of 8 biologists with various specialties during three separate overnight visits.

Bird and Sensitive Wildlife Surveys, Worker Environmental Education and Awareness Program, and Mitigation Monitoring and Reporting, Alton Parkway Extension Project, Irvine, CA

Ms. Tollett is helping implement the requirements of environmental planning documents and agency-approved permits. These include the Alton Parkway EIS/ER, FWS Section 7 Conservation Permit, CDFG 1600 SAA, ACOE 404 Permit, and a RWQCB 401 Certification. Ms. Tollett has supervised a crew of five rotating staff members, trained to monitor and consult with the client, through review of environmental documents and submittal of monitoring reports on a regular basis. The team is conducting surveys of nesting birds and sensitive wildlife, both prior to and during construction. Ms. Tollett has also prepared and presented a Worker Environmental Education and Awareness Program (WEAP) and a Mitigation Monitoring and Reporting Program (MMRP).

High Desert Corridor Project, Desert Tortoise (Gopherus agassizii) Presence/Absence Surveys, Mojave Desert, San Bernardino County, CA

Ms. Tollett has performed presence/absence surveys for the Desert Tortoise. Survey included walking miles of transects along the project footprint, as well as, the Zone of Influence. Burrowing owl (*Athene cunicularia*) locations were also mapped as part of this effort.

Hwy 395 Widening Project, Desert Tortoise (*Gopherus agassizii*) Presence/Absence Surveys, vicinity of Kramer Junction, San Bernardino County, CA

Ms. Tollett has performed presence/absence surveys for the Desert Tortoise. Survey included walking miles of transects along the project footprint, as well as, the Zone of Influence. Burrowing owl (*Athene cunicularia*) locations were also mapped as part of this effort.

Reconnaissance Biological Surveys, Habitat Suitability Surveys, Mitigation Reports, and Data Management to support the Devers to Palo Verde 500Kv Transmission Line Project (DPV2), Riverside County, CA

Ms. Tollett conducted and prepared Reconnaissance Biological Surveys, Habitat Suitability Surveys, Mitigation Reports, and Data Management efforts for Southern California Edison's DPV2 Transmission Line, with construction phase anticipated at a 5 years. The DPV2 Project spans 153 miles from eastern to western Riverside County. This large-scale project required micro-siting adjustments immediately prior to construction, therefore additional surveys were conducted to confirm previous baseline survey data submitted to assist in preparation of the Draft and Final DPV2 Project ER/ES, (finalized in 2006). To satisfy guiding environmental documents (ER/ES, agency permits, county requirements), Ms. Tollett participated in the planning, preparation, and submittal of several Mitigation Plans. Plans and documents submitted include a Noxious Weed Control Plan, Transplanting Plan, Sensitive Habitat Definition Memo, and Habitat Restoration and Compensation Plan (assist). The DPV2 Project began in summer 2011.

Bakersfield Cactus and Desert Tortoise Surveys, Alta Wind Farm, Tehachapi, CA

Ms. Tollett participated in Desert Tortoise Surveys and Bakersfield cactus surveys on the Alta Wind Farm Project. A team of four Biologists surveyed discrete locations using alternating belt transects with a handheld Trimble sub-meter GTX unit. Survey results were used for project planning and relocation of special-status species under the direction of Rick Gorsira, CH2MHill.

Burrowing Owl Relocation and Mitigation Planning, Imperial Solar Energy Center, El Centro, CA

Ms. Tollett is acting as Senior Biologist and alternate Biological Resources Manager for this 200 MW PV solar project in Imperial Valley. The project includes the coordination all biological mitigation, monitoring, and compliance. This project tasks include scheduling and staffing preconstruction, all monitoring, and T&E species mitigation measures, for the solar fields and transmission through 31 months of construction. Special mitigation plans were developed for Burrowing Owl relocation and Flat Tailed Horned Lizard in the BLM management area.

Burrowing Owl Surveys, Development Projects, Valencia, CA

Ms. Tollett conducted seasonal and protocol burrowing owl surveys on several Newhall Land & Farming Co. development projects in Valencia, California. Protocol level surveys were completed using the standard survey methodology within the Burrowing Owl Consortium's Burrowing Owl Survey Protocol and Mitigation Guidelines (April 1993). When Burrowing Owl presence was established, the agencies were contacted to coordinate proper mitigation specific to each situation. Proximity buffers and noise mitigation constituted the bulk of the mitigation concerns. A Biological Survey Report was written and submitted to the client.

Nesting Bird Surveys, Ridgeview and Stevenson Ranch Developments, Santa Clarita and Valencia, CA

Ms. Tollett was the lead biologist, conducting nesting bird surveys throughout the proposed Ridgeview and Stevenson Ranch development projects in northern Los Angeles County. Ms. Tollett assisted in the preparation of mitigation monitoring protocols and setting buffers for active nesting. In addition, Ms. Tollett conducted training for construction personnel completing work in the nesting zones. The project's field forms, daily monitoring forms, and final report were submitted to the client at project completion.

Southern Tarplant Mitigation, Bradley West Expansion at LAX, Los Angeles, CA

Ms. Tollett is overseeing an UltraSystems team carrying out this mitigation project. This project mitigated the risk to an on-site population of the Southern Tarplant, a rare, threatened, and seriously endangered species in California. UltraSystems biologists consulted on a mitigation plan for approximately 300 individual plants on the project site. They confirmed that the mitigation area proposed by LAWA could support the Southern Tarplant. They revised the LAWA Southern Tarplant mitigation plan and later supervised LAWA crews in clearing the new

area of weeds and trash. Seeds were collected from the existing Tarplant population and planted in the new mitigation area. UltraSystems is conducting regular inspections of the new area.

Habitat Restoration, Warm Springs Rehabilitation Center Project, Los Angeles County Department of Public Works, Los Angeles, CA

Ms. Tollett is overseeing a team restoring a portion of riparian and upland habitat associated with Elizabeth Creek near the Los Angeles County Health and Human Services Warm Springs Rehabilitation Center. The team prepared the Biological Assessment and Jurisdictional permitting, inventoried plant and wildlife species present, initiated restoration efforts through native plant container stock and seeding, recorded experimental-restoration data, and conducted targeted non-native plant removals.

NARCO Channel Monitoring and Reporting, Laguna Niguel, CA

Ms. Tollett is overseeing four annual site evaluations being conducted in support of a revegetation effort located within and along the banks of the Narco Channel, a perennial drainage that runs through the Laguna Niguel Regional Park in the City of Laguna Niguel, Orange County, California. Specific aims of the restoration include establishing a more natural vegetated cover, providing additional flood control capacity from storm-water runoff, to increase the measurable quantity of riparian habitat in the watershed, to enhance pollutant removal capacity of stream, to improve overall water quality (e.g. lower concentrations of bacteria, suspended solids, heavy/trace metals, and dissolved nutrients), and to create habitat for native species (URS 2006). To achieve these broad project goals, the Stream Alteration Agreement (SAA), authorized by the California Department of Fish and Game (CDFG), set specific annual targets for survival of planted native shrub and tree species, as well as benchmarks for percent cover of native, non-native, and invasive plant species. Mitigation monitoring reports are being prepared each of the four years analyzing percent cover of natives versus invasives and determining overall success of the project in accordance with the California Department of Fish and Game targets.

RECENT RESEARCH PROJECTS

Research Assistant, Western Spadefoot Toad capture and tagging, Crystal Cove, CA

Ms. Tollett has approximately 30 hours capturing and radio tagging the western spadefoot toad (*Spea hammondi*), under guidance from USGS permitted biologist, Kathy Baumberger.

Research Assistant, Western Pond Turtle Radio Telemetry Surveys, San Joaquin Marsh, UC Irvine, CA

Ms. Tollett has participated in radio telemetry surveys for the western pond turtle (*Actinemys marmorata*) in an effort to determine female turtle's movement within the marsh and potential nesting locations. This project is facilitated by the University of California, Irvine and California State University Long Beach, under the direction of Barry Nerhus, (permitted biologist, Endemic Environmental). An estimated 300 turtles inhabit the San Joaquin Marsh; approximately 30 individuals were tagged during 2011 and triangulated on a weekly basis.

Joyce D. Mak

Staff Biologist

Education

- B.A., Environmental Analysis and Design, University of California, Irvine, CA

Professional Certifications and Training

- Introduction to Surveying, Monitoring and Handling Techniques Workshop, Desert Tortoise Council, 2012
- Yellow-billed Cuckoo Survey Protocol Workshop, Southern Sierra Research Station, 2012
- Birds of Southern California: Introductory Visual Workshop, Sea and Sage Audubon Org, Huntington Beach
- Western Mountains and their Birds Workshop, Sea and Sage Audubon Org, Huntington Beach
- Learning California Bird Sounds Workshop, Sea and Sage Audubon Org, Huntington Beach
- Learning Western Mountain Bird Sounds Workshop, Sea and Sage Audubon Org, Huntington Beach
- Field-Based Rare Vegetation Workshop, CNPS, Irvine Ranch Conservancy, Southeastern Orange County
- Approximately 15 hours of CAGN protocol-level surveys and monitoring with permitted biologist.
- Flat-tailed horned Lizard Training, Southwest Partners in Amphibian and Reptile Conservation, United States

Professional Affiliations

- Member, California Native Plant Society (CNPS)
- Member, National Audubon Society (NAS)
- Member, National Wildlife Foundation (NWF)
- Member, The Nature Conservancy (TNC)

Professional Experience

Ms. Mak is a wildlife biologist with a particular interest in avian ecology. She is knowledgeable about native and non-native California plant and wildlife species, having worked in upland and riparian habitats throughout Southern California, including Los Angeles, Orange, Riverside, San Diego, Imperial, and San Bernardino Counties with a particular interest and study in avian ecologies. She has worked closely with CDFG permitted biologists on protocol-level surveys. She has conducted surveys for special-status bird species, including coastal California gnatcatcher, California Least Terns, Snowy Plover, and Coastal Cactus Wren. She is a member of National Audubon Society and has completed several birding courses and workshops by the Sea and Sage Audubon. Ms. Mak is also a very passionate avid birder in her free time.

Other works that she has provided include biological and construction monitoring, permit compliance, and biological technical reports. She has contributed to several restoration, re-vegetation and conservation efforts, included native plant installation and chemical weed treatment and removal, and has also conducted several biological resources surveys and monitoring. She has assisted on Phase I and II Environmental Assessments analysis, and completed air emissions reports, Hazardous Materials Management Plans, and supported water quality and storm water prevention programs.

SELECT PROJECT EXPERIENCE

UltraSystems

Biological Mitigation Monitoring, Sunrise Powerlink Project, San Diego County, CA

Ms. Mak is providing mitigation monitoring of construction for project laydown yards of this project, which involves the construction electric transmission lines between the Imperial Valley substations near El Centro in Imperial County to San Diego Gas & Electric's Sycamore Canyon Substation in coastal San Diego County. The project will extend approximately 118 miles on 23 sites and cross private and public lands.

Bird and Sensitive Wildlife Surveys and Mitigation Monitoring and Reporting, Alton Parkway Extension Project, Irvine, CA

Ms. Mak had written the work plan for this project, provided biological construction monitoring, and personnel coordination. UltraSystems helped implement the mandates of environmental planning documents and agency-approved permits. These included the Alton Parkway ES/ER, FWS Section 7 Conservation Permit, CDFG 1600 SAA, ACOE 404 Permit, RWQCB 401 Certification, and other applicable documents. Ms. Mak was part of a crew of five rotating staff members, trained to monitor and consult with the client, through review of environmental documents and submittal of monitoring reports.

Quarterly Avian and Wildlife Monitoring and Macro-Invertebrate Sampling, Harper Lake, CA

Ms. Mak conducted quarterly morning and evening bird count and identification surveys with evaporation ponds at a solar power plant in Hinkley, CA. Surveys began no later than one hour after sunrise and ended within one hour of sunset. The methodology consisted of walking the perimeter of each pond and recording birds and other wildlife as observed. A spotting scope and binoculars were used in and around the ponds during each session. Weather conditions (wind, cloud cover, and temperature) and water depths were measured at each pond. Ms. Mak also conducted yearly sampling for benthic or bottom-dwelling organisms, planktonic or free-swimming organisms, and adult insects around the margins of the ponds, with samples shipped for analysis. Monitoring reports were prepared for following each avian and aquatic survey.

Bird and Bat Exclusion Monitoring, Los Angeles County, CA

Ms. Mak implemented pre- and post- bird and bat deterrence monitoring programs for the Los Angeles County Department of Public Works (LACDPW) in support of three seismic retrofit bridge infrastructure improvement projects in Los Angeles County. The program was designed to assist LACDPW in being compliant with the California Fish and Game Code (Section 3503) and Migratory Bird Treaty Act of 1918. Tasks included installing bird exclusion netting and conducting routine monitoring visits to deter migratory birds and bats from constructing nests and laying eggs or roosting in the bridge structures.

Biological Assessment Report and Surveys, Laguna Hills, Orange County, CA

Ms. Mak conducted comprehensive literature reviews, general biological surveys, and vegetation mapping to determine the presence or potential occurrence of sensitive biological resources. She conducted baseline biological surveys for sites including but not limited to nine parcels totaling 72 acres, and on part of the 25-acre commercial site. The surveys documented current site conditions, the plant and wildlife species observed, and vegetation communities. The information was compiled in a biological technical report.

Natural Environmental Study and Surveys for Huntington Beach Bridges, Huntington Beach, CA

Ms. Mak performed biological surveys along with other UltraSystems biologists and compiled background research and field data from two other surveys in order to compose environment documents for the analysis. The environmental documents are being written on behalf of the City of Huntington Beach.

Bird and Sensitive Wildlife Surveys, Retrofit of Foothill Boulevard Bridge Over San Gabriel River, Los Angeles County, CA

Ms. Mak has conducted presence-absence, nesting bird, preconstruction surveys and construction monitoring for this project. Ms. Mak was also in part of the focus bird surveys for Coastal California Gnatcatcher and Least Bell's Vireo with Permitted biologist Brian Leatherman at the site. Binocular and pedestrian surveys are being completed focusing on the bridge and surrounding areas up to 500 linear feet from each side of the bridge. Biologists are recording sightings of plants and animals, especially avian wildlife related to bridges, bridge structures, and shore and marsh lands. (Ongoing)

NEPA and CEQA Documentation, Los Angeles Regional Interoperable Communications System (LA-RICS), Los Angeles County, CA

Ms. Mak is part of the UltraSystems team currently preparing technical studies and documentations for NEPA and CEQA requirement toward the construction project of LA-RICS, an \$800-million emergency communications system due to be operational in 2016. She has been conducting biological surveys for evaluation of biological resources of each

potential site and preparing technical reports for the project. LA-RICS will provide a highly coordinated emergency communications system to all first-responders to natural and man-made disasters throughout Los Angeles County. The company's technical team of more than 20 professionals is assessing the potential environmental impacts from the construction of approximately 260 proposed communications towers in urban and rural areas. UltraSystems' studies include: aesthetics and visual resources, land use, socioeconomic, human health and safety, air quality/greenhouse gas, noise, infrastructure (services and utilities/site access); historic and cultural resources, geology and soils, and biological resources.

Mitigation Site Evaluation for Invasive Plant Species Removal and Control Effort, San Diego Creek Invasive Removal Project, Orange County, CA

Ms. Mak is providing annual site evaluations on vegetation and invasive species using quantitative monitoring and sampling methods similar to CNPS rare plant surveys methods evaluating the percent converge of the exotic plant species focusing on Giant Reed (*Arundo donax*), Tamarisk (*Tamarix* sp.), Castor Bean (*Ricinus communis*), and Blue Gum Eucalyptus (*Eucalyptus globules*).

Mitigation Site Evaluation for Arundo Removal and Control Effort, San Diego Creek Flood Control Emergency Project, Orange County, CA

Ms. Mak is providing annual site evaluations on the re-growth of giant reed (*Arundo donax*), a highly invasive plant species, removal effort by the Orange County Public Works using quantitative monitoring and sampling methods similar to evaluate the percent converge of the Arundo and other exotic plant species at the Santa Ana River Mitigation Area (SARMA) which covers approximately 130 parcels for the mitigation study enhancement efforts. Key components include field surveys with the use of a TRIMBLE GPS unit and monitoring report writing.

Southern Tarplant Mitigation, Bradley West Expansion at LAX, Los Angeles, CA

Ms. Mak is part of UltraSystems biological team carrying out a mitigation project at the Los Angeles World Airport (LAWA). Ms. Mak assisted on revising and developing a mitigation plan in support of the Southern Tarplant (*Centromadia parryi* ssp. *australis*), a rare, threatened, and seriously endangered species in California. Mitigation activities include Southern Tarplant seed collection, new mitigation site preparations, seed application, Southern Tarplant condition monitoring, and developing monitoring reports associated with each monitoring period. The project is in response to the LAX Bradley West expansion and Crossfield Taxiway Relocation projects, which posed a risk to an on-site population of approximately 300 Southern Tarplants. UltraSystems biologists were consulted on for the mitigation effort and had confirmed that the new mitigation area proposed by LAWA could support this rare plant. Several other tasks in support of the project include supervising LAWA crews in clearing the new mitigation area of non-native weeds and trash and regular inspections of the new mitigation area.

Biological Surveys, Whiteman Airport Master Plan Update, Los Angeles County, CA

Ms. Mak conducted literature reviews and general biological surveys to determine the presence or potential occurrence of sensitive biological resources on the project site. She completed vegetation mapping using Google Earth and baseline biological surveys. The surveys documented site conditions, the plant and wildlife species observed, and vegetation communities. The information was compiled in a biological technical report.

Biological Surveys, Hotel Development, Imperial County, CA

Ms. Mak conducted literature reviews and general biological surveys to determine the presence or potential occurrence of sensitive biological resources on the project site. She composed vegetation mapping using Google Earth and conducted baseline biological surveys on part of the 25-acre commercial site. The surveys documented current site conditions, the plant and wildlife species observed, and vegetation communities. The information was included in a biological technical report.

Crystal Cove State Park – Resource Management Department

Habitat Mitigation and Monitoring Plan Support, Crystal Cove State Park, Laguna Beach, CA

Ms. Mak assisted with on-site maintenance tasks associated with the Habitat Mitigation and Monitoring Plan, including native plant installation, restoration, and chemical weed treatment and removal efforts. Habitat restored included

Coastal Bluff Scrub, Coastal Dune, Coastal Sage Scrub, and Southern California Chaparral habitat. She also conducted surveys and monitoring for the endangered or threatened wildlife, including the Least Bell's Vireo, Coastal California Gnatcatcher, California Least Terns, Snowy Plover, Coastal Cactus Wren, Spade Foot Toad, and Western Pond Turtle.

GLE Associates, Inc.

Environmental Assessments, Various Projects, Southern California

Ms Mak performed Phase I and II Environmental Assessments and monitoring of lead, mold, and asbestos. She performed project management tasks in support of storm water prevention programs, sample collections, and pollutant parameter analysis. She coordinated with regulatory agencies and companies in support of public awareness programs. She conducted daily project documentations and summaries, providing detailed information for technical reports, estimating project costs, and developing project proposals with general contractors.

JE Environmental Compliance, Inc.

Technical Reports and Assessments, Various Projects, Southern California

Ms Mak assisted with permit preparation, air emission reports, water quality assessments, and wastewater compliance. She collected field samples of storm water pollutants and conducted associated parameter analysis. She also assisted with the audit of hazardous waste management facilities and waste accumulation areas.

VOLUNTARY EXPERIENCE

The Nature Conservancy

Wildlife Survey, Nature Conservancy, Irvine, CA

Ms. Mak interned with the Nature Conservancy, assisting the Field Ecologist with a survey of the Mountain Lion (*Puma concolor*) using wildlife tracking antennas and GPS and receivers. She conducted a survey of plant species using a plot method to analyze the effects of exotic flora and cattle-grazing on coastal sage scrub and grassland habitats.

Administrative Support, South Coast Resource Conservation and Development Council, Riverside, CA

Ms Mak has volunteered her time to this organization, providing administrative support for its annual Fire Summit Conference. She has contributed team coordination and event planning for this event, which attracted more than 120 representatives of resource agencies, law enforcement, for-profit and non-profit organizations, and companies from throughout California.

Hugo Flores

Field Biologist

Education

- B.S., Biology, University of California, Los Angeles, 2007
- A.A., Biology, Golden West College, Huntington Beach, 2004

Memberships and Affiliations

- Member, Independent Latino Student Association (ILSA)
- Member, Academic Advancement Program (AAP)
- Member, St. Joseph's Hospital Volunteer Center

Related Experience

UCLA Research Associate

- Mr. Flores collaborated with world-renowned researchers in collecting and analyzing various data regarding physiological efficiencies of native species in relation to different types of weather

Specialized Training

- Birds of Southern California, Introductory Visual Workshop offered by Sea and Sage Audubon
- Learning California Bird Sounds - the Introductory Aural Workshop offered by Sea and Sage Audubon
- Learning California Bird Sounds - Learning Mountain Bird Sounds Aural Workshop offered by Sea and Sage Audubon
- "Basic Tracking and Awareness" offered through Earth Skills
- "Introduction to Desert Tortoise Surveying, Monitoring and Handling Techniques Workshop" offered by the Desert Tortoise Council (DTC)
- Flat-tailed Horned Lizard Training offered by Bureau of Land Management

Professional Experience

Mr. Flores has performed biological and construction monitoring, permit compliance, and technical writing for biological reports. He has conducted numerous botanical and mammal tracking surveys. Mr. Flores is very knowledgeable about environmental policy and planning practices (CEQA, NEPA). He is experienced in the implementation of Habitat Mitigation and Restoration Plans as well as monitoring.

SELECT PROJECT EXPERIENCE

Biological Monitoring, Sunrise Powerlink, San Diego County, CA

Mr. Flores served as a Biological Monitor observing the use of Best Management Practices (BMPs) such as construction speed limits, equipment leakage along with the use of drip pans, erosion control, and dust control. He monitored the presence of wildlife during grading activities and did nesting bird surveys during the breeding season. He kept a monitor log, which recorded all birds, mammals, and any significant biological details observed during his field visits. He also assisted in reviewing monitor logs from other Sunrise Powerlink monitors to make sure they were clear, accurate and coherent.

*High Desert Corridor Project, Desert Tortoise (*Gopherus agassizii*) Presence/Absence Surveys, Mojave Desert, San Bernardino County, CA*

Mr. Flores has performed presence/absence surveys for the Desert Tortoise. Survey included walking miles of transects along the project footprint, as well as, the Zone of Influence.

Biological Monitoring, Alton Parkway Extension, Irvine, CA

Mr. Flores served as a biological monitor for the use of Best Management Practices and the presence of wildlife during grading activities. He conducted nesting bird surveys and completed a monitoring log which recorded all

birds, mammals, and any other significant biological details during his field visits. His work included literature reviews of Habitat Conservation Plans for cities impacted by the Alton Parkway Extension.

Bird and Bat Exclusion Monitoring, Los Angeles County, CA

Mr. Flores managed and implemented pre- and post-bird and bat deterrence monitoring programs for the Los Angeles County Department of Public Works (LACDPW) for three seismic retrofit bridge projects. The program was designed to assist LACDPW in complying with the California Fish and Game Code (Section 3503) and Migratory Bird Treaty Act of 1918. Tasks included the installation of bird and bat exclusion netting and conducting routine monitoring visits to deter migratory birds and bats from constructing nests, laying eggs, or roosting within the bridge structure. Monitoring included bird counts and identification surveys on multiple sites in and adjacent to the Los Angeles River.

Hwy 395 Widening Project, Desert Tortoise (*Gopherus agassizii*) Presence/Absence Surveys, vicinity of Kramer Junction, San Bernardino County, CA

Mr. Flores has performed presence/absence surveys for the Desert Tortoise. Survey included walking miles of transects along the project footprint, as well as, the Zone of Influence.

Haller, Rojo & Clipper Valley Wash Bridges Replacement Project, Desert Tortoise (*Gopherus agassizii*) Presence/Absence Surveys, vicinity of Essex, San Bernardino County, CA

Mr. Flores has performed presence/absence surveys for the Desert Tortoise. Survey included walking miles of transects along the project footprint, as well as, the Zone of Influence.

Pre-Construction Bird Survey and Construction Monitoring, Santa Clara River South Fork, Los Angeles County, CA

Mr. Flores conducted a pre-construction bird survey which included observing for any possible nesting birds and sensitive bird species to help our client comply with California Fish and Game Code (Section 3503) and the Migratory Bird Treaty Act of 1918. During construction he monitored for bird nests, sensitive species, vegetation clearings and Best Management Practices (BMP's) pursuant to CDFG 1600 SAA, ACOE 404 Permit, and RWQCB 401 certification.

Santa Ana River Annual Mitigation Monitoring Project, Orange County Public Works, Orange County, CA

Mr. Flores performed vegetation sampling surveys within each of the 130 established parcels. The surveys included sampling the percent cover of *Arundo donax* and the percent cover of all non-native vegetation from a single, randomly located plot within each of the parcels.

Narco Channel Restoration Project, Orange County Public Works, Orange County, CA

Mr. Flores performed vegetation sampling along eight transects using the point-intercept method. At every 0.5-meter interval along each transect, a point on the ground was projected vertically using a slender metal rod. Plants intercepted or "hit" by the vertical rod at each 0.5 meter interval were identified to species and recorded according to *vegetation layer* (herb, shrub, or tree) and *type* (native, non-native, or invasive).

Imperial Solar Energy Center (CSOLAR) Project, Foraging Surveys for the Burrowing Owl (*Athene cunicularia*), Imperial County, CA

Mr. Flores has performed Foraging surveys for the Burrowing owl. Surveys took place before/after sunrise and before/after sunset and included observing several burrowing owls at two different burrowing locations. Main focus of the study was to observe and estimate (through the use of pre-measured markers) foraging distances for burrowing owls from their respective burrow.

Evergreen Solar, Pre-construction Surveys for the Burrowing Owl (*Athene cunicularia*), San Bernardino County, CA

Mr. Flores has performed pre-construction surveys for the burrowing owl. Surveys included walking transects along the project footprint and buffer area. All Burrowing Owls and Burrowing Owl sign (whitewash, pellets, and burrows) was recorded and mapped.

Imperial Solar Energy Center (CSOLAR) Project, Flat-Tail Horned Lizard (*Phrynosoma mcallii*) Presence/Absence surveys, Imperial County, CA

Mr. Flores has performed presence/absence surveys for the Flat-Tail Horned Lizard. Survey included walking several transects along BLM Land inside project perimeters. Harvester Ant colonies were counted and any FTHL scat/track was recorded.

Foothill Boulevard over San Gabriel River Bridge Retrofit Project, Los Angeles County, CA

Mr. Flores conducted bird surveys inside the San Gabriel riverbed which involved listening and observing for identifiable bird cues such as species specific markings, calls, song, etc. Nests, nesting behaviors, bird species, and other wildlife were recorded. Other biological issues that might be of concern were also recorded and reported to LADPW.

NEPA and CEQA Documentation, Los Angeles Regional Interoperable Communications System (LA-RICS), Los Angeles County, CA

Mr. Flores is part of the UltraSystems team currently preparing technical studies and NEPA and CEQA documentation toward the construction of LA-RICS, an \$800-million emergency communications system due to be operational in 2016. He completed a literature review regarding local ordinances for sites with potential for biological impacts. LA-RICS will provide a highly coordinated emergency communications system to all first-responders to natural and man-made disasters throughout Los Angeles County. The company's technical team of more than 20 professionals is assessing the potential environmental impacts from the construction of approximately 260 proposed communications towers in urban and rural areas. UltraSystems' studies include: aesthetics and visual resources, land use, socioeconomic, human health and safety, air quality/greenhouse gas, noise, infrastructure (services and utilities/site access); historic and cultural resources, geology and soils, and biological resources.

Biological Assessment, Heacock Street Replacement Bridge, Moreno, CA

Mr. Flores assisted the project Senior Biologist with a flora and fauna assessment for a bridge and transportation project. His work was used to complete a Natural Environmental Study, in compliance with Caltrans specifications.

Biological Assessment, Sandalwood Housing Project, City of Big Bear Lake, CA

Mr. Flores conducted a flora assessment for a proposed housing project site. He documented plant and animal species and overall site characteristics, including soils and disturbance factors. He helped prepare a biological technical report, based on a literature review and field research. He recommended appropriate mitigation measures to reduce impacts to less than significant levels.

Santa Clara River Biological Survey and Report, Flood Control Retrofit Project, Azusa, CA

Mr. Flores conducted comprehensive literature reviews, general biological surveys, and vegetation mapping to determine the presence or potential occurrence of sensitive biological resources with two sites in the Santa Clara South Fork. He documented plant and animal species and overall site characteristics, including soils and disturbance factors. He assisted in the preparation of a biological technical report based literature review and field finding and recommended appropriate mitigation measures to reduce impacts to less than significant levels.

Olive View Medical Center (OVMC) Storage Trailer Replacement, Los Angeles, CA

Mr. Flores conducted a Biological Assessment, listing all plants and wildlife found on the site. He co-authored the biological assessment.



CIRCLE MOUNTAIN BIOLOGICAL CONSULTANTS, INC.

P.O. BOX 3197

WRIGHTWOOD, CA 92397

PHONE/FAX: (760) 249-4948

Email: sharon_dougherty@circlemountainbiological.com

Website: <http://www.circlemountainbiological.com>

Mr. Joe Guzzetta
Joshua Basin Water District
61750 Chollita Road
P.O. Box 675
Joshua Tree, CA 92252

31 December 2012

Re: RFP for Biological Monitoring During Construction of Groundwater Recharge Basin

Dear Mr. Guzzetta:

Circle Mountain Biological Consultants, Inc. (CMBC) herein submits a formal proposal for biological monitoring in compliance with the California Environmental Quality Act (CEQA) during construction of a 32.5-acre groundwater recharge basin and associated 23,800-foot (4.5-mile±) pipeline in the community of Joshua Tree, San Bernardino County, California. CMBC does not intend to provide cultural monitoring for the project, and our proposal does not include these services. As described in the Joshua Basin Water District's (District) Request For Proposal (RFP) for the project, the District estimates that pipeline construction will take approximately 36 weeks. Construction of the recharge basin will take place at a later time, probably no sooner than July 2013. The contractor chosen for monitoring pipeline construction may also monitor construction of the recharge basin, if agreed by mutual consent.

CMBC proposes the following personnel and subcontractors for work on this project. These names, along with qualification statements, have already been submitted to the District and U.S. Fish and Wildlife Service (Service) and California Department of Fish and Game (Department). The Service has already approved them as authorized biologists and monitors.

- Edward LaRue, Jr., will act as the primary authorized biologist for the project. He is a principal of CMBC, and will supervise all other monitors and biologists. LaRue will be responsible for completing all necessary reports, and will be the primary point of contact for field surveys and CEQA compliance.
- Sharon Dougherty, also a principal of CMBC, will serve as a monitor and authorized biologist as needed. Dougherty will also be responsible for administration of contract(s), invoicing, scheduling, and coordination.
- Patricia Seamount, Michael Radakovich, Michael Gallagher, William Donnan, and Ellen Schafhauser are all regular subcontractors with CMBC, and will act as a monitors and authorized biologists, as needed.

CMBC makes the following assumptions in developing cost estimates for the proposal, as described below:

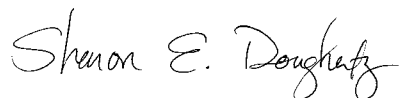
- Based on preliminary information provided by the District, approximately the eastern 2 miles of the 4.5-mile pipeline right-of-way (ROW) are located in developed areas, and are unlikely to support Agassiz's desert tortoise, and CMBC proposes that full-time construction monitoring will not be needed in these areas. Weekly compliance visits, as described in the RFP, are proposed on Monday morning of each week for this section of the pipeline. The Service has tentatively concurred with this approach, pending formal written approval.
- CMBC estimates that construction through these developed areas will take approximately 16 weeks, with once-a-week visits to ensure compliance. Construction through the remaining 2.5 miles of ROW will take 20 weeks, based on a total estimated construction period of 36 weeks, and will require full time monitoring, as tortoises are most likely to be encountered in these areas.
- CMBC assumes that the construction crew will work a 5-day, 40-hour work week. Since monitors will generally be on-site 15-30 minutes prior to start of construction, and will stay on-site until all heavy equipment is shut down for the day, monitors will work an estimated 45 hours per week, plus travel time. CMBC anticipates, with a few exceptions, that monitors will make one trip to the Joshua Tree area and one trip home each week, which will include billable time and mileage.
- CMBC assumes that there will be a single point of construction for pipeline installation, and that one monitor/authorized biologist will be sufficient to monitor all activities. Since the recharge basin has already been fenced, CMBC would only monitor the following two activities: (1) Salvage and stockpile of topsoil to minimize impacts to Little San Bernardino Mountains linanthus (*Linanthus maculatus*), which is a rare plant occurring within the basin area; and (2) remain onsite until pertinent portions of the basin are bladed, which is intended to document no impacts to tortoises.

Per the RFP, the following materials will accompany this cover letter:

- Appendix A: Statement of Qualifications
- Appendix B: Understanding and Approach
- Appendix C: Staff Availability
- Appendix D: Cost Estimate

If additional information is needed, please contact Sharon Dougherty at (760) 249-4948, or by email at sharon_dougherty@circlemountainbiological.com. We appreciate the opportunity to submit a proposal for this work.

Sincerely,



Sharon Dougherty
President, Circle Mountain Biological Consultants, Inc.

APPENDIX A: Statement of Qualifications

DESERT TORTOISE AUTHORIZED BIOLOGIST REQUEST FORM

This form should be used to provide your qualifications to agency officials if you wish to undertake the duties of an authorized biologist with regard to desert tortoises during construction or other projects authorized under Sections 7 (Biological Opinions) or 10(a)(1) (B) (i.e. Habitat Conservation Plans) of the Endangered Species Act.

(If you seek approval to attach/remove/insert any devices or equipment to/into desert tortoises, withdraw blood, or conduct other procedures on desert tortoises, a recovery permit or similar authorization may be required. Application for a recovery permit requires completion of Form 3-200-55, which can be downloaded at <http://www.fws.gov/forms/3-200-55.pdf>.)

1. Contact Information:

Name	Edward L. LaRue, Jr.
Address	PO Box 3197
City, State, Zip Code	Wrightwood, CA 92397
Phone Number(s)	(760) 249-4948
Email Address	ed.larue@verizon.net

2. Date: 12/7/2012

3. Areas in which authorization is requested (check all that apply):

- San Bernardino, Kern, Inyo and Los Angeles Counties, California (Ventura office)
- Riverside, San Diego, and Imperial Counties, California (Carlsbad office)
- Nevada Utah Arizona

4. Please provide information on the project:

USFWS Biological Opinion or HCP No. When Applicable	Number: 8-8-10-F-66	Date: 4 February 2012
Project Name	Joshua Basin Water District, Water Recharge Basin	
Federal Agency (If Applicable)	Environmental Protection Agency	
Proponent or Contractor	Joshua Basin Water District	

5. If you hold, or have held, any relevant state or federal wildlife permits provide the following:

Species	Dates	State (specify) or Federal Permit Number	Authorized Activities
Desert tortoise	1989-2012	Biological Opinions 1-8-99-F-67, 1-8-94-F-41, 1-8-97-F-17, & 1-6-91-F-	Named to handle desert tortoise as authorized biologist on BOs and 10a permit listed to the left
Mohave Ground Squirrel	4/11/2012 to 4/30/2016	MOU	Trap, handle, PIT-tag, and collect tissue samples from Mohave ground squirrels
Reptiles, mammals	8/29/2011 to 8/29/2013	Scientific Collections Permit SC-001544	Catch and release
Flat-tailed Horned Lizard	18 May 2010	CDFG/BLM Certified	Certified to conduct focused surveys for flat-tailed horned lizards

6. **Education:** Provide up to three schools, listing most recent first:

Institution	Dates attended	Major/Minor	Degree received
Ohio State University, Department of Entomology	1983-1987	Veterinary and Medical Entomology	MS
Virginia Tech, Department of Biology	1977-1982	General Biology	BA

7. **Desert Tortoise Training:**

Name/Type of Training	Dates (From/To)	Location	Instructor/Sponsor
1. Classes: Desert Tortoise Council Workshop	1990-2012	Ridgecrest, CA	Instructor at all 25 workshops
2. Field Training: 23 years of focused tortoise	1989-2012	Throughout Mojave Desert	Lead Biologist on all surveys

8. **Experience** - Include only those positions relevant to the requested work with desert tortoises. Distinguish between wild Mojave desert tortoise and other experience. Include only your experience, not information for the project you worked on (e.g., if 100 tortoises were handled on a project and you handled 5 of those tortoises, include only those 5. List most recent experience first. Handling a Mojave desert tortoise must be authorized by a Biological Opinion or other permit and reported to the USFWS. Information provided in this section will be used by the USFWS to track the numbers of tortoises affected by previous projects (baseline). **Be sure to include a project supervisor or other contact that can verify your skills and experience in relation to your job performance.** Attach additional sheets as necessary. Please use numbers in each column; do not use "X's" to indicate participation in the activity. If your experience is limited to **less than three desert tortoise positions**, please include additional job experience and references in the section below (pg. 5).

Experience by project and activity:

Please include: Project Name Job & Title Dates of Employment	Supervisor / Project Contact Name Phone Email address	Conduct Clearance Surveys (Hrs/Days)	Excavate DT Burrows (No.)	Locate DT No. < 100mm 100mm	Handled for Relocation DTs (No.)	Excavate and relocate DT nests (No.)
1. Copper Mountain College Translocation Authorized Biologist (TE 143444-0) 2008 to 2012	Paul Delaney, PhD Copper Mountain College Cell: (310) 804-7436 pdelaney@cmccd.edu	+/- 30 days	10-15	10	+/- 45	0
2. Bowman Road Pipeline (BO 1-8-99-F-67) Authorized Biologist 8 months in 2000	Renee Morquecho, PhD Indian Wells Valley Water D. (760) 384-5520	+/- 7 days	0	8	0	0
3. Copper Mesa Pipeline (BO 1-6-91-F-30) Authorized Biologist 7 months in 1996	Susan Greer Joshua Basin Water District (760) 366-8438	+/- 30 days	8-10	12-15	3-4	0
4. Mojave River Pipeline (BO 1-8-97-F-17) Authorized Biologist 11 months in 1999	Edward LaRue Circle Mountain Biological Consultants, Inc.	+/- 30 days	3-4	6-8	2-3	0
5. Lenwood Loop Connector Roadway Authorized Biologist (1-8-94-F-41) 8-1-1994 to 12-9-1994	Edward LaRue Circle Mountain Biological Consultants, Inc. (760) 249-4948	4 days±	1	25±	7	0
6. Morongo Basin Pipeline (1-6-91-F-30) Authorized Biologist 14 months 1993 to 1994	Larry LaPre, PhD. BLM – Moreno Valley (951) 697-5218 llapre@blm.gov	+/- 45 days	0	2-3	0	0

Experience by project and activity (continued): Each project number should correspond with the project listed on the previous page

Project Name (Number should correspond to previous page)	Construct Artificial Burrows (No.)	Monitor project equipment and activities (Hrs/Days)	Oversee project compliance (Hrs/ Days)	Supervise DT field staff (Hrs/Days) and No. staff supervised	DT fence Installation and inspection (Hrs/Days)	Present DT Awareness Training (No.)
1. Copper Mountain College Translocation Authorized Biologist 2008 to 2012	3-5	45 days	90 days	6 staff	10 days	6
2. Bowman Road Pipeline Authorized Biologist 8 months in 2000	0	30 days	8 months	8 months, 3 staff	0	5-6
3. Copper Mesa Pipeline Authorized Biologist 7 months in 1996	3-4	45 days	7 months	7 months, 5 staff	5 days	6-7
4. Mojave River Pipeline Authorized Biologist 11 months in 1999	0	180 days	11 months	11 months, 6 staff	3 days	10-15
5. Lenwood Loop Connector Roadway Authorized Biologist 8-1-1994 to 12-9-1994	0	120 days	4 months	4 months, 3 staff	0	8-10
6. Morongo Basin Pipeline Authorized Biologist 14 months 1993 to 1994	0	30 days	14 months	14 months, 8 staff	0	5-10

Summary of experience:

Total time spent for all desert tortoise-related field activities
(referenced above): Specify total number of hours:
OR total number of 8-hour days: 450 days

Total number of miles walked conducting survey transects: 5,000-7,500 miles

Total number of wild, free-ranging desert tortoises you personally handled:

<100 mm: 25*

≥100 mm: 75*

*I handled many tortoises in the early 2000's implementing USFWS distance sampling surveys in the West and East Mojave deserts. I also helped survey 220 square miles of Lancaster in 1990; 105 square miles of Edwards Air Force Base in 1994; 118 square miles of Fort Irwin in 1998; 4,000 square miles of the West Mojave for the West Mojave Plan between 1997 and 2000; 477 miles on 29 Palms Marine Corps Base in 2011, among other regional survey efforts, which are not reflected in the summary tables.

Additional supervisory experience other than with desert tortoise work:

Project	Time	Staff (No.)
Tierra Madre Consultants – Vice President	2 years	15

Additional references for individuals whom have held **less than three** positions working with desert tortoise

Project Name Job Title Dates of employment	Supervisor / Project Contact Name Phone Email address
Patuxent Wildlife Research Center, 1978-1988	James Carpenter, DVM (? Contact info)
Puerto Rican Parrot Project (1983-1986)	James Wiley, PhD (? Contact info)
Tern & Plover Steward for The Nature Conservancy, 6 months 1987	Karene Motivans (? Contact info)

I certify that the information submitted in this form is complete and accurate to the best of my knowledge and belief.
I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. Ch.47, Sec. 1001.

Signed: 

Date: 12/7/2012

DESERT TORTOISE AUTHORIZED BIOLOGIST REQUEST FORM

This form should be used to provide your qualifications to agency officials if you wish to undertake the duties of an authorized biologist with regard to desert tortoises during construction or other projects authorized under Sections 7 (Biological Opinions) or 10(a)(1) (B) (i.e. Habitat Conservation Plans) of the Endangered Species Act.

(If you seek approval to attach/remove/insert any devices or equipment to/into desert tortoises, withdraw blood, or conduct other procedures on desert tortoises, a recovery permit or similar authorization may be required. Application for a recovery permit requires completion of Form 3-200-55, which can be downloaded at <http://www.fws.gov/forms/3-200-55.pdf>.)

1. Contact Information:

Name	Sharon Dougherty
Address	PO Box 3197
City, State, Zip Code	Wrightwood, CA 92397
Phone Number(s)	(760) 249-4948
Email Address	sharon_dougherty@circlemountainbiological.com

2. Date: 12/7/2012

3. Areas in which authorization is requested (check all that apply):

- San Bernardino, Kern, Inyo and Los Angeles Counties, California (Ventura office)
- Riverside, San Diego, and Imperial Counties, California (Carlsbad office)
- Nevada Utah Arizona

4. Please provide information on the project:

USFWS Biological Opinion or HCP No. When Applicable	Number: 8-8-10-F-66	Date: 4 February 2012
Project Name	Joshua Basin Water District, Water Recharge Basin	
Federal Agency (If Applicable)	Environmental Protection Agency	
Proponent or Contractor	Joshua Basin Water District	

5. If you hold, or have held, any relevant state or federal wildlife permits provide the following:

Species	Dates	State (specify) or Federal Permit Number	Authorized Activities
Reptiles, mammals	4/22/2010 to 4/22/2012	Scientific Collections Permit SC-000713	Catch and release
Desert tortoise	1994-2012	Biological Opinions 1-8-99-F-67, 1-8-94-F-41, 1-8-97-F-17, & 1-6-91-F-30	Named to handle desert tortoise as authorized biologist on BO's to left
Flat-tailed Horned Lizard	18 May 2010	CDFG/BLM Certified	Certified to conduct focused surveys for flat-tailed horned lizards

6. **Education:** Provide up to three schools, listing most recent first:

Institution	Dates attended	Major/Minor	Degree received
Yale University School of Forestry and Environmental Studies	1984-1987	Environmental Studies/Wildlife Biology	MES
University of California Santa Cruz	1976-1981	Biology and Environmental Studies	2 BAs

7. **Desert Tortoise Training:**

Name/Type of Training	Dates (From/To)	Location	Instructor/Sponsor
1. Classes: Desert Tortoise Council Workshops	1994, 1995, 1996	Ridgecrest, CA	Desert Tortoise Council
2. Field Training: 18 years of focused tortoise surveys	1994-2012	Throughout Mojave Desert	Edward LaRue

8. **Experience** - Include only those positions relevant to the requested work with desert tortoises. Distinguish between wild Mojave desert tortoise and other experience. Include only your experience, not information for the project you worked on (e.g., if 100 tortoises were handled on a project and you handled 5 of those tortoises, include only those 5. List most recent experience first. Handling a Mojave desert tortoise must be authorized by a Biological Opinion or other permit and reported to the USFWS. Information provided in this section will be used by the USFWS to track the numbers of tortoises affected by previous projects (baseline). **Be sure to include a project supervisor or other contact that can verify your skills and experience in relation to your job performance.** Attach additional sheets as necessary. Please use numbers in each column; do not use "X's" to indicate participation in the activity. If your experience is limited to **less than three desert tortoise positions**, please include additional job experience and references in the section below (pg. 5).

Experience by project and activity:

Please include: Project Name Job & Title Dates of Employment	Supervisor/ Project Contact Name Phone Email address	Conduct Clearance Surveys (Hrs/Days)	Excavate DT Burrows (No.)	Locate DT No. < 100mm 100mm	Handled for Relocation DTs (No.)	Excavate and relocate DT nests (No.)
1. Rite Aid Yucca Valley Biological Monitor 9-30-2011 to 7-19-2011	Edward LaRue Circle Mountain Biological Consultants, Inc. (760) 249-4948 ed.larue@verizon.net	1 day	0	0	0	0
2. Bighorn Desert Water Agency Recharge Basin Test Well Drilling Biological Monitor 8-23-2010 to 10-9-2010	Marina West Bighorn Desert Water Agency (760) 364-2315 bdvwa2@mindspring.com	1 day	0	0	0	0
3. Gray Butte Runway Extension Biological Monitor 3-25-2009 to 10-17-2009	Dick McRae General Atomics Aeronautical Systems, Inc. 25500 East Avenue R-8 Palmdale, CA 93550 (760) 388-8102 richardmcr@gat.com	4 days	0	0	0	0
4. Monitoring of geologic trench on APN 588-062-26, Yucca Valley Biological Monitor 6-4-2006 to 6-9-2006	Edward LaRue Circle Mountain Biological Consultants, Inc. (760) 249-4948 ed.larue@verizon.net	1 day	0	0	0	0
5. Indian Wells Valley Water District Southwest Well Field	Renee Morquecho, PhD Indian Wells Valley Water D. (760) 384-5520 reneem@iwwvd.com	6 days	0	3±	0	0
5. Mojave River Pipeline, Phase I Authorized Biologist (BO 1-8-97-F-17) March 1997 to December 1997	Edward LaRue Circle Mountain Biological Consultants, Inc. (760) 249-4948 ed.larue@verizon.net	0 days	2	4±	0	0
6. Lenwood Loop Connector Road Construction Project (1-8-94-F-41) Authorized Biologist 8-1-1994 to 12-9-1994	Edward LaRue Circle Mountain Biological Consultants, Inc. (760) 249-4948 ed.larue@verizon.net	4 days±	1	25±	7	0

Experience by project and activity (continued): Each project number should correspond with the project listed on the previous page

Project Name (Number should correspond to previous page)	Construct Artificial Burrows (No.)	Monitor project equipment and activities (Hrs/Days)	Oversee project compliance (Hrs/ Days)	Supervise DT field staff (Hrs/Days) and No. staff supervised	DT fence Installation and inspection (Hrs/Days)	Present DT Awareness Training (No.)
1. Construction of Rite Aid Yucca Valley Biological Monitor 9-30-2011 to 7-19-2011	0	2 days	2 days	0	0	1
2. Bighorn Desert Water Agency Recharge Basin Test Well Drilling Biological Monitor 8-23-10 to 10-9-2010	0	2 days	2 days	4 days, 1 staff	2 days	1
3. Gray Butte Runway Extension Biological Monitor 3-25-09 to 10-17-2009	0	136 hours	136 hours	7 days, 2 staff	0	2
4. Monitoring of geologic trench on APN 588-062-26, Yucca Valley Biological Monitor 6-4-2006 to 6-9-2006	0	2 days	2 days	5 days, 1 staff	0	1
5. Indian Wells Valley Water District Southwest Well Field	0	6 days	6 days	0	0	2
6. Mojave River Pipeline, Phase I Authorized Biologist March 1997 to December 1997	0	627.5 hours	627.5 hours	0	0	7±
7. Lenwood Loop Connector Road Construction Project Authorized Biologist 8-1-1994 to 12-9-1994	0	100 days±	100 days±	100 days±, 1 staff	0	10±

Summary of experience:

Total time spent for all desert tortoise-related field activities
(referenced above): Specify total number of hours:

OR total number of 8-hour days: 250± days

Total number of miles walked conducting survey transects: 700+ miles

Total number of wild, free-ranging desert tortoises you personally handled:

<100 mm: 0

≥100 mm: 7

Additional supervisory experience other than with desert tortoise work:

Project	Hours	Staff (No.)
US Forest Service Resource Officer	2 years	3

Additional references for individuals whom have held **less than three** positions working with desert tortoise

Project Name Job Title Dates of employment	Supervisor / Project Contact Name Phone Email address

I certify that the information submitted in this form is complete and accurate to the best of my knowledge and belief.

I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. Ch.47, Sec. 1001.

Signed: Sharon Dougherty Date: 2/3/2012

DESERT TORTOISE AUTHORIZED BIOLOGIST REQUEST FORM

This form should be used to provide your qualifications to agency officials if you wish to undertake the duties of an authorized biologist with regard to desert tortoises during construction or other projects authorized under Sections 7 (Biological Opinions) or 10(a)(1) (B) (i.e. Habitat Conservation Plans) of the Endangered Species Act.

(If you seek approval to attach/remove/insert any devices or equipment to/into desert tortoises, withdraw blood, or conduct other procedures on desert tortoises, a recovery permit or similar authorization may be required. Application for a recovery permit requires completion of Form 3-200-55, which can be downloaded at <http://www.fws.gov/forms/3-200-55.pdf>.)

1. Contact Information:

Name	Patricia C. Seamount
Address	PO Box 8447
City, State, Zip Code	Bodfish, CA 93205
Phone Number(s)	(760) 379-8516, cell: (760) 793-0522
Email Address	pseamount@earthlink.net

2. Date: 10 December 2012

3. Areas in which authorization is requested (check all that apply):

- X San Bernardino, Kern, Inyo and Los Angeles Counties, California (Ventura office)
- Riverside, Sn Diego, and Imperial Counties, California (Carlsbad office)
- Nevada Utah Arizona

4. Please provide information on the project:

USFWS Biological Opinion or HCP No. When Applicable		Date:
Project Name		
Federal Agency (If Applicable)		
Proponent or Contractor		

5. If you hold, or have held, any relevant state or federal wildlife permits provide the following:

Species	Dates	State (specify) or Federal Permit Number	Authorized Activities
Gopherus agassizii	31 Jul 2007-31 Jul 2023	USFWS TE 14344-0	Capture, weigh, measure, mark, release in translocation area (Copper Mountain Community College Translocation)
Gopherus agassizii	March 2007 - April 2008	USFWS TE 108507	Capture, weigh, measure, mark/xmtr, release (Ft. Irwin SEA Translocation)
Gopherus agassizii	April 2007 - December 2007	DJOTR-2007-SCI-0016 CDFG-SCP-802036-02 (sub-permit FWSNFW-0-9)	Capture, weight, measure, release (USGS/Line Distance Sampling)

6. Education: Provide up to three schools, listing most recent first:

Institution	Dates attended	Major/Minor	Degree received
California Polytechnic State University	1/1985-6/1990	Aerospace Engineering	BS
Cerro Coso Community College	1977 -1984	General Education	AA
Southern Oregon State College	1975-1977	Biology, Biological Illustration	---

7. Desert Tortoise Training.

Name/Type of Training	Dates (From/To)	Location	Instructor/Sponsor
1. Classes: Desert Tortoise Handling Workshop,	2004.2012	Ridgecrest, CA	Ed LaRue, Peter Woodman
2. Field Training: Various locations in Mojave and Colorado Deserts	2004 -2006, 2012	Moronggo Basin, West Mojave, East Mojave	Ed LaRue
3. Translocation: 1) Copper Mountain Community College, 2) Ft. Irwin SEA	1) 2008 2) 2007	1)Joshua Tree, CA 2)Ft. Irwin, CA	1)Ed LaRue 2)Peter Woodman
4			

8. Experience - Include only those positions relevant to the requested work with desert tortoises. Distinguish between wild Mojave desert tortoise and other experience. Include only your experience, not information for the project you worked on (e.g., if 100 tortoises were handled on a project and you handled 5 of those tortoises, include only those 5. List most recent experience first. Handling a Mojave desert tortoise must be authorized by a Biological Opinion or other permit and reported to the USFWS. Information provided in this section will be used by the USFWS to track the numbers of tortoises affected by previous projects (baseline). **Be sure to include a project supervisor or other contact that can verify your skills and experience in relation to your job performance.** Attach additional sheets as necessary. Please use numbers in each column; do not use "X's" to indicate participation in the activity. If your experience is limited to **less than three desert tortoise positions**, please include additional job experience and references in the section below (pg. 5).

Experience by project and activity:

Please include: Project Name Job Title Dates of Employment	Supervisor I Project Contact Name Phone Email address	Conduct Clearance Surveys (Hrs/Days)	Excavate DT burrows (No.)	Locate DT No. < 100mm 100mm	Handled for Relocation DTs (No.)	Excavate, and relocate DT nests (No.)
1. Nursery Products, Inc. Biological Monitor Nov 2011 - Jan 2012	Steve Boland Sundance Biological (928)380-8850 spboland@aol.com	3 days	0	0	0	0
2. Windstar/RMT Windmill Project Biological Monitor Dec 2010 - Dec 2012	Steve Boland Sundance Biological (928)380-8850 spboland@aol.com	3 days	0	0	0	0
3. Fast & Furious Film Shoot Authorized Biologist Jun 30 - July 29, 2010 B.O. 1-8-97-F-17 (BLM)	Kerri Tuttle Environmental Science and Assoc. (760)681-7696 ktuttle@esaassoc.com	7 days	0	0	0	0
4. Copper Mountain Community College Translocation Re- Survey Authorized Biologist Apr 18 - 19, 2009	Edward LaRue Circle Mountain Biological Consultants, Inc. (760)249-4948 circlemtn@yahoo.com	2 days	0	2 < 10 >	3	0
5. Joshua Tree Elementary School Seismic Trench Biological Monitor Dec 3, 2008	Edward LaRue Circle Mountain Biological Consultants, Inc. (760)249-4948 circlemtn@yahoo.com	1 day	0	0	0	0
6. Copper Mountain Community College Translocation Authorized Biologist Sept 15 - 30, Oct 1,2, Nov 19-21, 24, 2008	Edward LaRue Circle Mountain Biological Consultants, Inc. (760)249-4948 circlemtn@yahoo.com	84 hrs	0	3 < 10 >	3	0

7. Ft. Irwin SEA Translocation Authorized Biologist April 15-May 9, 2007	Peter Woodman Kiva Biological Consulting (760)377-3466 kivabio@aol.com		200 hrs	0	6 < 16 >	18	0
8. Line Distance Sampling Authorized Biologist Mar 21-Apr 7, 2007	Peter Woodman Kiva Biological Consulting (760)377-3466 kivabio@aol.com		122 hrs	0	3 >	0	0
9. DanMark Seismic Trench Biological Monitor Sep 25-29, Oct. 2-19, 2008	Edward LaRue Circle Mountain Biological Consultants, Inc. (760)249-4948 circlemtn@yahoo.com		48 hrs	0	3>	0	0
10. IWWWD Pipeline & Tank Expansion Biological Monitor July - December, 2006	Edward LaRue Circle Mountain Biological Consultants, Inc. (760)249-4948 circlemtn@yahoo.com		92 hrs	0	0	0	0

Experience by project and activity (continued): Each project number should correspond with the project listed on the previous page

Project Name (Number should correspond to previous page)	Construct Artificial Burrows (No.)	Monitor project equipment and activities (Hrs/Days)	Oversee project compliance (Hrs/Days)	Supervise DT field staff (Hrs/Days) and No. staff supervised	DT fence Installation and inspection (Hrs/Days)	Present DT Awareness Training (No.)
1. Nursery Products, Inc.	0	2 days	2 days	0	2 days	1
2. Windstar/RMT Windmill Project	0	52 days	52 days	0	30 days	0
3. Fast & Furious Film Shoot	0	26 days	26 days	0	0	3
4. Copper Mountain Community College Translocation Re-Survey	0	0	0	0	0	0
5. Joshua Tree Elementary School Seismic Trench	0	1 day	1 day	0	0	1
6. Copper Mountain Community College Translocation	0	168 hrs	168 hrs	0	5	0
7. Ft. Irwin SEA Translocation	0	0	0	0	0	0
8. Line Distance Sampling	0	0	0	0	0	0
9. DanMark Seismic Trench	0	119 hrs	119 hrs	0	0	1
10. IWVWD Pipeline/Tank Expansion	0	203 hrs	203 hrs	0	24	4
11. Various Survey Jobs, 2004-present	0	0	0	0	0	0

Summary of experience:

Total time spent for all desert tortoise-related field activities
(referenced above): Specify total number of hours:

OR total number of 8-hour days: **4626 hrs (2004 - 2012)**

Total number of miles/kilometers walked conducting survey transects: **3854 miles**

Total number of wild, free-ranging desert tortoises you personally handled:

<100 mm: <10

≥100 mm: 0-50 (includes ~30 tortoises from LV Recovery center, trg. for LDS)

Additional supervisory experience other than with desert tortoise work

Project	Hours	Staff (No.)
NASA Dryden Flight Research Center Co-op Supervision	360	3

Additional references for individuals whom have held **less than three** positions working with desert tortoise

Project Name Job Title Dates of employment	Supervisor / Project Contact Name Phone Email address

I certify that the information submitted in this form is complete and accurate to the best of my knowledge and belief.

I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. Ch.47, Sec. 1001.

Signed: *Patricia C. Sammont*

Date: 12/12/12

DESERT TORTOISE AUTHORIZED BIOLOGIST REQUEST FORM

This form should be used to provide your qualifications to agency officials if you wish to undertake the duties of an authorized biologist with regard to desert tortoises during construction or other projects authorized under Sections 7 (Biological Opinions) or 10(a)(1) (B) (i.e. Habitat Conservation Plans) of the Endangered Species Act.

(If you seek approval to attach/remove/insert any devices or equipment to/into desert tortoises, withdraw blood, or conduct other procedures on desert tortoises, a recovery permit or similar authorization may be required. Application for a recovery permit requires completion of Form 3-200-55, which can be downloaded at <http://www.fws.gov/forms/3-200-55.pdf>.)

1. Contact Information:

Name	Michael L. Gallagher
Address	PO Box 8447
City, State, Zip Code	Bodfish, CA 93205
Phone Number(s)	(760) 379-8516, cell: (760) 793-0560
Email Address	mgallagher49@hotmail.com

2. Date: 12 December 2012

3. Areas in which authorization is requested (check all that apply):

-
- XSan Bernardino, Kern, Inyo and Los Angeles Counties, California (Ventura office)
- Riverside, San Diego, and Imperial Counties, California (Carlsbad office)
- Nevada Utah Arizona

4. Please provide information on the project:

USFWS Biological Opinion or HCP No. When Applicable		Date:
Project Name		
Federal Agency (If Applicable)		
Proponent or Contractor		

5. If you hold, or have held, any relevant state or federal wildlife permits provide the following:

Species	Dates	State (specify) or Federal Permit Number	Authorized Activities
Gopherus agassizii	31 Jul 2007-31 Jul 2023	USFWS TE 14344-0	Capture, weigh, measure, mark, release in translocation area (Copper Mountain Community College Translocation)
Gopherus agassizii	March 2007 - April 2008	USFWS TE 108507	Capture, weigh, measure, mark/xmtr, release (Ft. Irwin SEA Translocation)
Gopherus agassizii	April 2007 - December 2007	DJOTR-2007-SCI-0016 CDFG-SCP-802036-02 (sub-permit FWSNFW-0-9)	Capture, weight, measure, mark, release (USGS/Line Distance Sampling)

6. **Education:** Provide up to three schools, listing most recent first:

Institution	Dates attended	Major/Minor	Degree received
CSU, Bakersfield	1989-1990	Education, Multisubject	B.A.
CSU, Bakersfield	1987-1989	Communications, Liberal Studies	B.A.
Bakersfield College	1970-1986	Liberal Arts, Computer Science	A.A.

7. **Desert Tortoise Training.**

Name/Type of Training	Dates (From/To)	Location	Instructor/Sponsor
2. Classes: Desert Tortoise Handling Workshop,	2004, 2012	Ridgecrest, CA	Ed LaRue, Peter Woodman
2. Field Training: Various locations in Mojave and Colorado Deserts	2004 -2007, 2012	West Mojave, East Mojave, Imperial Co.	Ed LaRue, Peter Woodman
3. Translocation: 1) Copper Mountain Community College, 2) Ft. Irwin SEA	3) 2008 4) 2007	1) Joshua Tree, CA 2) Ft. Irwin, CA	1) Ed LaRue 2) Peter Woodman

8. Experience - Include only those positions relevant to the requested work with desert tortoises. Distinguish between wild Mojave desert tortoise and other experience. Include only your experience, not information for the project you worked on (e.g., if 100 tortoises were handled on a project and you handled 5 of those tortoises, include only those 5. List most recent experience first. Handling a Mojave desert tortoise must be authorized by a Biological Opinion or other permit and reported to the USFWS. Information provided in this section will be used by the USFWS to track the numbers of tortoises affected by previous projects (baseline). **Be sure to include a project supervisor or other contact that can verify your skills and experience in relation to your job performance.** Attach additional sheets as necessary. Please use numbers in each column; do not use "X's" to indicate participation in the activity. If your experience is limited to **less than three desert tortoise positions**, please include additional job experience and references in the section below (pg. 5).

Experience by project and activity:

Please include: Project Name Job Title Dates of Employment	Supervisor I Project Contact Name Phone Email address	Conduct Clearance Surveys (Hrs/Days)	Excavate DT burrows (No.)	Locate DT No. < 100mm 100mm	Handled for Relocation DTs (No.)	Excavate, and relocate DT nests (No.)
1. Bowman Road Ext Biological Monitor Jul 16 - Nov 13, 2012	Randi McCormick McCormick Biological (661)343-1078 randi@mccormickbiologicalinc.com	0 hrs	0	0	0	0
2. Windstar/RMT Windmill Project Biological Monitor Dec 2010 - Dec 2011	Steve Boland Sundance Biological (928)380-8850 spboland@aol.com	5 days	0	0	0	0
3. Joshua Basin Water District Biological Monitor April 6 - 14, 2010	Edward LaRue Circle Mountain Biological Consultants, Inc. (760)249-4948 circlemtn@yahoo.com	8 hrs	0	0 1 >	0	0
4. Copper Mountain Community College Translocation Re-Survey Authorized Biologist Apr 19, 2009	Edward LaRue Circle Mountain Biological Consultants, Inc. (760)249-4948 circlemtn@yahoo.com	10 hrs	0	1 < 4 >	1	0
5 Copper Mountain Community College Translocation Authorized Biologist Sept 15 - 30, Oct 1,2, Nov 19-21, 24, 2008	Edward LaRue Circle Mountain Biological Consultants, Inc. (760)249-4948 circlemtn@yahoo.com	70 hrs	1	1 < 12 >	3	0
6. 29 Palms Pressure Betterment Project Biological Monitor Mar 24 - April 2008	Mark Cassady TRC Solutions (805)528-7099 mcassady@trcsolutions.com	80 hrs	0	3 >	0	0
7. Ft. Irwin SEA Translocation Authorized Biologist April 15-May 9, 2007	Peter Woodman Kiva Biological Consulting (760)377-3466 kivabio@aol.com	200 hrs	0	6 < 15 >	21	0
8. Line Distance Sampling Authorized Biologist Mar 21-Apr 7, 2007	Peter Woodman Kiva Biological Consulting (760)377-3466 kivabio@aol.com	122 hrs	0	3 >	0	0
9. IWWWD Pipeline & Tank Expansion Biological Monitor July - December, 2006	Edward LaRue Circle Mountain Biological Consultants, Inc. (760)249-4948 circlemtn@yahoo.com	29 hrs	0	0	0	0

Experience by project and activity (continued): Each project number should correspond with the project listed on the previous page

Project Name (Number should correspond to previous page)	Construct Artificial Burrows (No.)	Monitor project equipment and activities (Hrs/Days)	Oversee project compliance (Hrs/ Days)	Supervise DT field staff (Hrs/Days) and No. staff supervised	DT fence Installation and inspection (Hrs/Days)	Present DT Awareness Training (No.)
1. Bowman Road Extension	0	256 hrs	256 hrs	0	256 hrs	26
2. Windstar/RMT Windmill Project	0	52 days	52 days	0	30 days	0
3 Joshua Basin Water District	0	57 hrs	57 hrs	0	0	7
4. Copper Mountain Community College Translocation Re-Survey	10 hrs	0	0	0	0	0
5. Copper Mountain Community College Translocation	0	168 hrs	168	0	93	0
6. 29 Palms Pressure Betterment Project	0	306 hrs	306 hrs	0	16	11
7. Ft. Irwin SEA Translocation	0	0	0	0	0	0
8. Line Distance Sampling	0	0	0	0	0	0
9. IWVWD Pipeline/Tank Expansion	0	29 hrs	29 hrs	0	0	4

Summary of experience:

Total time spent for all desert tortoise-related field activities
(referenced above): Specify total number of hours:

OR total number of 8-hour days: **4430 hrs**

Total number of miles/kilometers walked conducting survey transects: **3610 miles**

Total number of wild, free-ranging desert tortoises you personally handled:

<100 mm: <10

≥100 mm: 0-50 (includes ~30 tortoises from LV Recovery center, trg. for LDS)

Additional supervisory experience other than with desert tortoise work


Project	Hours	Staff (No.)
Silviculture projects, USFS	90	12
Fire Hazard Reduction, USFS	200	2

Additional references for individuals whom have held **less than three** positions working with desert tortoise

Project Name Job Title Dates of employment	Supervisor / Project Contact Name Phone Email address

I certify that the information submitted in this form is complete and accurate to the best of my knowledge and belief.

I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. Ch.47, Sec. 1001.

Signed: 

Date: 12/12/12

DESERT TORTOISE AUTHORIZED BIOLOGIST REQUEST FORM

This form should be used to provide your qualifications to agency officials if you wish to undertake the duties of an authorized biologist with regard to desert tortoises during construction or other projects authorized under Sections 7 (Biological Opinions) or 10(a)(1) (B) (i.e. Habitat Conservation Plans) of the Endangered Species Act.

(If you seek approval to attach/remove/insert any devices or equipment to/into desert tortoises, withdraw blood, or conduct other procedures on desert tortoises, a recovery permit or similar authorization may be required. Application for a recovery permit requires completion of Form 3-200-55, which can be downloaded at <http://www.fws.gov/forms/3-200-55.pdf>.)

1. Contact Information:

Name	Michael Radakovich
Address	PO Box 2731
City, State, Zip Code	Wrightwood, CA 92397
Phone Number(s)	(760) 646-0332
Email Address	ed.larue@verizon.net

2. Date: 12/7/2012

3. Areas in which authorization is requested (check all that apply):

- San Bernardino, Kern, Inyo and Los Angeles Counties, California (Ventura office)
- Riverside, San Diego, and Imperial Counties, California (Carlsbad office)
- Nevada Utah Arizona

4. Please provide information on the project:

USFWS Biological Opinion or HCP No. When Applicable	Number: 8-8-10-F-66	Date: 4 February 2012
Project Name	Joshua Basin Water District, Water Recharge Basin	
Federal Agency (If Applicable)	Environmental Protection Agency	
Proponent or Contractor	Joshua Basin Water District	

5. If you hold, or have held, any relevant state or federal wildlife permits provide the following:

Species	Dates	State (specify) or Federal Permit Number	Authorized Activities
Desert tortoise	2008	10a permit TE 143444-0	Authorized to handle tortoises under 10a permit
Desert tortoise	2000-2002	USFWS Distance Sampling Trainee	Authorized to handle tortoises during distance sampling

6. **Education:** Provide up to three schools, listing most recent first:

Institution	Dates attended	Major/Minor	Degree received
John A. Rowland High School	1975-1978	N/A	High School diploma

7. **Desert Tortoise Training:**

Name/Type of Training	Dates (From/To)	Location	Instructor/Sponsor
1. Field Training: 13 years of focused tortoise	1999-2012	Throughout Mojave Desert	Surveying biologist on all surveys

8. **Experience** - Include only those positions relevant to the requested work with desert tortoises. Distinguish between wild Mojave desert tortoise and other experience. Include only your experience, not information for the project you worked on (e.g., if 100 tortoises were handled on a project and you handled 5 of those tortoises, include only those 5. List most recent experience first. Handling a Mojave desert tortoise must be authorized by a Biological Opinion or other permit and reported to the USFWS. Information provided in this section will be used by the USFWS to track the numbers of tortoises affected by previous projects (baseline). **Be sure to include a project supervisor or other contact that can verify your skills and experience in relation to your job performance.** Attach additional sheets as necessary. Please use numbers in each column; do not use "X's" to indicate participation in the activity. If your experience is limited to **less than three desert tortoise positions**, please include additional job experience and references in the section below (pg. 5).

Experience by project and activity:

Please include: Project Name Job & Title Dates of Employment	Supervisor / Project Contact Name Phone Email address	Conduct Clearance Surveys (Hrs/Days)	Excavate DT Burrows (No.)	Locate DT No. < 100mm 100mm	Handled for Relocation DTs (No.)	Excavate and relocate DT nests (No.)
1. Copper Mountain College Translocation Authorized Biologist (TE 143444-0) 2008 to 2012	Paul Delaney, PhD Copper Mountain College Cell: (310) 804-7436 pdelaney@cmccd.edu	+/- 30 days	10-15	10	3-5	5-6
2. Joshua Basin Water District Recharge Basin Biological Monitor (8-8-10-F-66) 2010 to 2012	Joe Guzzetta Joshua Basin Water Dist. (760) 366-2042 x 226 jguzzetta@jbwd.com	+/- 30 days	0	0	0	0
3. Cadiz Pipeline and Wellfield Survey Tortoise Surveyor 9-20-2010 to 10-17-2010	Ed LaRue Circle Mountain Biological Consultants, Inc. (760) 249-4948 ed.larue@verizon.net	250 hours of presence-absence surveys	0	0 though sign was found	0	0
4. 29 Palms Hensel Phelps Construction Site Biological Monitor August to November 2010	Brian Henen, PhD 29 Palms Marine Corps (760) 830-5720 brian.henen@usmc.mil	+/- 40 hours	0	0	0	0
5. 29 Palms Marine Corps Base base-wide survey Tortoise Surveyor March through July 2011	Brent Husung 29 Palms Marine Corps (760) 830-5719 martin.husung@usmc.mil	3 months of presence-absence surveys	0	+/- 6	0	0
6. USFWS Distance Sampling in West Mojave Tortoise Surveyor 2000 through 2001	Pete Woodman Kiva Biological Consulting (760) 377-3466 kivabio@aol.com	+/- 2.5 months	0	30+	6-8	0

Experience by project and activity (continued): Each project number should correspond with the project listed on the previous page

Project Name (Number should correspond to previous page)	Construct Artificial Burrows (No.)	Monitor project equipment and activities (Hrs/Days)	Oversee project compliance (Hrs/ Days)	Supervise DT field staff (Hrs/Days) and No. staff supervised	DT fence Installation and inspection (Hrs/Days)	Present DT Awareness Training (No.)
1. Copper Mountain College Translocation Authorized Biologist (TE 143444-0) 2008 to 2012	0	10-15 days	10-15 days	0	6 days	1
2. Joshua Basin Water District Recharge Basin Biological Monitor (8-8-10-F-66) 2010 to 2012	0	30 days	30 days	0	15 days	0
3. Cadiz Pipeline and Wellfield Survey Tortoise Surveyor 9-20-2010 to 10-17-2010	0	250 hours of survey	0	0	0	0
4. 29 Palms Hensel Phelps Construction Site Biological Monitor August to November 2010	0	18 days	18 days	0	16 days	0
5. 29 Palms Marine Corps Base base-wide survey Tortoise Surveyor March through July 2011	0	3 months of survey	0	0	0	0
6. USFWS Distance Sampling in West Mojave Tortoise Surveyor 2000 through 2001	0	2.5 months of survey	0	0	0	0

Summary of experience:

Total time spent for all desert tortoise-related field activities
(referenced above): Specify total number of hours:

OR total number of 8-hour days: 220 days

Total number of miles walked conducting survey transects: 1,000-2,000 miles

Total number of wild, free-ranging desert tortoises you personally handled:

<100 mm: 3

≥100 mm: 10

Additional supervisory experience other than with desert tortoise work:

Project	Time	Staff (No.)
General contractor supervising many people	37 years	20

Additional references for individuals whom have held **less than three** positions working with desert tortoise

Project Name Job Title Dates of employment	Supervisor / Project Contact Name Phone Email address
With 13 years experience, not applicable	N/A

I certify that the information submitted in this form is complete and accurate to the best of my knowledge and belief.

I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. Ch.47, Sec.1001.

Signed:  Date: 12/7/2012

DESERT TORTOISE AUTHORIZED BIOLOGIST REQUEST FORM

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(If you seek approval to attach/remove/insert any devices or equipment to/into desert tortoises, withdraw blood, or conduct other procedures on desert tortoises, a recovery permit or similar authorization may be required. Application for a recovery permit requires completion of Form 3-200-55, which can be downloaded at <http://www.fws.gov/forms/3-200-55.pdf>.)

1. Contact Information:

Name	William Donnan
Address	P. O. Box 732
City, State, Zip Code	Wrightwood, CA 92397
Phone Number(s)	(760) 985-1179
Email Address	ed.larue@verizon.net

2. Date: 7 December 2012

3. Areas in which authorization is requested (check all that apply):

- X San Bernardino, Kern, Inyo and Los Angeles Counties, California (Ventura office)
- Riverside, San Diego, and Imperial Counties, California (Carlsbad office)
- Nevada Utah Arizona

4. Please provide information on the project:

USFWS Biological Opinion or HCP	Number: 8-8-10-F-66	Date: 4 February 2012
Project Name	Joshua Basin Water District, Water Recharge Basin	
Federal Agency	Environmental Protection Agency	
Proponent or Contractor	Joshua Basin Water District	

5. If you hold, or have held, any relevant state or federal wildlife permits provide the following:

Species	Dates	State (specify) or Federal Permit Number	Authorized Activities
Tortoise	Jan-Sept 2000	BO 1-8-99-F-67	Handle tortoises
Tortoise	3 months 1998	BO 1-8-97-F-17	Handle tortoises
Tortoise	April-Nov 1996	BO 1-6-91-F-30	Handle tortoises

6. Education: Provide up to three schools, listing most recent first:

Institution	Dates attended	Major/Minor	Degree received
Walnut High School	1993-1996	N/A	High School Diploma

7. Desert Tortoise Training:

Name/Type of Training	Dates (From/To)	Location	Instructor/Sponsor
1. Classes: Desert Tortoise Council	1998	Ridgecrest, CA	Woodman, Karl, etc.
2. Field Training: 23 years of focused tortoise	1994-2012	Throughout Mojave Desert	LaRue

8. Experience – Include only those positions relevant to the requested work with desert tortoises. Distinguish between wild Mojave desert tortoise and other experience. Include only your experience, not information for the project you worked on (e.g., if 100 tortoises were handled on a project and you handled 5 of those tortoises, include only those 5. List most recent experience first. Handling a Mojave desert tortoise must be authorized by a Biological Opinion or other permit and reported to the USFWS. Information provided in this section will be used by the USFWS to track the numbers of tortoises affected by previous projects (baseline). **Be sure to include a project supervisor or other contact that can verify your skills and experience in relation to your job performance.** Attach additional sheets as necessary.

Experience by project and activity:

Please include: Project Name Job & Title Dates of Employment	Supervisor / Project Contact Name Phone Email address	Conduct Clearance Surveys (Hrs/Days)	Excavate DT Burrows (No.)	Locate DT No. < 100mm 100mm	Handled for Relocation DTs (No.)	Excavate and relocate DT nests (No.)
1. Cadiz Pipeline and Wellfields Survey Tortoise Surveyor 9/20/2010 to 10/17/2010	Edward LaRue Circle Mountain Biological Consultants, Inc. (760) 249-4948 ed.larue@verizon.net	250 hours of presence-absence surveys	0	0 though sign was found	0	0
2. Bowman Road Pipeline (BO 1-8-99-F-67) Authorized Biologist 8 months in 2000	Renee Morquecho, PhD Indian Wells Valley Water D (760) 384-5520 reneem@iwwvd.com	8 months as primary monitor	0	5	0	0
3. Copper Mesa Pipeline (BO 1-6-91-F-30) Authorized Biologist 7 months in 1996	Susan Greer Joshua Basin Water District (760) 366-8438 SGreer@jbwd.com	7 months as primary monitor	0	5-10	0	0
4. Mojave River Pipeline (BO 1-8-97-F-17), Phase 1 Authorized Biologist 3 months in 1998	Edward LaRue Circle Mountain Biological Consultants, Inc. (760) 249-4948 ed.larue@verizon.net	3 months	0	6-8	0	0
5. Mojave River Pipeline (BO 1-8-97-F-17), Phase 2 Authorized Biologist 5 months in 1999	Steve Gardner SW Desert Environmental (909) 867-2716	5 months	0	5-10	0	0
6. USFWS Distance Sampling in 29 Palms Tortoise Surveyor 10 days in 2000	Pete Woodman Kiva Biological Consulting (760) 377-3466 kivabio@aol.com	10 days	0	Unknown	0	0

Experience by project and activity (continued): Each project number should correspond with the project listed on the previous page

Project Name (Number should correspond to previous page)	Construct Artificial Burrows (No.)	Monitor project equipment and activities (Hrs/Days)	Oversee project compliance (Hrs/Days)	Supervise DT field staff (Hrs/Days) and No. staff supervised	DT fence Installation and inspection (Hrs/Days)	Present DT Awareness Training (No.)
1. Cadiz Pipeline and Wellfields Survey Tortoise Surveyor 9/20/2010 to 10/17/2010	0	37 days surveying	0	0	0	0
2. Bowman Road Pipeline (BO 1-8-99-F-67) Authorized Biologist 8 months in 2000	0	8 months	8 months	0	0	5-6
3. Copper Mesa Pipeline (BO 1-6-91-F-30) Authorized Biologist 7 months in 1996	0	7 months	7 months	0	0	2-3
4. Mojave River Pipeline (BO 1-8-97-F-17), Phase 1 Authorized Biologist 3 months in 1998	0	3 months	3 months	0	0	0
5. Mojave River Pipeline (BO 1-8-97-F-17), Phase 2 Authorized Biologist 5 months in 1999	0	5 months	5 months	0	0	0
6. USFWS Distance Sampling in 29 Palms Tortoise Surveyor 10 days in 2000	0	10 days surveying	0	0	0	0

Summary of experience:

Total time spent for all desert tortoise-related field activities
(referenced above): Specify total number of hours:
OR total number of 8-hour days: +/- 500 days

Total number of miles walked conducting survey transects: 1,000+

Total number of wild, free-ranging desert tortoises you personally handled:

<100 mm: 0*

≥100 mm: 0*

*Although I've monitored for more than 500 days during which time I've observed 40-50 tortoises, there has never been the need to handle any. We were able to successfully avoid harassment take of all tortoises I've observed.

Additional supervisory experience other than with desert tortoise work:

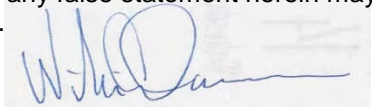
Project	Time	Staff (No.)
None		

Additional references for individuals whom have held **less than three** positions working with desert tortoise

Project Name Job Title Dates of employment	Supervisor / Project Contact Name Phone Email address
With 18 years experience, not applicable	N/A

I certify that the information submitted in this form is complete and accurate to the best of my knowledge and belief.

I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. Ch.47, Sec.1001.

Signed:  Date: 12/7/2012

DESERT TORTOISE AUTHORIZED BIOLOGIST REQUEST FORM

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(If you seek approval to attach/remove/insert any devices or equipment to/into desert tortoises, withdraw blood, or conduct other procedures on desert tortoises, a recovery permit or similar authorization may be required. Application for a recovery permit requires completion of Form 3-200-55, which can be downloaded at <http://www.fws.gov/forms/3-200-55.pdf>.)

1. Contact Information:

Name	Schafhauser, Ellen
Address	PO Box 438
City, State, Zip Code	Weldon, Ca 93283
Phone Number(s)	760-608-9143
Email Address	ekschafhauser@yahoo.com

2. Date: May 17, 2011

3. Areas in which authorization is requested (check all that apply):

- San Bernardino, Kern, Inyo and Los Angeles Counties, California (Ventura office)
 x Riverside, San Diego, and Imperial Counties, California (Carlsbad office)
 Nevada Utah Arizona

4. Please provide information on the project:

USFWS Biological Opinion or HCP No. When Applicable		Date:	
Project Name	Joshua Basin Water District		
Federal Agency (If applicable)			
Proponent or Contractor			

5. If you hold, or have held, any relevant state or federal wildlife permits provide the following:

Species	Dates	State (specify) or Federal Permit Number	Authorized Activities
Scientific Collecting Permit, Desert Tortoise (<i>Gopherus agassizii</i>)	November, 2009 to November, 2012 (currently in renewal process)	SC-007979	Capture, release, and salvage native flora and fauna (non-listed) Presence/absence and clearance survey, monitor construction, capture and release of desert tortoise
Fish and Wildlife Permit Delhi Sands flower-loving fly (<i>Rhaphiomidas terminatus abdominalis</i>)	07, 2009 to 07, 2013	TE084254-1	Survey by pursuit, presence/absence surveys

6. Education: Provide up to three schools, listing most recent first:

University of Santa Monica	2000 - 2002	Spiritual Psychology	Masters of Arts
California State University, Bakersfield and Fresno	1984 - 1985	California Multi-subject Teaching Credential (K-12) Secondary Biological Sciences Teaching Credential	California Multi-subject Teaching Credential Supplemental Science (Biology)
New York State University	1974 - 1976	Parks and Recreation/Science	Bachelor of Science

7. Desert Tortoise Training:

Name/Type of Training	Dates (From/To)	Location	Instructor/Sponsor
1. Classes A. Tortoise Handling Workshop B. Desert Tortoise Symposium C. Biological Updates on Scientific Research	A. 2003 and 2004 B. 2001, 2004, 2012 C. 2006	A. Ridgecrest, CA B. Las Vegas, NV, C. Tucson, AZ	A. Desert Tortoise Council B. Same as above C. Same as above
2. Field training A. Tortoise Handling Workshop B. Arizona Tortoise Handling, and Blood Work Techniques (assistance and observation)	A. 2003 and 2004 B. 2004	A. Ridgecrest, CA B. Various Locations Arizona	A. Desert Tortoise Council B. Peter Woodman, Kiva Biological Consulting, Kivabibio@aol.com 760 377 3466
3. Translocation Translocation of Desert Tortoises	April, 2004	California City, CA to Rand Mountain Area, CA	Alice Karl, heliophile@mindspring.com
4. Mojave Ground Squirrel Trapping <i>Spermophilus mohavensis</i> , Set opened, handled, identified, sexed, antelope ground squirrel, round-tailed Squirrel, and observed trapping sessions with information history, range, habits, behavior, and trapping protocol, Handled 7 MGS in training.	May and June of 2005 and 2006	Various CA. locations	Denise LaBerdeau, 760-378-3021, 760-617-6306, eremico@aol.com

8. Experience - Include only those positions relevant to the requested work with desert tortoises. Distinguish between wild Mojave desert tortoise and other experience. Include only your experience, not information for the project you worked on (e.g., if 100 tortoises were handled on a project and you handled 5 of those tortoises, include only those 5. List most recent experience first. Handling a Mojave desert tortoise must be authorized by a Biological Opinion or other permit and reported to the USFWS. Information provided in this section will be used by the USFWS to track the numbers of tortoises affected by previous projects (baseline). **Be sure to include a project supervisor or other contact that can verify your skills and experience in relation to your job performance.** Attach additional sheets as necessary. Please use numbers in each column; do not use "X's" to indicate participation in the activity. If your experience is limited to **less than three desert tortoise positions**, please include additional job experience and references in the section below (pg. 5).

Experience by project and activity:

Please include: Project Name Job Title Dates of Employment	Supervisor / Project Contact Name Phone Email address	Conduct Clearance Survey (Hrs/Days)	Excavate DT Burrows (No.)	Locate DT No. <100 mm ≥ 100 mm	Handled for Relocation DTs (No.)	Excavate and Relocate DT Nests (No.)
1. DVP2 Devers to Palo Verde Transmission line Project, FWS-ERIV-07B0060-10 F0884, Biological monitor 2012, Monitoring 2. TRTP : Tehachapi Renewable resource Transmission line Project, Biological Monitor 2011, Monitoring	Gilbert Goodlett Enviro Plus Consulting, Terrin Ricehill 909 2535618 Tricehilli@cfi.com	10 Hrs, 8 months, Tortoise and general monitor 10Hrs, 6 months Presence absence surveys and monitor	0	0	0	0
2. 29 Palms Marine Base Triangle Transect Vertebrate Inventory March –May 2011, survey 22 (Helo Landings for 29 Palms Marine Base, Project (cannot locate BO. No.), Biologist Team Leader October – December, 2009	Ed LaRue (Circle Mountain Biological Consultants), (760) 792- 6293, circlemtn@yahoo.com	10 hrs/ 40 days Presence/ absence surveys	0	4 15	0	0
3. Desert Tortoise Transect 80 Mile Survey in Eastern Mojave Desert, Blyth, Blackjack Communication Line, CA, (cannot locate BO. No.), Survey Biologist, May, 2009	Gilbert Goodlett, (Enviro Plus Consulting), (760) 954-4265 or (760) 371-3592, torthunter@aol.com	10 hrs/4 days Presence/ absence surveys	0	0 1	0	0
4. Southern California Gas Company 29 Palms Pressure Betterment BO No. 1-5-00-F-420, Environmental Inspector/Desert Tortoise Monitor, January – March, 2008	Peggy Wood, (435) 881-6444, pegwood@mtwest.net	9Hrs/30+days Presence/ absence surveys	0	1 0	0	0
5. Desert Tortoise Clearance Survey, Hyundai Vehicle Test Track Project, (BO No. 1-8-98-F-60R) California City, CA, Survey Biologist, 2004 and April, 2009	Mercy Vaughn, (928) 380-5507, manydogs10@aol.com	8 hrs/28 days clearance survey	0	0 0	0	0
6. Fort Irwin Translocation, Survey (Radio Tracking), and Monitoring Project (BO No. 1-8-05-F-43), Biologist, 2007	Pete Woodman, (Kiva Biological Consulting) (760) 377-3466 or (760) 861-3961 kivabibio@aol.com	10 hrs/40 days locate for translocation capture/ release	1	5 41	3 (under supervision MOU)	0
7. Tortoise Monitoring and Handling Indian Wells Valley Water District Project (cannot locate BO No.), Biologist, April – August, 2006	Ed LaRue (Circle Mountain Biological Consultants), (760) 792-6293, circlemtn@yahoo.com	8 hrs/ 20 days Presence/ absence surveys	0	0 2	1	0
8. Tortoise Monitoring, Caltrans Highway 247 Road Improvement Project, (cannot locate BO No.), Biologist, August, 2005	Ed LaRue (Circle Mountain Biological Consultants) , (760) 792-6293, circlemtn@yahoo.com	8 hrs/ 25 days Presence/ absence surveys	0	0 3	0	0

Experience by project and activity (continued): Each project number should correspond with the project listed on the previous page

Project Name (Number should correspond to previous page)	Construct Artificial Burrows (No.)	Monitor project equipment and activities (Hrs/Days)	Oversee project compliance (Hrs/Days)	Supervise DT field staff (Hrs/Days) and No. staff supervised	DT fence Installation and Inspection (Hrs/Days)	Present DT Awareness Training (No.)
1.DVP2 Devers to Palo Verde Transmission line Project, FWS-ERIV-07B0060-10 F0884, Biological monitor 2012, Monitoirng	0	10-12 hr/day	10-12 hr/day 6 days/week	0	0	2
2. TRTP : Tehachapi Renewable resource Transmission line Project, Biological Monitor	0	6 days/week		0		7
2. 29 Palms Marine Base Triangle Transect Vertebrate Inventory March –May 2011, survey 22 (Helo Landings for 29 Palms Marine Base, Project (cannot locate BO. No.), Biologist Team Leader October – December, 2009	0	0	0	0	0	0
3. Desert Tortoise Transect 80 Mile Survey in Eastern Mojave Desert, Blyth, Blackjack Communication Line, CA, (cannot locate BO. No.), Survey Biologist, May, 2009	0	9 hrs/30 days	9 hrs 30 days	0	0	1
4. Southern California Gas Company 29 Palms Pressure Betterment BO No. 1-5-00-F-420, Environmental Inspector/Desert Tortoise Monitor, January – March, 2008	0	8hrs/40 days	0	0	8 hrs 40 Days	6
5. Desert Tortoise Clearance Survey,Hyundai Vehicle Test Track Project, (BO No. 1-8-98-F-60R) California City, CA, Survey Biologist, 2004 and April, 2009	0	0	0	0		0
6. Fort Irwin Translocation, Survey (Radio Tracking), and Monitoring Project (BO No. 1-8-05-F-43), Biologist, 2007	3	8 hrs / 20 days	8 hrs/ 20days	0	0	0
7. Tortoise Monitoring and Handling Indian Wells Valley Water District Project (cannot locate BO No.), Biologist, April – August, 2006	0	8hr /20 days	8hrs/20 days	0	0	4
8. Tortoise Monitoring, Caltrans Highway 247 Road Improvement Project, (cannot locate BO No.), Biologist, August, 2005	0	8 hr / 25 days	8 hrs / 25 days		2	4

Summary of experience:

Total time spent for all desert tortoise-related field activities (referenced above):

Specify total number of hours: **2500 +**
 OR Total number of 8-hour days: **hours**

Total number of miles/kilometers walked conducting survey transects:

1500
+miles

Total number of wild, free-ranging desert tortoises you personally handled:

<100 **35 + (20+ years experience)** mm:

≥100 **150 + (20+ years experience)** mm:
 Additional supervisory experience other than with desert tortoise work

Project	Hours	Staff (No.)

Additional references for individuals whom have held **less than three** positions working with desert tortoise

Project Name Job Title Dates of employment	Supervisor / Project Contact Name Phone Email address

I certify that the information submitted in this form is complete and accurate to the best of my knowledge and belief.

I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. Ch.47, Sec. 1001.

Signed: Ellea Schafhauser Date: 12/7/12

APPENDIX B: Project Understanding and Approach

CMBC personnel have been involved in earlier stages of the District's proposed project, including initial surveys of the recharge basin site and pipeline right-of-way for Agassiz's desert tortoise and other special-status species; monitoring and pre-construction surveys during exploratory activities, vegetation clearing, and special status plant salvage and removal; and assistance with obtaining incidental take permits for the desert tortoise from both the Service and Department.

CMBC will provide one or more qualified personnel to act as authorized biologists/biological monitors during the project. It is our understanding that there will be a single point of installation of the pipeline, and that one monitor/authorized biologist will be sufficient to monitor all activities. The biologists will be authorized to handle or move Agassiz's desert tortoise under the authority of specific State and Federal Incidental Take Permits. Monitors will be authorized to handle or move Agassiz's desert tortoise when needed, to prevent the possibility of violation of State and federal Endangered Species Acts, including "take" of Agassiz's desert tortoise, a threatened species that is known to occur in the vicinity. The monitors will also assist with avoiding impacts to other special status species and wildlife that may occur in the vicinity.

Specific tasks will include:

2.1. Education Program. Prior to the start of ground-disturbing activities, CMBC will present an education and awareness program on the Agassiz's desert tortoise and other special status species in a classroom setting to personnel and contractors working on the project. Additional "tailgate briefings" will be presented in the field during weekly compliance visits or daily monitoring as new personnel arrive. This program has already been approved by the Department and the Service, and has previously been presented to District employees and others working at the recharge basin.

2.2. Pre-construction surveys. Prior to the start of ground-disturbing activities, CMBC staff will conduct a pre-construction survey of the site and adjacent areas, to identify any sensitive biological resources that could be affected by the work (e.g. tortoise burrows). The working area should be marked in advance of surveys with flagging or laths. Other areas to be flagged include staging and storage areas. Insofar as possible, these areas will be located in previously disturbed or barren areas to reduce the risk of impacts to Agassiz's desert tortoise. If cross-country vehicle travel is required, the authorized biologist will inspect and approve a travel route as needed.

2.3. Daily monitoring and compliance checks during construction. In the areas where a monitor is required, CMBC will provide an authorized biologist to monitor construction each day. The monitor will check the area in advance of ground disturbance, during the operation of any heavy equipment, and will check open trenches or other hazards continuously throughout the day to prevent any harm to desert tortoises. The monitor will typically arrive 15-30 minutes prior to the start of installation activities and will remain on-site until all equipment has been shut down for the day. CMBC estimates that a full-time monitor will be needed for 20 weeks of the estimated 36 weeks that the project will take for completion.

The eastern 2 miles± of the 4.5 mile pipeline run through residential and commercial areas that are devoid of *wild* desert tortoises (pet tortoises are not protected by either federal or State Endangered Species Act). Pending written authorization, the Service has tentatively agreed that full-time monitoring in this area will not be necessary. For this part of the pipeline, a monitor will perform weekly monitoring compliance visits each Monday morning to implement worker awareness measures. The goal of the compliance visits, during several hours each Monday is to: (1) track progress of installation; (2) ensure that other non-tortoise measures are being implemented (maintaining a clean workplace, marking and staying within the ROW, etc.); (3) progressively measuring how much habitat and non-habitat are lost to installation, and implementing other various measures in the regulatory documents; and (4) perform preconstruction surveys for any new areas that are to be bladed. CMBC estimates that construction through these developed areas will take approximately 16 weeks.

The District has specified that they may request the chosen contractor to conduct full-time monitoring during initial ground disturbance within the recharge basin, subject to modification. Specifically, biologists would monitor activities within the fenced area during stockpiling of soil to salvage Little San Bernardino Mountains linanthus plants and grubbing the site of vegetation.

2.4. *Preparation of reports.* CMBC will be responsible for reporting to the Department and the Service on permit compliance. The Department typically requires a report on the results of pre-construction surveys, twice-monthly reports during construction, an annual report, and a final mitigation report. The Service requires a final report. These reports will be completed and submitted by CMBC according to the schedule specified by the agencies.

Note: If the District chooses to implement federal protection measures and not solicit a formal incidental take permit from the Department, those measures identified herein that are pertinent to the State agency would not be implemented. This would result in slightly less cost to the District as certain reporting would not be required. If the State incidental take permit is not obtained, there would be no latitude to handle tortoises; such handling would be permitted under federal authorization but in the absence of Department authorization, no tortoises could be handled without violating the State Endangered Species Act.

APPENDIX C: Staff Availability

The exact schedule for this project has not been determined at this time, but work is tentatively planned to begin in January of 2013 and will continue for approximately 36 weeks, through September of 2013. Preconstruction surveys will be carried out as required by regulatory documents. CMBC will present the education and awareness program to construction personnel prior to the start of ground-disturbing activities, at a date and time to be arranged with the District. CMBC will provide an authorized biologist to be available as required and described herein throughout the project.

CMBC staff and subcontractors will be available to begin monitoring as early as the second week of January 2013. In addition to the two principals of CMBC (LaRue and Dougherty), we have enlisted five qualified subcontractors to ensure that biologists are available as needed throughout the planned project.

APPENDIX D: Rates and Cost Estimate

Table 1. Rates for Circle Mountain Biological Consultants

Task	Rate	Comments
Administrative	\$60/hour	Dougherty
Biological surveys	\$60/hour	Authorized biologist
Long-term Construction Monitoring (more than 5 days) – Regular Monitor	\$55/ hour, plus travel time, per diem, lodging	Personnel other than supervisor (e.g., Radakovich, Seamount, Gallagher, Donnan, Schafhauser)
Construction Monitoring – Supervising Monitor, CMBC Principals	\$60/ hour, plus travel time, per diem, lodging	LaRue or Dougherty
Mileage	\$0.555/mile	To and from site, plus on-site travel.
Per diem & Lodging	\$100/ day	Applies to overnight stays only.
Reports, meetings, consultation with agencies, project administration, etc.	\$60/hour	LaRue or Dougherty
Equipment, supplies	At cost	Any required equipment or supplies will be paid for by CMBC and the cost reimbursed by the District. This may include laths, flagging, printed materials, etc.

The cost of monitoring will vary depending upon the actual time required; however the rates used in determining this estimate will be the same as those charged for the project. Only actual hours worked and costs incurred will be charged.

Table 2. Costs for Initial Survey

TASK	Units	Rate	# Staff	Item total
Administrative costs	2.5 hours	\$60/hour	1	\$ 150.00
Initial tortoise survey	15.0 hours	\$60/hour	2	\$1,800.00
Drive time	2. 5 hours	\$60/hour	2	\$ 300.00
Mileage round trip	±225 miles	\$0.555/mile	1	\$ 125.00
Lodging & per diem	1 night	\$100/night	2	\$ 200.00
TOTAL				\$2,575.00

If the initial survey is done immediately before the start of monitoring, no separate travel costs will be charged.

Costs for monitoring will vary depending upon the actual number of days and hours worked, the number of monitors needed, etc. Table 1, above, outlines rates to be charged, and Tables 3a and 3b, below, provide estimated weekly charges for a single full-time monitor, and a charge for weekly compliance visits, with an estimated charge for 20 weeks of full-time monitoring and 16 weeks of compliance visits.

Table 3a. Weekly Costs for Full-Time Monitoring With One Monitor

Task	Units	Rate	# Staff	Item total
Administrative costs	2.0 hours	\$60/hour	1	\$ 120.00
Supervisor	6.0	\$60/hour	1	\$ 360.00
Full-time monitoring	45.0 hours	\$55/hour	1	\$2,475.00
Average drive time (To and from home base to project vicinity)*	6.0 hours	\$55/hour	1	\$ 330.00
Mileage	350± miles	\$0.555/mile	1	\$ 195.00
Lodging & per diem	4 nights	\$100/night	1	\$ 400.00
Reporting & data compilation	2.5 hours	\$60/hour	1	\$ 150.00
Weekly Total				\$4,030.00
TOTAL FOR 20 WEEKS FULL TIME				\$80,600.00

* “Home base” is Wrightwood for LaRue, Dougherty, Radakovich & Donnan; Lake Isabella area for Seamount, Gallagher, and Schafhauser.

Table 3b. Weekly Costs for Weekly Compliance Checks With One Monitor

Task	Units	Rate	# Staff	Item total
Administrative costs	2.0 hours	\$60/hour	1	\$ 120.00
Compliance visit	10.0 hours	\$60/hour	1	\$ 600.00
Drive time (To and from Wrightwood to project vicinity)	4.0 hours	\$60/hour	1	\$ 240.00
Mileage	200± miles	\$0.555/mile	1	\$ 110.00
Reporting & data compilation	1.0 hours	\$60/hour	1	\$ 60.00
Weekly Total				\$1,130.00
TOTAL FOR 16 WEEKS VISIT ONLY				\$18,080.00

Unless 48-hours notice is given, a minimum daily charge will be made for four hours of work plus lodging and per diem, if the workday is cancelled or reduced to less than four hours, including delays for equipment repairs, etc.

Table 4. Cost Estimates for Additional Tasks

Task	Units	Rate	# Staff	Item total
Administrative costs	6 hours	\$60/hour	1	\$ 360.00
Education program presentation including drive time	3.0 hour	\$60/hour	1	\$ 180.00
Education program materials (Decals, rearview mirror hangers)	50 sets	\$1.50/each	n/a	\$ 75.00
Mileage round trip	±200 miles	\$0.555/mile	1	\$ 110.00
Meetings (estimated 3) including drive time	12.0 hours	\$60/hour	1	\$ 720.00
Mileage (for 3 meetings)	±600 miles	\$0.555/mile	1	\$ 330.00
Final reports	10.0 hours	\$60/hour	1	\$ 600.00
TOTAL				\$2,375.00

Table 5. Summary of Cost Estimates

TASKS	COST ESTIMATE
Initial Survey	<i>\$2,575.00</i>
Full-Time Monitoring for 20 Weeks	<i>\$80,600.00</i>
Weekly Compliance Checks for 16 Weeks	<i>\$18,080.00</i>
Additional Tasks	<i>\$2,375.00</i>
<i>TOTAL ESTIMATED COSTS</i>	<i>\$103,630.00</i>

Importantly, at the time of this bid (31 December 2012), the federal permit from the Service and the draft State permit from the Department both require that *all* construction activities be monitored. The approach to monitor only those areas where tortoises occur was introduced by LaRue to the Service earlier in December 2012, and tentatively accepted by Ray Bransfield of the Service soon thereafter. Given the above rates and based on a 16-week survey period through residential areas, the additional monitoring costs would have been \$64,480. Weekly compliance visits, which would cost approximately \$18,080, were offered as an alternative to full time monitoring. As such, the approach given herein would save the District an estimated \$46,400.

January 8, 2013

Joe Guzzetta, General Manager
Joshua Basin Water District
61750 Chollita Road
P.O. Box 675
Joshua Tree, California 92252

VIA OVERNIGHT MAIL

Subject: Proposal for Cultural Resources Monitoring Services for the Joshua Basin Water District Groundwater Recharge Basin and Pipeline Project, Joshua Tree, California

Dear Mr. Guzzetta:

BonTerra Consulting is pleased to submit this proposal to provide Cultural Resources Services for the Joshua Basin Water District Groundwater Recharge Basin and Pipeline Project. We are electing to pursue only the cultural resources monitoring tasks. BonTerra Consulting understands that the District intends to construct approximately 24,000 linear feet of pipeline and a recharge facility, with pipeline construction lasting approximately 36 weeks.

Our Cultural Resources project team would be led by Mr. Patrick Maxon, RPA, Director of Cultural Resources, who has over 18 years of experience in cultural resource management and is a Registered Professional Archeologist (RPA) who meets the Secretary of Interior's standards for historic preservation programs for archaeology. Mr. Maxon possesses the necessary skills and professional experience to provide responsive cultural resources analyses. All work will be performed by BonTerra Consulting staff, except for Native American monitoring, which will be conducted by the Agua Caliente Band of Cahuilla Indians as a subconsultant.

The following is the information for the BonTerra Consulting contact person for this undertaking:

Address:	2 Executive Circle, Suite 175, Irvine, California 92614
Contact Name:	Patrick O. Maxon, RPA
Phone Number:	(714) 444-9199
Fax Number:	(714) 444-9599
Email address:	PMaxon@BonTerraConsulting.com
Mobile phone:	(949) 677-2393

BonTerra Consulting is a certified woman-owned small business (WBE/SBE) that provides a variety of environmental resources and project management consulting services. We take pride in preparing environmental documents that meet all applicable requirements and that are comprehensive and technically



Joe Guzzetta
January 8, 2013
Page 2

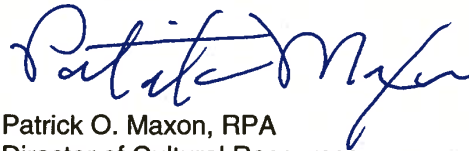
and legally defense. We look forward to this opportunity to work with you. If you would like to discuss our qualifications in more detail please feel free to call us with any questions at (714) 444-9199.

Sincerely,

BONTERRA CONSULTING



Dana C. Privitt, AICP
Principal



Patrick O. Maxon, RPA
Director of Cultural Resources

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STATEMENT OF QUALIFICATIONS

Firm Profile

Founded in 1996, BonTerra Consulting is a certified woman-owned small business enterprise (WBE/SBE) that provides and conducts a variety of environmental and project management consulting services, including California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) documentation; cultural resources assessments, mitigation, and monitoring; biological resources surveys and assessments; habitat restoration planning; regulatory services and permitting; air quality, greenhouse gas emissions, and noise analyses; and Geographic Information Systems (GIS) mapping and spatial analyses to public- and private-sector clients throughout Southern and into Central California. Each of the firm's 8 principals has more than 20 years of hands-on experience in environmental planning; impact assessment; natural resources management; biological surveys; and city and regional planning studies.

The firm includes Environmental Planners; Project Managers; Archaeologists; Paleontologists; Architectural Historians; Botanists; Certified Arborists; Ornithologists; Wildlife Biologists; Restoration Ecologists; Regulatory Specialists; and Air Quality and Noise Specialists. This group works together as a highly effective team to meet the requirements of our clients' projects and is recognized as one of the most experienced teams of environmental professionals in the Southern and Central California consulting community.

BonTerra Consulting meets the needs of our clients by providing responsive strategic consulting and technical analyses. Our consulting services consistently provide our clients with timely and technically sound documentation that complies with regulatory and planning agency requirements. We believe in client responsiveness and quality assurance with no surprises.

BonTerra Consulting has extensive experience completing the full-range of cultural studies under CEQA, including Phase I surveys and identification of cultural resources; Extended Phase I and Phase II testing and evaluation of cultural resources; Phase III data recovery and mitigation projects for historical resources; and Phase IV monitoring projects. We have worked throughout Southern California including San Bernardino County and in the Sonoran and Mojave Deserts.

Project Personnel

The BonTerra Consulting team will include the key staff members listed below. Mary Ann Eason will be the Lead Monitor. Ms. Eason lives locally and works part-time in the community of Joshua Tree; therefore, she can react quickly and efficiently to project needs. Resumes highlighting key staff members experience for this project are included in Appendix A:

- Patrick O. Maxon, M.A., RPA, Cultural Resource Manager
- Christopher E. Drover, Ph.D., RPA, Senior Archeologist
- Mary Ann Eason, Project Archeologist
- David A. Alexander, Project Archeologist
- David M. Smith, Project Archeologist
- Patricia Tuck, Agua Caliente Band of Cahuilla Indians, Director of Tribal Historic Preservation

Representative Projects

BonTerra Consulting has experience in providing a wide range of CEQA/NEPA Compliance, Cultural Resources Assessments, Biological Assessments, Air Quality Analyses, and Regulatory Agency Permitting services for projects located throughout Southern California. BonTerra Consulting has performed relevant cultural resource consulting services for numerous city and county agencies in San Bernardino, Riverside, Orange, and Los Angeles Counties. BonTerra Consulting's related experience includes the projects with references described below.

Twentynine Palms General Plan Update Cultural Resources and Biological Studies, Riverside County. BonTerra Consulting provided cultural resources and biological technical reports for the City of Twentynine Palms General Plan and Environmental Impact Report (EIR). BonTerra Consulting conducted a study of existing cultural resources conditions in the City of Twentynine Palms consistent with CEQA requirements for the proposed General Plan Update. The study consisted of cultural and paleontological literature reviews and other background research at the Twentynine Palms Historical Society, which was used to develop report conclusions and recommendations for handling cultural and paleontological resources for projects in the city. The study showed that the City of Twentynine Palms is sensitive for both archaeological and paleontological resources. There are 74 cultural resources recorded in the City and on file at the San Bernardino Archaeological Information Center. One site, the Oasis of Mara (CA-SBR-37/2052/H) and its associated Chemehuevi Indian American Cemetery, has been determined eligible for listing in the National Register of Historic Places (NRHP). The City also contains geological deposits that are concentrated in the less elevated northern and eastern portion of the City that could produce fossil remains. Additionally, Mr. Maxon assisted the City of Twentynine Palms with Native American consultation under Senate Bill 18 requirements.

Reference Contact: Laura Stetson; (626) 356-4460; lstetson@hogleirland.com

Perris Valley Pipeline Project Cultural and Paleontological Resources Services, Riverside County. BonTerra Consulting provided cultural and paleontological resources services for the Perris Valley Pipeline project. BonTerra Consulting Archaeologists and Paleontologists conducted over 26 weeks of cultural/paleontological resources monitoring during grading. BonTerra Consulting provided cultural resources monitoring services in accordance with the project's Mitigation, Monitoring and Reporting Program and conducted a paleontological resources literature review at the Natural History Museum of Los Angeles County (LACM). No cultural or paleontological resources were discovered during monitored grading activities. The Metropolitan Water District of Southern California (MWD), the Western Municipal Water District, and the Eastern Municipal Water District developed the Perris Valley Pipeline project jointly. The pipeline consists of 6.5 miles of 96-inch pipeline. The Eastern Municipal Water District is constructing the southern reach, which consists of a separate four-foot-diameter, six-mile-long water pipeline that connects its service area to the Perris Valley Pipeline. The pipeline provides substantial water reliability and quality benefits to a significant portion of western Riverside County.

Reference Contact: Lorraine Woodman; (805) 963-0468; lwoodman@entrix.com

City of Rancho Cucamonga General Plan Update Environmental Impact Report, Rancho Cucamonga. BonTerra Consulting prepared the EIR for the City of Rancho Cucamonga General Plan Update project. Although the City's General Plan was adopted in 2001, City policy required that the General Plan be updated in order to make informed decisions about the development of the City and programs for its citizens. The General Plan Update addressed the

City's ongoing growth and buildout, and the EIR addressed, on a programmatic level, all environmental topics, including traffic and circulation; land use compatibility; air quality and global climate change; cultural resources; natural and biological resources; and open space. The cultural resources study included a comprehensive records search and literature review of cultural resources studies and site records at the San Bernardino Archaeological Information Center housed at the San Bernardino County Museum in Redlands; a paleontological resources literature review at the San Bernardino County Museum's Geological Sciences Division; initial Native American consultation; and an inventory of historic properties in the City. Mitigation measures were proposed for future projects in the City. The Updated General Plan and EIR were approved in May 2010 in compliance with the schedule set forth by the City and the City's General Plan Update consultant.

Reference Contact: Laura Stetson; (626) 356-4460; lstetson@hogleirland.com

PROJECT UNDERSTANDING AND APPROACH

BonTerra Consulting understands that the Joshua Basin Water District (JBWD) intends to construct approximately 24,000 linear feet of 16-inch diameter pipe, as an extension to the existing Mojave Water Agency pipeline, and construct an approximate 32.5-acre recharge facility to accommodate replenishment of the aquifer. Pipeline construction is estimated to take approximately 36 weeks, beginning in January or February 2013, and extending through September 2013. This scope of work is based on implementation of the applicable cultural resources mitigation measures set forth in JBWD's EIR and Mitigation Measures completed for this project.

This portion of the Sonoran Desert was inhabited prehistorically by the Serrano, whose territory encompassed the San Bernardino Mountains east of Cajon Pass, north of the mountains in the desert near Victorville, and as far eastward as Twentynine Palms. They had a village site at the Oasis of Mara in the present day City of Twentynine Palms, approximately ten miles east of the project site. The Twenty-Nine Palms Band of Mission Indians, a federally recognized tribe, is located in the vicinity of the project area, but its members and descendants are made up of Chemehuevi Native Americans who migrated to the area in the late 19th century and established the tribe. The Sonoran Desert transitions to the north to the higher elevated Mojave Desert and other tribal groupings.

Gold mining began in the Joshua Tree area in the early 1870s and the first settlers were seen in the area shortly thereafter. Homesteading began in the early part of the 20th Century, which only increased during the Great Depression. Portions of the project site were deeded to the Southern Pacific Railway in 1910. Much of the remainder of the project site along State Route 62 has remained undeveloped.

Possible buried cultural resources in the project area would include prehistoric cultural materials from the Serrano and Chemehuevi Native American groups (and their ancestors) that occupied the area; historic materials related to the mining, railroad, and homesteading that occurred in the area; and more recent detritus from modern populations.

CULTURAL RESOURCES MONITORING

According to the RFP and EIR, the cultural resources survey performed for the EIR located four isolated artifacts; two historic archaeological resources; two prehistoric archaeological resources; one multi-component archaeological resource; and one resource of undetermined age within the proposed project and project alternatives. Three of the isolated prehistoric artifacts are within the preferred recharge basin, and the multi-component resource is located immediately adjacent to the proposed pipeline alignment. The surveyors determined that the

three isolated artifacts are ineligible for the NRHP or California Register of Historical Resources (CRHR). Because it is located immediately adjacent to the proposed pipeline alignment, per Final EIR Mitigation Measure 3.4-1b, the portion of multi-component site (designated CA-SBR-13305/H) located within the project footprint was subject to archaeological testing and was also determined ineligible for the NRHP or CRHR. Nearby site components not subject to testing could contain significant materials and could be potentially eligible; therefore monitoring of grading in the vicinity of the site shall be on a full-time basis. All work will be conducted and supervised by a qualified archaeologist that meets the Secretary of the Interior's Standards for archaeology. BonTerra Consulting assumes that any other resources discovered during the previous survey will be avoided by the project.

Tasks for cultural resources monitoring, taken from the requirements in the RFP and EIR, are as discussed below.

Education Program. The BonTerra Consulting team will prepare and present an education and awareness program to construction personnel on the historic and prehistoric cultural resources in the area; the potential of construction activities to disturb known or unknown cultural resources and human remains; and the actions to be taken in the event of accidental discovery. BonTerra Consulting assumes that this education program will be completed during the initial day of monitoring for the project.

Avoidance of Cultural Resources. Prior to the start of ground-disturbing activities, the cultural resources monitor will mark an Environmentally Sensitive Area (ESA) around the untested portions of the multi-component archaeological resource (CA-SBR-13305/H) for avoidance. BonTerra Consulting assumes that this effort will be completed during the initial monitoring activities at the site. According to the EIR, there are other sites that were identified during the survey that are within the recharge basin alternatives (see Optional Monitoring Tasks). The sites have not yet been evaluated, but for the purpose of this project are deemed significant. If any of these are located on or near the final recharge basin locations, they will also be marked as ESAs and avoided (MM 3.4-1a of the EIR). If they cannot be avoided through the ESA method testing and evaluation may be required to determine their significance under CEQA.

Archaeological and Native American Monitoring. Because there is a potential for buried resources in the project area, a qualified archaeologist and Native American representative from the Agua Caliente Band of Cahuilla Indians shall monitor ground-disturbing activities (including brush clearance and grubbing) on a weekly basis. Costs for retention of a Native American monitor are included in the fees for this project. Monitoring will be accomplished as follows:

- Full-time monitoring within 100 feet of site CA-SBR-13305/H.
- Periodic spot-check monitoring (i.e., twice per work week) of ground-disturbing activities associated with construction of the pipeline. This is subject to modification based on the monitors' observations and recommendations.

For the purposes of this proposal, BonTerra Consulting assumes that 320 hours of cultural resources and Native American monitoring is required for these monitoring tasks.

If cultural resources or human remains are discovered during ground-disturbing activities, the monitors shall have the authority to halt work in the area until the resource can be evaluated by the qualified Archaeologist or County Coroner as appropriate. The qualified Archaeologist shall evaluate the find and shall determine the appropriate treatment.

Preparation of Monitoring Report. BonTerra Consulting will be responsible for reporting to the U.S., Environmental Protection Agency (USEPA) as the lead federal agency and to JBWD as the lead State agency. The monitoring report will be completed and submitted by BonTerra Consulting according to the schedule specified by the USEPA and water district. It is assumed that no cultural resources will be encountered during the monitoring and that the report will be a Negative Monitoring Report.

Project Management. Patrick Maxon will manage the project on a daily basis, ensuring monitoring coverage when necessary and communicating with all project personnel as needed. One and one-half hours of project management time per week is estimated for the project.

Optional Monitoring Task: As an optional task, full-time monitoring will be conducted during initial ground disturbance within the recharge basin. The need for full-time monitoring would be subject to modification based on the monitors' observations and recommendations. This optional task we have assumed that 120 hours of cultural resources and Native American monitoring is required for the Optional Task.

STAFF AVAILABILITY

The BonTerra staff selected for this project will be available as needed to monitor on a weekly basis an average of two days per week during trenching activities. Ms. Mary Anne Eason will function as the Lead Monitor. She is a locally based Archaeologist with many years of experience in the Mojave and Sonoran Deserts. She works on a weekly basis in the community of Joshua Tree so would be immediately available in case of emergency or a change in the project schedule. Ms. Eason is anticipated to complete 100 percent of the monitoring, but supporting her are BonTerra Consulting Archaeological Monitors, Mr. David Alexander and Mr. David Smith. Both are experienced monitors who are available as needed to substitute for Ms. Eason in the unlikely event that she is not available. Dr. Chris Drover will assist Mr. Maxon in the event of a discovery. Patrick Maxon, RPA will be the Project Manager and Principal Investigator. He is available on a daily basis by telephone and email to manage project elements; to communicate with the client, the monitor, and the Native American representative; and to ensure monitoring is conducted as necessary and appropriate.

PROPOSED COST

The following is BonTerra Consulting's fee for the project. It will remain in effect throughout the project. The fee schedule table lists our hourly rates and reimbursable expenses.

Schedule of Fees

Task Number and Description	Principal	P. Maxon Director	Archaeology Monitor	Native American Monitor	Editor	WP/AA/ Clerical	Graphics	Total Labor
	\$210	\$140	\$65	\$75	\$85	\$75	\$95	
Task 1 - Education Program		2	2		0.5	0.5	1	\$585.00
Task 2 - Avoidance			2					\$130.00
Task 3 - Monitoring			320	320				\$44,800.00
Task 4 - Report	1	8	8		1	1	1	\$2,105.00
Task 5 - Project Management		54				16		\$8,760.00
Subtotal Tasks 1 - 6								\$56,380.00
Optional Task - Recharge Basin Monitoring		4.5	120	120				\$17,430.00
Direct Costs (Estimated)								
Arch Mileage (76 trips for 80 mls r/t @ \$.565/mile)								\$3,435.00
NA Mileage (76 trips for 80 mls r/t @ \$.565/mile)								\$3,435.00
Arch Mileage (Optional Task) (15 trips@\$.565/mile)								\$650.00
NA Mileage (Optional Task) (15 trip@\$.565/mile)								\$650.00
Direct Costs Subtotal								\$8,170.00
TOTAL WITHOUT OPTIONAL TASK								\$63,250.00
TOTAL WITH OPTIONAL TASK								\$81,980.00

APPENDIX A
RESUMES



EDUCATION

Master of Arts, Anthropology, California State University, Fullerton, CA, 1994

Bachelor of Arts, Psychology/Sociology, Towson State University, Towson, MD, 1987

PROFESSIONAL CERTIFICATIONS

Registered Professional Archaeologist (National), ID No. 11468, 1999–present

Certified Archaeologist, Orange County Environmental Management Agency, 1998–present

Certified Archaeologist, Riverside County Transportation and Land Management Agency, Register No. 226, 2008–present

Cultural Resources Specialist, California Energy Commission, 2004

PROFESSIONAL SUMMARY

Patrick Maxon is a Registered Professional Archaeologist who meets the Secretary of Interior's standards for historic preservation programs for archaeology. Mr. Maxon has 18 years of experience in all aspects of cultural resources management, including prehistoric and historic archaeology, paleontology, ethnography, and tribal consultation. He has expertise in compliance with the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA), the National Historic Preservation Act (NHPA), the Archaeological Resources Protection Act (ARPA), and the Clean Water Act, among others. Mr. Maxon has completed hundreds of cultural resources projects that have involved (1) agency, client, Native American, and subcontractor coordination; (2) treatment plans and research design development; (3) archival research; (4) field reconnaissance; (5) site testing; (6) data recovery excavation; (7) construction monitoring; (8) site recordation; (9) site protection/preservation; (10) mapping/cartography; (11) laboratory analysis; and (12) report production. He has managed a number of projects under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the Bureau of Land Management, the Bureau of Reclamation, and other federal agencies that require compliance with Section 106 of the NHPA. He has also completed projects throughout Southern California under CEQA for State and local governments and municipalities, including the California Department of Transportation (Caltrans), the Department of General Services (DGS), the California Energy Commission, the California Department of Water Resources, the Los Angeles County Department of Public Works (LACDPW), the Los Angeles Department of Water and Power, the Los Angeles Unified School District, and others.

REPRESENTATIVE PROJECT EXPERIENCE

Twentynine Palms General Plan Update Cultural and Paleontological Studies. Mr. Maxon was the Cultural Resources Manager for the City of Twentynine Palms' General Plan Update. He conducted a study of existing cultural resources conditions in the City of Twentynine Palms consistent with CEQA requirements for the proposed General Plan Update. The study consisted of cultural and paleontological literature reviews and other background research at the Twentynine Palms Historical Society, which was used to develop report conclusions and recommendations. The study showed that the City of Twentynine Palms is sensitive for both archaeological and paleontological resources. There are 74 cultural resources recorded in the City and on file at the San Bernardino Archaeological Information Center. One site, the Oasis of Mara (CA-SBR-37/2052/H) and its associated Chemehuevi Indian American cemetery has been determined eligible for listing in the National Register of Historic Places (NRHP). The City also contains geological deposits that are concentrated in the less elevated northern and eastern

portions of the City that could produce fossil remains. Additionally, Mr. Maxon assisted the City of Twentynine Palms with Native American consultation under Senate Bill 18 requirements.

Perris Valley Pipeline Cultural Resources Services, Riverside County. Mr. Maxon served as the Project Manager for the Perris Valley Pipeline Project in Riverside County. He provided cultural resources monitoring services in accordance with the project's Mitigation, Monitoring and Reporting Program (MMRP) and conducted a paleontological resources literature review at the Natural History Museum of Los Angeles County (LACM). No cultural or paleontological resources were discovered during monitored grading activities. The Metropolitan Water District of Southern California (MWD), the Western Municipal Water District, and the Eastern Municipal Water District are developing the Perris Valley Pipeline project jointly. The pipeline will consist of 6.5 miles of 96-inch pipeline that travels from MWD's Henry J. Mills Water Treatment Plant east along Alessandro Boulevard and then south to Oleander Street in the right-of-way paralleling Interstate 215. The Eastern Municipal Water District is constructing the southern reach, which consists of a separate four-foot-diameter, six-mile-long water pipeline that will connect its service area to the Perris Valley Pipeline at Cactus Avenue. The pipeline will provide substantial water reliability and quality benefits to a significant portion of western Riverside County. When completed, the pipeline will enhance the treated water delivery capacity in the Eastern and Western Municipal Water Districts' service areas by up to 150 million gallons per day.

Summerly Development Project Cultural Resources Monitoring, Lake Elsinore. Mr. Maxon was the Cultural Resources Project Manager for the Summerly Development Project in Lake Elsinore. He managed the placement and work of BonTerra Consulting monitors on the project site and ensured that any discovery of cultural or paleontological resources was handled appropriately. Daily field notes were maintained by BonTerra Consulting monitors and were included in the final report. The notes describe the activities performed each day and discuss any discoveries made. No cultural resources were observed or collected during monitoring activities, and no further cultural resources investigation is recommended unless future grading activities will impact native sediments. The project entailed the dewatering and removal of an artificial pond at the eastern end of the project site and the excavation of a trench that will hold a new 108-inch pipe.

East Branch Extension Phase II Water Pipeline Project Cultural Resources Services, Mentone. Mr. Maxon was the Cultural Resources Manager for the East Branch Extension Phase II Water Pipeline Project. Mr. Maxon was responsible for a full range of cultural resources services including historic, prehistoric, and paleontological archival research; field surveys; resource evaluations; and report preparation. The project involved the preparation of all CEQA/NEPA environmental documents; the acquisition of regulatory permits; and construction monitoring.

Wakunaga Development Project Cultural Resources Monitoring, Mira Loma. Mr. Maxon served as the Cultural Resources Manager for the Wakunaga Development Project in Mira Loma. A Paleontological Monitor attended a pre-construction meeting and observed grading activities on a full-time basis for all deposits four feet or greater below the ground surface and prepared a Paleontological Resources Impact Mitigation Program for the project. Although bone fragments were discovered during grading, they were deemed non-significant. Mr. Maxon completed the Negative Findings Monitoring Report at the conclusion of excavation work for the project. The Wakunaga Development Project would allow for the construction of a 52,988-square-foot (sf) building to manufacture vitamin supplements. This includes 32,896 sf of landscaping area, 125 parking spaces, and 2 loading docks on a 4.9-acre site. The proposed building is an expansion of an existing pharmaceutical manufacturing facility, "Wakunaga of America Co., Ltd", located immediately to the south of the current project site.

EDUCATION

Doctor of Philosophy, Anthropology, University of California, Riverside, CA, 1979 (Ph.D. Dissertation: Late Prehistoric Human Ecology of the Northern Mohave Sink, San Bernardino County, CA)

Master of Arts, Anthropology, California State University, Fullerton, CA, 1972

Bachelor of Arts, Anthropology, California State University, Fullerton, CA, 1970

PROFESSIONAL SUMMARY

Christopher E. Drover, Ph.D. is a Registered Professional Archaeologist (RPA) and has over 41 years of experience conducting cultural resources assessments in support of environmental documentation. He completed his Doctorate of Philosophy in Anthropology-Archaeology at the University of California, Riverside, in 1979; has been a tenured professor of this discipline at Golden West College in Huntington Beach since 1973; and is an ongoing visiting professor of anthropology at the University of California, Irvine. As a Principal Investigator, he has published extensive research regarding the archaeology of San Bernardino, Riverside, and Orange Counties. Dr. Drover has conducted numerous consulting projects in the California Counties of Riverside, Orange, San Diego, Los Angeles, San Bernardino, Kern, Ventura, San Mateo, Siskiyou, and Inyo; in the states of Arizona, Nevada, and Alaska; and internationally in Mexico. Some of the clients he has provided evaluations for over the years include the Museum of Northern Arizona; the Kaiser Corporation; St. Joe America Corporation; Fluor Corporation; Kinder Morgan; the Department of Defense; the Bureau of Reclamation; the Bureau of Indian Affairs; the Bureau of Land Management; the U.S. Army Corps of Engineers (USACE); the State Lands Commission; the U.S. Forest Service (USFS); Arco; Chevron; and the Texaco Oil Corporation.

REPRESENTATIVE PROJECT EXPERIENCE

The Retreat at The Quarry Cultural Resources Services and Monitoring, La Quinta. Dr. Drover was the Archaeologist responsible for overseeing the cultural resources survey for this mixed-use, residential/commercial development. The seven-acre site located in La Quinta underwent a Phase I environmental assessment and cultural resources monitoring during the grading process. All work was conducted pursuant to California Environmental Quality Act (CEQA) guidelines.

Paseo Del Sol Project Archaeological, Paleontological, and Grading Monitoring, Temecula. Dr. Drover was an Archaeologist for the Paseo del Sol project. He was responsible for overseeing the archaeological, paleontological, and grading monitoring for this 829-acre project located in Temecula. He consulted with and assisted local Native Americans and conducted all tasks pursuant to CEQA guidelines. There were five archaeological sites mitigated during the early phase of work; three of the sites were prehistoric while the other two were early Pala Valley historic adobe sites. Excavations included systematic data recovery, testing, and the complete excavation of a three-room adobe. The Pala Formation, rich in Pleistocene mammal fossils, formed the geologic base of the property. Archaeologists and paleontologists were active throughout the initial pre-grading and mass-grading phases on the site. Five mastodons were found at the site; were excavated; and were prepared for analysis. Additionally, other evidence of extinct animals was found, including a saber-toothed cat claw. The archaeological and paleontological sensitivity of this area was high, consequently requiring the active monitoring of active cuts.

The Bowtie Development Project Phase I Cultural Resources Inventory, Lake Elsinore. Dr. Drover served as the Principal Investigator for the Bowtie Development project in Lake Elsinore, which was planned for residential and commercial development. Dr. Drover conducted a Phase I cultural resource survey for the property and obtained negative results.

Newport Coast Community Park Project Grading Monitoring Services, Newport Beach. Dr. Drover was an Archaeologist for the Newport Coast Community Park project. He was responsible for overseeing the grading monitoring services for this park project. The area's archaeological and paleontological features have been determined sensitive and relatively high, therefore, requiring monitoring of active cuts during the grading process. The scope of work also included excavation and construction plan review; coordination of responsibilities with project contractors; development of a safety plan for grading operation monitoring; salvage observation and evaluation to identify any cultural resources uncovered by grading or trenching; shovel probing to determine whether a discovery is isolated or part of a potential site; coordination of the transfer of any collected archaeological resources; and full report preparation on the archaeological program with the discoveries described and interpreted for the City.

Trilogy at Glen Ivy Project Archaeological Services, Corona. Dr. Drover was an Archaeologist for the Trilogy at Glen Ivy project. He was responsible for overseeing the archaeological services for this 820-acre senior residential community with a golf course located in Corona. Dr. Drover's scope of services included an archaeological and paleontological literature review; archaeological and paleontological field work; and archaeological and paleontological report preparation.

Big Tujunga Sediment Removal Cultural Resources Study, Los Angeles. Dr. Drover was an Archeologist for the Big Tujunga Reservoir Sediment Removal Project for the Los Angeles County Department of Public Works (LACDPW). The purpose of the Cultural Resources Study was to assess the potential impacts to Cultural Resources that would result from the implementation of the Project. Dr. Drover prepared an initial report along with Patrick O. Maxon, Project Manager. The technical report described the findings of the study and offering management recommendations.

Newport Banning Ranch Archaeological Resource Assessment, Newport Beach. Dr. Drover served as the Principal Investigator for the Newport Banning Ranch Project located in Newport Beach in Orange County. Dr. Drover conducted test excavations of 11 sites; results showed that 3 of the sites (CA-ORA-839, and CA-ORA-844B, and CA-ORA-906) were deemed eligible for listing in the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR). Site preservation or data recovery excavation was recommended for the sites. The Newport Banning Ranch project would allow for the development of up to 1,375 residential dwelling units; 75,000 square feet of commercial uses; a 75-room resort inn; and approximately 52 acres of public parks on a 401-acre site.

Santa Paula Recycled Water Project Preliminary Pipeline Sizing Phases 1a and 1b, Phase I Cultural Resources Assessment, Santa Paula. Dr. Drover served as the Principle Investigator for the Santa Paula Recycled Water Project located in the City of Santa Paula in Ventura County. Eleven miles of proposed pipelines were surveyed and evaluated for CEQA+ (similar to National Historic Preservation Act Section 106 evaluation). Full-time archaeological monitoring was required when construction activities occurred in the immediate vicinity of the Santa Paula Cemetery and at the possible location of the ethnohistoric village of Mupu located in the City. An Integrated Cultural Resources Management Plan (ICRMP) was completed and approved prior to project construction.

EDUCATION

Master of Arts, Anthropology, University of California, Riverside, CA, 1994

Bachelor of Arts, Anthropology; Minor, Women's Studies, California State University, San Bernardino, CA, 1990

Associate of Arts, Liberal Arts/Social Science, San Bernardino Valley College, San Bernardino, CA 1986

PROFESSIONAL SUMMARY

Mary Anne Eason's educational emphasis is in cultural anthropology. In 1990 she trained on the job as an archaeologist and has since been working under the direction of the Principal Investigator or Registered Professional Archaeologist at various companies. Her archaeological field experience includes pedestrian surveys, excavations, and monitoring. She has assisted with archival research and report preparation, cleaning, sorting and entering artifacts into catalogs or databases. Ms. Eason has over eleven years of experience as an adjunct anthropology instructor at various colleges and universities in San Bernardino and Riverside counties. As an anthropology instructor, I have arranged for and taken student volunteers into the field and introduced them to archaeological fieldwork. Much of her work in archaeology has been carried out in the upper and lower deserts of Southern California, primarily in the Coachella Valley and Mojave deserts. She has been involved in both historic and prehistoric archaeological projects. As a result of her employment at the San Bernardino County Library in Joshua Tree since 2011, she is familiar with local history in the Yucca Valley, Joshua Tree, and Twentynine Palms communities.

REPRESENTATIVE EXPERIENCE

Library Assistant, San Bernardino County Library, – Joshua Tree. Ms. Eason assists patrons in the use of the library collection and services and provides general reference service by searching the collection, online databases, and other sources in answering reference inquiries. She also performs various circulation duties and services by checking-out and discharging items; cataloging documents; and completing cash transactions.

Archaeologist, Archaeogroup (formerly Archaeological Advisory Group). Ms. Eason completed various duties associated with cultural resource management, including archaeological survey, excavation, and monitoring; lab work (i.e., cleaning, sorting, and cataloging artifacts; and archival research and report writing.

Associate Faculty, Mt. San Jacinto Community College. part-time faculty at both the Menifee and San Jacinto campuses, Ms. Eason organized and taught various anthropology courses, including Cultural Anthropology, Physical Anthropology, and Latin American Cultures.

Guest Relations, Palm Springs Air Museum. Ms. Eason performed various receptionist duties, including answering phones; providing information or redirecting calls; proofreading flyers and the newsletter; completing data entry and filing; and maintaining the coffee cart which included making and selling various types of coffee drinks, smoothies, and snacks.

Adjunct Faculty, University of Redlands. Ms. Eason organized and taught courses for both the Liberal Studies and Anthropology Departments, including Cross-Cultural Dance, Dance of Mexico, and Cultural Anthropology.

Adjunct Faculty, San Bernardino Valley College. Ms. Eason organized and taught various anthropology courses, including Cultural Anthropology, Physical Anthropology, Archaeology, and North American Indians.

Adjunct Faculty, California State University, San Bernardino. Ms. Eason organized and taught a course on the Anthropology of Dance for the Department of Anthropology.

Adjunct Faculty, California State University, San Bernardino. Ms. Eason organized and taught courses on Mexican Folklórico Dance for the Department of Kinesiology.

Tutor, AmeriCorps National Service, University of California, Riverside. As a full-time member, Ms. Eason tutored children in reading and math and taught folklórico dance at Longfellow and Hyatt Elementary Schools. She was also appointed Team Leader at my site, acting as liaison between the members and the AmeriCorps Director.

Archaeologist, Statistical Research, Inc. Ms. Eason completed archaeological excavation, survey, monitoring, and lab work.

Field Assistant, Archaeological Research Unit, University of California, Riverside. Ms. Eason completed archaeological excavation and survey.

Archaeologist, Chambers Group, Inc. Ms. Eason completed archaeological excavation and survey.

PUBLICATIONS/PRESENTATIONS

A. Beals and **M.A. Eason.** 1993 Siblings in North America and South Asia (pp 71–101). *Siblings in South Asia: Brothers and Sisters in Cultural Context* (C.W. Nuckolls, Ed.) New York, NY: The Guilford Press.

Eason, M.A. 1995 (November). "The Danza Comes in and Reconquers Our Own People': Danza Azteca and Native Tradition In Mexican-American Culture." A paper presented at the Congress on Research in Dance (CORD) conference.

HONORS AND ACTIVITIES

2010–present: Volunteer, Pegasus Riding Academy for the Handicapped: Ms. Eason assists with equine therapy for a variety of clients.

2011–present: Volunteer/Member, Coachella Valley Mounted Rangers: Ms. Eason cares for and rides rescued horses and participates in events and fund-raising.

1990–1998; 2006–present: Member, Ballet Folklórico de UC Riverside (Vice-President 1993–1996; Treasurer 1992–1993)

1993–2006: Member, Asociación Nacional de Grupos Folklóricos

2000–2005: Board Member, Coachella Valley Mexican-American Cultural Center

1989–1990: Member, Phi Kappa Phi Honor Society, California State University, San Bernardino.

1988: Minority Honors Outreach Program, University of California, Riverside: Awarded an internship as a research assistant in the Anthropology Department.

1987: The National Dean's List: Featured in the 1987–1988 edition.

1986–1987: Member, Alpha Gamma Sigma Honor Society, San Bernardino Valley College

EDUCATION

Bachelor of Arts, Sociology, Concentration: Social Change and Global Issues, California State University, Long Beach, CA, 1994

Associate of Arts, General Education, Concentration: Social Change and Global Issues, Saddleback College, Mission Viejo, CA, 1992

PROFESSIONAL SUMMARY

David A. Alexander has been working as an Archaeological and Paleontological Field Monitor since 1989. He has experience monitoring grading sites for cultural resources; conducting pre-construction surveys; plotting fossil localities on grading/topographic maps; and extracting all significant fossil finds from project sites. As a Field Monitor, Mr. Alexander's responsibilities have also included attendance at weekly construction safety meetings and decision-making tasks such as monitoring grading and site locations and weighing the significance of fossil localities. Mr. Alexander also records pertinent information regarding fossil finds; participates in plaster jacketing of large fossil specimens; prepares fossils for curation; and coordinates closely with clients and contractors.

REPRESENTATIVE PROJECT EXPERIENCE

Perris Valley Pipeline South Reach Archaeological and Paleontological Field Monitoring, Riverside County. Mr. Alexander served as a Paleontological Field Monitor for the Perris Valley Pipeline South reach near Lake Perris in Riverside County. This project involved part-time cultural and paleontological monitoring during 26 weeks of trenching for the installation of a 108-inch pipe.

Summerly Residential Project Archaeological and Paleontological Services, Lake Elsinore. Mr. Alexander was an Archaeological and Paleontological Field Monitor for the Summerly Residential Project in Lake Elsinore in Riverside County. The project entailed trenching for the installation of a large water pipe on the project site. No resources were discovered as a result of the monitoring effort.

Ortega Reservoir Geotechnical Studies, Archaeological and Paleontological Monitoring, Orange County. Mr. Alexander was a Paleontological Field Monitor during the first phase of geotechnical studies to determine the appropriate location of the planned Ortega Reservoir for the Santa Margarita Water District. He provided both Archaeological and Paleontological monitoring services at the project site. Monitoring in the Cretaceous age Williams Formation, from which dinosaurs have been recovered in the past, resulted in the discovery of several fossils and fossil impressions (leaves, wood, and invertebrates).

Newport Banning Ranch Paleontological Assessment, Newport Beach. Mr. Alexander was a Field Paleontologist for this project. He assisted in the paleontological assessment for this development in order to determine the project site's potential for the presence of sensitive rock formations and fossil resources. The paleontological significance of the project site was deemed "high". Future paleontological work will include an intensive survey of the site; sampling of fossil outcrops; preservation of some outcrops if possible; and monitoring of construction activities.

Centennial Specific Plan and Phase One Implementation Project Cultural Resources Surveys, Los Angeles County. Mr. Alexander was a Field Paleontologist for this project. He considered the current status of the project area's paleontological resources in the environmental analyses and assisted in the completion of a Phase I paleontological and cultural resources study of the entire 12,000-acre project area and small off-site areas. A paleontological records search was completed at the Los Angeles County Natural History Museum (LACM), and an intensive pedestrian survey was performed to evaluate the project area for the presence of paleontological resources. Several fossil localities were identified and evaluated.

Highland Reservoir Project Cultural Surveys, Yorba Linda. Mr. Alexander was the Paleontological Field Monitor for this project, which entailed the demolition of the existing Highland Reservoir and its replacement with two new reservoirs. The first phase of the cultural resources study consisted of a Phase I cultural resources survey that resulted in the identification of the Highland Reservoir (constructed in 1911) as eligible for listing in the National Register of Historic Places (NRHP). A recommendation to monitor grading around the reservoir and to formally document the structure and related elements to the standards of the Historic American Engineering Record, Level II was made. The second phase included the production of large-format photographs of the structure; collection of existing drawings of the structure held by the Yorba Linda Water District; and production of as-built drawings of the structure's roof trusses. During demolition of the reservoir, Mr. Alexander conducted archaeological monitoring. No significant cultural resources were discovered.

State Route 73 Road Widening Archaeological and Paleontological Monitoring, Orange County. Mr. Alexander served as a Paleontological Field Monitor for this project, which involved cultural and paleontological resources monitoring for the widening of northbound State Route 73. Cultural monitoring was conducted during excavations, where required and as appropriate, and a final summary report of the cultural and paleontological resources monitoring was prepared. The project commenced in January 2009 and was completed in June 2009. Monitoring occurred where native sediments, potentially sensitive for cultural and/or paleontological resources, were expected to be encountered, and continued on an as-needed basis throughout project-related ground-disturbing activities. Mr. Alexander maintained daily logs of all monitoring activities, which were provided to the client and the Transportation Corridor Agencies (TCA) on a weekly basis. One fossil locality consisting of sand dollar fossil impressions was collected, cleaned, bagged, and given to the TCA. BonTerra Consulting recommended that the fossils be prepared for curation by a qualified Invertebrate Paleontologist and submitted to an appropriate storage facility.

Various Projects, Paleontological Field Monitor, Riverside, and San Bernardino Counties. As a Paleontological Field Monitor, Mr. Alexander has worked on projects for the following public agencies: the Metropolitan Water District Inland Feeder Pipeline in Moreno Valley; the Inland Empire Utility Agency RP-2/5 in Chino; the Metropolitan Transportation Authority's Goldline in East Los Angeles; and the Prima Deshecha Landfill in San Juan Capistrano.

Mr. Alexander conducted paleontological field monitoring for the following private development projects in San Bernardino and Riverside Counties: Eagles Glen in Corona; the Retreat in Corona; Lewis Homes in Jurupa Valley; Yucaipa-Calimesa Unified School District in Calimesa; and Pardee Homes in Corona.

EDUCATION

Bachelor of Science, Anthropology, University of California, Riverside, California 1991

PROFESSIONAL CERTIFICATIONS

Certified Archaeologist, Orange County Environmental Management Agency.

Certified Archaeologist, Riverside County Transportation and Land Management Agency.

Principle Investigator, Southern California, Bureau of Land Management

Hazwoper 40-Hour Certification

PROFESSIONAL SUMMARY

Mr. Smith has 23 years of experience as a principal investigator, field director, project archaeologist, and project manager. His project experience has involved properties, pipelines, transmission lines developments, facilities, mines, and parks managed by the Bureau of Land Management and the Bureau of Reclamation. He has expertise in National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) compliance involving surveys, inventories, monitoring, testing and data recovery, and Native American consultations. He is a certified archaeologist for Riverside County and has completed Riverside County cultural sensitivity training. He has extensive experience as a field and laboratory supervisor. He has conducted archaeological surveys encompassing over 40,000 acres of private and public lands in California, Nevada, and Arizona. These surveys were conducted for private and public clients. Agencies include the Bureau of Land Management in Arizona, California, and Nevada; the Prescott National Forest, the San Bernardino National Forest, the Cleveland National Forest, the Angeles National Forest, the Coconino National Forest, the Department of Defense, the Bureau of Reclamation, the California State Lands Commission, Arizona State Lands, the Arizona State Museum, the United States Army Corps of Engineers, and dozens of municipal, county, and state agencies.

Mr. Smith has extensive experience with agency, client, Native American, and subcontractor coordination; archival research; field reconnaissance; site testing; data recovery excavation; construction monitoring; site recordation; site protection/preservation; mapping; laboratory analysis; and report production. He has the practical experience necessary to staff, train, and manage field crews effectively to produce an accurate, reliable product for the client.

Mr. Smith's field experience includes all facets of safety training, education, and implementation to ensure compliance under the most rigid agency regulations.

REPRESENTATIVE PROJECT EXPERIENCE

Southern California Edison Ivanpah-Eldorado Transmission Project Cultural Resources Survey, California and Nevada. Mr. Smith provided archaeological consulting, analysis, monitoring, and reporting services in support of SCE's Ivanpah-Eldorado Transmission Project. David Smith surveyed 51 miles of transmission lines and associated roads and updated all known sites throughout the right-of-way as well as recorded new sites on California Department of Parks and Recreation (DPR) records for the California segment and Intermountain Archaeological Computer System (IMACS) forms for the Nevada segment.

Riverside RTRD 220-Kilovolt Alignment Initial Study Riverside County. Mr. Smith was the Project Archaeologist. This project consisted of an Initial Study (IS) to determine if archaeological resources would be impacted by any of three proposed utility alignments. Studies included records and literature reviews for archaeological and paleontological resources.

AT&T Fiber Optic Cable Installation Class III Cultural Resource Inventories Victorville, CA to Las Vegas, NV. Mr. Smith was the Project Archaeologist for this project. The study area for the fiber optic cable installation project encompasses a 190-mile linear segment located primarily through Bureau of Land Management lands. He conducted Class III cultural resources records search for the project Area of Potential Effect (APE) (including a one-mile query radius) at the San Bernardino Archaeological Information Center (SBAIC). A query was also sent to the California Native American Heritage Commission (NAHC) to determine whether any sacred sites or localities were located on or near the project site. Class III Inventories, consisting of high-resolution pedestrian surveys of the project site and adjacent areas, were also conducted. A survey report was prepared documenting the findings of the various record searches, information queries, and field inventories. Mr. Smith will perform cultural resources construction monitoring.

Bureau of Land Management Calnev Pipeline Class III Inventory, Barstow Resource Area. Mr. Smith was the Project Archaeologist for this project. He conducted a Class III Cultural Resources Inventory pursuant to Section 106 of the National Historic Preservation Act. The inventory consisted of a records search; Native American notifications; a pedestrian survey; and a written technical report documenting the results of the inventory.

Bureau of Land Management Calnev Pipeline Class III Cultural Resources Inventory for Two Pipeline Repair Excavations, California and Nevada. Mr. Smith was the Project Archaeologist for this project. He performed a Class III Cultural Resources Inventory For Two Pipeline Repair Excavations along The Calnev Pipeline, from Colton to Las Vegas. He conducted a Class III Cultural Resources Inventory pursuant to Section 106 of the National Historic Preservation Act. The inventory consisted of a records search; Native American notifications; a pedestrian survey; and a written technical report documenting the results of the inventory.

The Shady Canyon Archaeological Project Testing and Data Recovery, Orange County. Mr. Smith was the Project Manager and Project Archaeologist who managed the Phase II Testing and Evaluations for numerous sites and the Phase III Data Recovery for 25 sites located in Shady Canyon in Orange County, California. Duties included field and laboratory management; Native American reburial coordination; technical writing; and technical editing.

The Bonita Mesa Archaeological Project Data Recovery, Irvine. Mr. Smith was the Project Archaeologist and managed the Phase II Testing and Evaluations and the Phase III Data Recovery for 7 sites located on Bonita Mesa, County of Orange, California. Duties included field and laboratory management; Native American reburial coordination; technical writing; and technical editing.

January 07, 2012

Joe Guzzetta, General Manager
Joshua Basin Water District
61750 Chollita Road
P.O. Box 675
Joshua Tree, CA 92252

Re: Cost Proposal to Conduct Biological & Cultural Resources Monitoring for CEQA & Regulatory Permit Compliance During Construction of the Joshua Basin Water District's Recharge Basin & Pipeline Project Site in Joshua Tree, California

Dear Mr. Guzzetta,

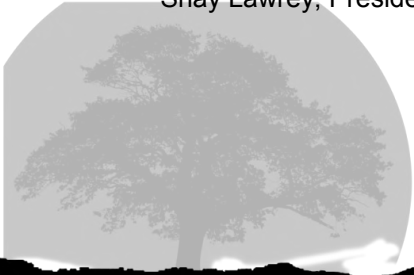
On behalf of Jericho Systems, Inc. and CRM TECH, I appreciate this opportunity to submit this cost proposal to the Joshua Basin Water District (JBWD) to conduct biological and cultural resources monitoring for California Environmental Quality Act (CEQA) & regulatory permit compliance during construction of JBWD's pipeline and recharge basin project, located in Joshua Tree, California. Jericho Systems, Inc. has teamed with CRM TECH and is submitting this proposal for both biological and cultural monitoring aspects of this project. Jericho Systems, Inc. will serve as the primary consulting firm with CRM TECH serving as a sub-consultant for the cultural monitoring.

Our proposal demonstrates that we are familiar with the area of Yucca Valley and Joshua Basin and that we have experience monitoring during pipeline construction. We have completed numerous similar monitoring projects and as such we understand what is needed and know how to do it. We are also knowledgeable regarding the types of biological and cultural resources that might be encountered in the area and we know how to comply the CEQA and regulatory permit requirements for this project. If you have any questions regarding this proposal feel free to contact me directly via e-mail at shay@jericho-systems.com, by phone at (909) 915-5900, or by mail at 108 Orange Street, Suite 10, Redlands, CA 92373. I will be the point of contact for the remainder of JBWD's selection process.

Sincerely,



Shay Lawrey, President





PROPOSAL

**BIOLOGICAL & CULTURAL RESOURCES MONITORING
FOR CEQA & REGULATORY PERMIT COMPLIANCE
DURING THE CONSTRUCTION OF THE JOSHUA BASIN WATER DISTRICT'S
RECHARGE BASIN & PIPELINE PROJECT SITE IN JOSHUA TREE, CALIFORNIA**

Prepared for Submittal to:
Joe Guzzetta, General Manager
Joshua Basin Water District
61750 Chollita Road
P.O. Box 675
Joshua Tree, CA 92252

Prepared by:
JERICHO SYSTEMS, INC
Shay Lawrey, President
108 Orange Street, Suite 10
Redlands, California 92373

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1 Statement of Qualifications for Jericho Systems, Inc.



1.1 Contact Information

Address: 108 Orange Street, Suite 10, Redlands, CA 92373
Phone Number: (909) 915-5900
Contact Person: Shay Lawrey, President
Email: Shay@jericho-systems.com

1.2 Company Profile

Jericho Systems, Inc. provides expert natural resource consulting services for clients in the public and private sectors. Our mission is to provide our clients with high quality consulting services, so that they can make informed natural resource management decisions. Our experienced staff helps our clients navigate the often complex regulatory permitting process to get their project done as efficiently as possible.

The key persons in our firm have decades of experience working with private, local, state and federal government clients. We have successfully balanced our workload, maintained a continuity of staff, and met or exceeded complex work schedules. We are comprised of experts with backgrounds in ecology, regulatory permitting, and planning, and particular expertise with California's deserts, forests, and riparian habitats. We thoroughly understand the regulatory issues associated with impacts and management of sensitive biological resources. Most importantly we have excellent working relationships with the federal and state resource agencies.

Our clients include private landowners, small businesses, corporations, conservation groups, land trusts, non-profits, and governmental agencies. We have worked with conservation groups to establish, restore, and manage conservation lands. We have worked with clients to establish and monitor conservation easements and mitigation sites. We have helped municipalities by conducting surveys, obtaining permits, and developing plans to incorporate resource conservation and management into their public works operations. We have completed projects ranging from small parcel assessments to large-scale infrastructure construction projects. Project budgets have ranged from a few thousand dollars to hundreds of thousands of dollars.

1.3 Services

Jericho Systems, Inc. is a natural resources consulting company providing expertise on the technical and regulatory aspects of natural resource assessment, impact analysis, mitigation, conservation, restoration, and land stewardship. We have a working familiarity with processes of a variety of State and Federal regulatory permitting agencies such as U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG) etc.

Our Services include:

- National Environmental Protection Act (NEPA) and California Environmental Quality Act (CEQA) compliance analysis, documentation, and permitting
- Initial Study/(Mitigated)Negative Declarations, and EIS/EIR sections for Biological Resources
- Special status wildlife surveys
- Wetland and jurisdictional delineations
- Habitat quality assessments
- Habitat suitability evaluations
- Biological Resources Damage Assessments
- USFWS Section 7, Section 10 consultation
- CDFG Section 2081 Incidental Take permitting
- Discharge of Fill and Streambed Alteration permitting
- Biological Assessments (BA)
- Natural Environment Studies (NES)
- Mitigation and Monitoring
- Construction monitoring

Jericho Systems, Inc. has demonstrated competence in preparation of environmental analysis and documentation. We have experience with, and expertise in, a variety of project types. Our involvement with these projects includes preparing environmental documents in support of CEQA/NEPA activities including wildlife habitat assessments, preparing technical Environmental Studies, mitigation site analysis, surveys and/or trapping for sensitive and endangered species.

Examples of project types that Jericho Systems, Inc. works on throughout California include:

- Utilities (gas pipelines, telecommunication, construction monitoring)
- Transportation (roads, trains, bridges)
- Public works (road maintenance, airports, flood control projects)
- Water (dams, canals, pipelines, treatment plants, recharge)

1.4 Staff Overview

Jericho Systems, Inc.'s proposed project personnel include the following individuals.

- Shay Lawrey, President; Wildlife Biology, Ecology, Regulatory Permitting and CEQA/NEPA compliance documentation and planning
- Daniel Smith; Herpetology, Wildlife Biology and Construction Monitoring
- Michael Kegarice; Desert tortoise survey and Construction Monitoring

Professional summaries for these individuals are presented below. Resumes located at end.

Shay Lawrey, President, graduated from Occidental College with a MS in Biology in 1997 with an emphasis in genetics and evolutionary biology. With over a decade of experience in natural resource management, California Environmental Quality Act and National Environmental Policy Act documentation and compliance, special status species survey, regulatory permitting, and construction monitoring, She has served as the Designated Biologists, the biologist designated by both the U.S. Fish and Wildlife Service and the California Department of Fish and Game, for projects located in the high desert and valley areas of San Bernardino. She has expertise with desert, and riverine/riparian ecosystems. San Bernardino kangaroo rat, desert tortoise, Mohave ground squirrel, burrowing owl, southern rubber boa, least Bell's vireo and southwestern willow flycatcher are the special status species Ms. Lawrey most often works with. She has over 2,500 hours in the field surveying for desert tortoise at the protocol level. In 2004 she attended the Desert Tortoise Council workshops which covers topics in desert tortoise handling, egg handling, artificial burrow construction, construction monitoring and regulatory requirements. She serves as firm lead in the acquisition of regulatory permits including incidental take permits under the California Endangered Species Act (CESA) and federal Endangered Species Act (ESA).

Daniel Smith, Environmental Technician, graduated from California State University at Fullerton, with a BA in Criminal Justice in 2008. For the past several years he has been a contract biologist with a focus on monitoring construction projects in the desert with desert tortoise and/or burrowing owl. He has over 1000 hours in the field surveying for desert tortoise and burrowing owl at the protocol level. He attended the Desert Tortoise Council workshops which covered topics in desert tortoise handling, egg handling, artificial burrow construction, construction monitoring and regulatory requirements. Primary duties over the past decade include conducting desert tortoise surveys and monitoring construction projects within desert tortoise habitat. Mr. Smith has more than 5,000 hours experience in construction monitoring.

Michael Kegarice, Environmental Technician, He has over 1000 hours in the field surveying for desert tortoise at the protocol level. He attended the Desert Tortoise Council workshops which covered topics in desert tortoise handling, egg handling, artificial burrow construction, construction monitoring and regulatory requirements. Primary duties over the past decade include conducting desert tortoise surveys and monitoring construction projects within desert tortoise habitat (mostly in the 29 Palms area). He has more than 10,000 hours experience in construction monitoring in desert tortoise habitat. Mr. Kegarice was an Environmental Site Manager on the BNSF's Third Main Track project through Cajon Pass for one year. Duties included monitoring construction; coordinating the cultural, Native American, and paleontological monitors; inspect species exclusionary fencing; and conduct storm water pollution prevention plan measures.

1.5 List of Selected Projects

Biological Monitoring Projects completed by Jericho Systems, Inc. are presented below. Contact information for references are also included.

- **Mojave Water Agency's new Operations Center Construction Project:** Ms. Lawrey and Mr. Smith conducted pre construction desert tortoise and general biological surveys, prepared and provided an environmental awareness class and provided construction monitoring. Contact person: Darrell Reynolds, PE, Project Manager/ Engineering Controller Mojave Water Agency, (760) 946-7023
- **Mojave Water Agency's Regional Recharge and Recovery (R³) and Oro Grande Wash Recharge Construction Projects.** Ms. Lawrey was CDFG designated biologist as per the California Endangered Species Act Incidental Take Permit (ITP) Number 2081-2010-027-06. Ms. Lawrey provided a CDFG approved environmental awareness class and full-time construction monitoring for the year-long construction phase of these projects. Shay was tasked with contractor compliance focusing on the terms and conditions of the CESA 2081 ITP, the Clean Water Act Sections 404/401 permits and CDFG Streambed Alteration Agreement. Contact person: Darrell Reynolds, PE, Project Manager/ Engineering Controller Mojave Water Agency, (760) 946-7023.
- **Victor Valley Waste Water Authority Upper Narrows Interceptor Replacement Project** biological resources assessment, species survey, jurisdictional delineation, regulatory permitting and coordination relative to natural resources issues with FEMA, U.S. Army Corps of Engineers, USFWS, CDFG, Environmental Protection Agency, Regional Water Quality Control Board, San Manuel Mission Band of Indians, and County of San Bernardino Flood Control District. Contact Person: Mr. Logan Olds, General Manager Victor Valley Wastewater Reclamation Authority, (760) 246-8638.
- **On call biologist to the Mojave Desert Resource Conservation District** for mitigation land annual monitoring and reporting for various parcels of land located within their service area Ms. Jackie Lindgren, District Coordinator, (760) 843-6882

These examples show that Jericho Systems, Inc. is familiar with desert ecotones similar to Yucca Valley and Joshua Basin and that we have experience monitoring during pipeline construction. We understand what is needed and know how to do it. We are also knowledgeable regarding the types of biological resources that might be encountered in the area.

2 Statement of Qualifications for CRM TECH

2.1 Contact Information

In 2000, CRM TECH became a California corporation (re-incorporated in 2003) and in 2003 CRM TECH was certified as a Small Business Enterprise (micro-business) by the State of California Office of Small and Minority Business.

Address: 1016 E. Cooley Drive, Suite B, Colton, CA 92324
Phone Number: (909) 824-6400
Contact Person: Michael Hogan, PhD, Principal Investigator, Archaeologist
Email: mhogan@crmtech.us

2.2 Company Profile



CRM TECH is a full-service cultural resources management consulting firm that has been providing our services to a wide variety of public agencies, environmental firms, private developers, and individuals since being founded in 1993. CRM TECH has completed more than 2,200 cultural and paleontological resources studies throughout the State of California, the majority of them in southern California. These jobs were completed according to guidelines of the California Environmental Quality Act (CEQA), the National Historic Preservation Act (NHPA), and/or the National Environmental Policy Act (NEPA), as well requirements of specific public agencies (e.g., Caltrans, Bureau of Land Management, various Counties and Cities). During this time, CRM TECH has acquired a unique expertise in California archaeology, history, architectural history, ethnography, anthropology, and paleontology. At the same time, CRM TECH has developed efficient methods using the latest technologies to deal with the full spectrum of historical, archaeological, and paleontological resource issues.

CRM TECH utilizes our broad range of knowledge and experience to successfully complete the required cultural studies according to the appropriate guidelines. CRM TECH provides high quality, legally defensible cultural resource compliance reports at very competitive prices. We take pride in completing projects in a timely manner and within the established budget.

2.3 Services

Services provided by CRM TECH comprise all aspects and phases of cultural resources investigations pertaining to archaeology, history, architectural history, and paleontology, including:

- Archaeological, historical, and paleontological record searches
- Historical and ethnohistorical research
- Paleontological literature reviews
- Consultation with public agencies
- Native American communications and consultations
- Archaeological, architectural, and paleontological surveys
- Cultural resources elements of general plans, specific plans, and environmental impact reports
- Communitywide historical resources inventories
- Historic building evaluations
- Test excavations to determine the significance of archaeological sites
- Mitigation of project effects through data recovery and documentation/recordation
- Archaeological and paleontological monitoring of earth-moving operations in sensitive areas

2.4 Staff Overview

CRM TECH has the personnel, knowledge, expertise, experience, and equipment to successfully complete the cultural resource investigations needed for this project. We have completed numerous studies in the Yucca Valley and Joshua Basin area, including monitoring programs (see below). Principal Investigators for this project will be Michael Hogan, Ph.D., RPA and Bai 'Tom' Tang, M.A. Hogan and Tang have over 60 years combined experience in CEQA and NHPA cultural resources compliance projects. Most of their work has been in southern California, and numerous of these projects have been in the Yucca Valley and the Joshua Basin area. Additional key personnel that may be involved in the project include John D. Goodman II, M.S., Project Archaeologist and Artifact Analyst; and Daniel Ballester, B.A., Field Director and GIS Specialist. A brief review of their experience is provided here, with resumes below.

HIGHLIGHTS
<p>Education</p> <ul style="list-style-type: none"> ▪ Ph.D., Anthropology, University of California, Riverside ▪ B.A., Anthropology, University of California, Riverside <p>Key Strengths</p> <ul style="list-style-type: none"> ▪ Understanding of State and Federal regulations ▪ In-depth knowledge of California archaeology ▪ Years of experience in California archaeology <p>Training</p> <ul style="list-style-type: none"> ▪ Has worked in the field since 1985 ▪ Principal Investigator since 2002 <p>Qualifications</p> <ul style="list-style-type: none"> ▪ Exceeds Secretary of Interior's Standards for Archaeology and Historical Archaeology ▪ Registered Professional Archaeologist

Michael Hogan, Ph.D. Principal Investigator, Program Manager, Archaeologist. Mr. Hogan has more than 25 years of cultural resources management experience. He has worked on some of the more important archaeological sites in southern California. Additionally, he has been involved in the preparation of cultural resource management documents subject to both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). He has successfully managed hundreds of projects, overseeing staff members and their work, to ensure that the various aspects of the research (records searches, field work, graphics production, and report writing) are efficiently completed to the highest standards while meeting established schedules. Thus,

Mr. Hogan has a proven record of preparing and managing CEQA/NEPA projects to successful completion. Mr. Hogan has been involved in every type of cultural resource management project, including due diligence records searches, Phase I surveys, Phase II testing and evaluation programs, Phase III data recovery as mitigation programs, monitoring during earth-moving, master plan and general plan elements, Native American scoping, and ethnographic research. These types of projects have been completed for all types of development projects, including large scale residential subdivision projects; water line installation projects; railroad, freeway, and highway improvement projects that cross numerous jurisdictional boundaries;

downtown redevelopment projects; and smaller scale multi-family and single-family residential projects. He has managed and been involved in the research for numerous projects in the counties of San Bernardino and Riverside, but has also done substantial work in San Diego, Orange, Los Angeles, Ventura, Kern, and other counties. He has conducted research and managed large-and small-scale projects for the Victorville Water District, the Mojave Desert Resource Conservation District, the Victor Valley Wastewater Reclamation Authority, the Baldy Mesa Water District, the City of Victorville, the City of Adelanto, the City of Hesperia, the Town of Yucca Valley, the City of Joshua Tree, the City of San Bernardino, the City of Highland, the San Bernardino Valley Water District, the County of San Bernardino, SANBAG, Caltrans, the Riverside County Transportation Department, the Bureau of Land Management, the Federal Communications Authority, and others. Additionally, Hogan has conducted numerous investigations in the cities of Yucca Valley, Joshua Tree, San Bernardino, Riverside, and Eastvale.

HIGHLIGHTS	
Education	<ul style="list-style-type: none"> ▪ Graduate Program in Public History/Historic Preservation, UC Riverside ▪ M.A., American History, Yale University, New Haven, Connecticut ▪ B.A., History, Northwestern University, Xi'an, China
Key Strengths	<ul style="list-style-type: none"> ▪ Understanding of State and Federal regulations ▪ In-depth knowledge of California history ▪ Over 25 years of experience with California architectural history ▪ Attention to detail
Training	<ul style="list-style-type: none"> ▪ Has worked in the field since 1988 ▪ Principal Investigator since 2002
Qualifications	<ul style="list-style-type: none"> ▪ Exceeds Secretary of Interior's Standards for Architectural History and History

Bai 'Tom' Tang, M.A. Principal Investigator, Project Manager, Architectural Historian, Historian. Mr. Tang has 25 years of cultural resources management experience, and is a recognized expert in California history and architectural history. He has authored, co-authored, and contributed to hundreds of cultural resource management documents subject to both the CEQA and the NEPA. He has also successfully managed hundreds of projects, during which he has guided staff members and overseen their work to ensure that the various aspects of the studies (records searches, historical archival research, field work, graphics production, and report writing) were efficiently completed to the highest standards while meeting established schedules. Thus, Mr. Tang has a proven record of preparing and managing CEQA/NEPA projects to successful completion.

Mr. Tang has been involved in a wide range of project types, including water line and water facility improvement projects; projects involving railroad and highway improvements; large scale residential development ventures; downtown redevelopment projects; the cultural resource elements of master plans and general plans; and smaller scale multi-family and single-family residential projects. He has managed and been involved in the research for numerous large-scale projects in the counties of San Bernardino and Riverside, but has also done substantial work in San Diego, Orange, Los Angeles, Ventura, Kern, and other counties. He has conducted research and managed large- and small-scale projects for the Victorville Water District, the Mojave Desert Resource Conservation District, the Victor Valley Wastewater Reclamation Authority, the Baldy Mesa Water District, the San Bernardino Valley Water District, the County of San Bernardino, the City of San Bernardino, the City of Highland, SANBAG, Caltrans, the Riverside County Transportation Department, the Bureau of Land Management, the Federal Communications Authority, and others. He has successfully brought to completion projects in most of the cities in southern California, including Yucca Valley and Joshua Tree, San Bernardino, Victorville, Apple Valley, Adelanto, Hesperia, Redlands, Riverside, and Highland, to name a few.

HIGHLIGHTS	
Education	<ul style="list-style-type: none"> ▪ M.S., Anthropology (Archaeological Emphasis), University of California, Riverside ▪ B.S., Anthropology, University of California, Riverside
Key Strengths	<ul style="list-style-type: none"> ▪ Understanding of State and Federal regulations ▪ In-depth knowledge of California prehistory and history ▪ Over 30 years of experience analyzing prehistoric and historic-period artifacts
Training	<ul style="list-style-type: none"> ▪ Has worked in the field since 1982
Qualifications	<ul style="list-style-type: none"> ▪ Exceeds Secretary of Interior's Standards for Archaeology and Historical Archaeology

John D. Goodman, II, Principal Archaeologist, Artifact Analyst. Mr. Goodman has over 30 years of cultural resources management experience, and is an expert in artifact analyses. He has authored, co-authored, and contributed to hundreds of cultural resource management documents subject to both the CEQA and the NEPA. He has also successfully managed hundreds of projects, during which he has trained other archaeologists and overseen their work to ensure that the various aspects of the research (records searches, field work, graphics production, and report writing) were efficiently completed to the highest standards while meeting established schedules. Thus, Mr. Goodman has a proven record of preparing and managing CEQA/NEPA projects to successful completion. Mr. Goodman has been involved in a wide range of project types

including water line and water facility improvement projects; projects involving railroad and highway improvements; downtown redevelopment projects; and smaller scale multi-family and single-family residential projects. He has conducted research and managed large- and small-scale projects for the US Forest Service; projects that involved Caltrans oversight, the Riverside County Transportation Department, the Bureau of Land Management, and other agencies. As part of his expertise, he has analyzed lithics, ground stone, faunal, and historic-period artifacts.

HIGHLIGHTS	
Education	<ul style="list-style-type: none"> ▪ M.A. Geographical Information Systems, University of Redlands, California (expected 2013) ▪ Certificate in Geographic Information Systems (GIS), California State University, San Bernardino ▪ B.A., Anthropology, California State University, San Bernardino
Key Strengths	<ul style="list-style-type: none"> ▪ Understanding of State and Federal regulations ▪ Skilled manager ▪ 14 years of experience conducting fieldwork
Training	<ul style="list-style-type: none"> ▪ Field schools ▪ GIS education

Daniel Ballester, Project Archaeologist, Field Director, GIS/Graphic Specialist. Mr. Ballester has over 14 years experience in the cultural resources management field. He has conducted and guided hundreds of cultural resource investigations subject to the CEQA and the NEPA. Mr. Ballester has worked with and trained other archaeologists and overseen their work. Mr. Ballester has a proven record of conducting and guiding the field research so that it meets the criteria and standards for CEQA and NEPA compliance. Mr. Ballester has been involved in a wide range of project types including water line and water facility improvement projects; projects involving railroad and highway construction and improvements; large scale residential development ventures; downtown redevelopment projects; the cultural resource elements of master plans and general plans;

and smaller scale multi-family and single-family residential projects. He has conducted research and managed large-and small-scale projects for the Victorville Water District, the Mojave Desert Resource Conservation District, the City of Victorville, the City of Adelanto, the City of Hesperia, the City of Desert Hot Springs, the Town of Yucca Valley, the City of Joshua Tree, the City of San Bernardino, the City of Highland, the San Bernardino Valley Water District, the County of San Bernardino, SANBAG, Caltrans, the Riverside County Transportation Department, the Bureau of Land Management, the Federal Communications Authority, and others. In 2007, Ballester completed the work to obtain a Certificate in Geographic Information Systems (GIS), from the California State University, San Bernardino. He is now completing his Masters degree in Geographical Information Systems from the University of Redlands, California.

2.5 List of Selected Projects

Three cultural studies completed by CRM TECH are presented below. Contact information for references are also included.

- **Yucaipa Valley Water District Regional Brineline Extension Project, Phase III**, in the Cities of Loma Linda and San Bernardino, San Bernardino County, California. CRM TECH was hired to conduct an archaeological and a paleontological monitoring program during earth-moving operations for the third phase of the Brineline Extension Project. CRM TECH had a monitor present during all trenching activities for the project, as requested by the Yucaipa Valley Water District. As the lead agency for the project, the Yucaipa Valley Water District (YVWD) required the monitoring program as part of the environmental review process, pursuant to the California Environmental Quality Act (CEQA). The purpose of the program was to assist the YVWD in identifying, evaluating and, if necessary, protecting any subsurface archaeological or paleontological remains that may be unearthed as a result of the earth-moving activities. On-site monitoring was carried out between October 13, 2011, and July 27, 2012, by CRM TECH archaeological/ paleontological monitors. Reports provided to Krieger and Stewart, Inc., 3602 University Avenue, Suite 201, Riverside, CA 92501; contact Patrick Watson, 951-684-6900.

- **Joshua Basin Water District H-Zone Reservoir Tank Relocation Project**, near the Town of Yucca Valley, San Bernardino County, California. In January and February 2010, at the request of Dudek, CRM TECH performed a cultural resources study on an approximately 0.75 acre of rural land in an unincorporated area near the Town of Yucca Valley, San Bernardino County, California. The study is a part of the environmental review process for the proposed undertaking. The Joshua Basin Water District (JBWD), as the project proponent and the lead agency, required the study pursuant to the CEQA. Since the undertaking requires federal oversight through the United States Department of Agriculture (USDA), the study was completed in compliance with both CEQA and Section 106 of the National Historic Preservation Act. The purpose of the study was to provide the JBWD and the USDA with the necessary information and analysis to determine whether the proposed undertaking would have an effect on any "historic properties," as defined by 36 CFR 800.16(l), or "historical resources," as defined by Title 14 CCR §15064.5(a)(1)-(3), that may exist in or near the APE. Report provided to Dudek, 75-150 Sheryl Avenue, Palm Desert, CA 92211; contact Jon Berg, (760) 341-6660.

- **Tentative Tract Map No. 18255**, near the Community of Joshua Tree, County of San Bernardino, California. Between February and April, 2007, at the request of Terra Nova Planning and Research, Inc., CRM TECH performed a cultural resources study of Tentative Tract Map No. 18255, consisting of approximately 105 acres of vacant land near the unincorporated community of Joshua Tree. The purpose of the study was to provide the County of San Bernardino, Lead Agency for the proposed project, with the necessary information and analysis to determine whether the proposed project would cause substantial adverse changes to any historical/ archaeological resources that may exist in or around the project area, as mandated by CEQA. Report provided to Terra Nova Planning and Research, Inc., 400 South Farrell Drive, Suite B-205, Palm Springs, CA 92262; contact John Criste, (760) 320-9040.

3 Project Understanding and Approach

The Joshua Basin Water District (JBWD) intends to construct approximately 24,000 linear feet (4.5 miles) of 16-inch diameter pipe, as an extension to the existing Mojave Water Agency pipeline, and construct an approximate 32.5-acre recharge facility to accommodate replenishment of the aquifer. JBWD expects the pipeline construction part of the project to last approximately 36 weeks from January, 2013, through September 2013. The recharge pond construction part of the project will take place at a later date around July 2013.

3.1 Biological Monitoring Approach

The project is located in the unincorporated community of Joshua Tree, in San Bernardino County along and adjacent to SR 62 between Yucca Mesa Road and Border Avenue. The unincorporated community of Joshua Tree is located approximately four miles north of the Joshua Tree National Park. Joshua Tree is approximately 2 miles east of the Town of Yucca Valley and approximately 10 miles west of the City of Twentynine Palms. The Bartlett Mountains lie approximately one mile north of Joshua Tree and rise to a peak height of 3,805 feet msl. The Pinto Mountains and Little San Bernardino Mountains border the project area to the south. Undeveloped land in the project area consists of Joshua tree woodland and creosote bush scrub. The habitat types located in the undisturbed areas of the project site are suitable for Agassiz's desert tortoise (*Gopherus agassizii*) which is listed under both state and federal law as a threatened species. Due to the potential for Agassiz's desert tortoise as well as other biological and cultural resources, monitoring is required.

3.1.1 Education Program

Prior to the initiation of construction, the Jericho Systems, Inc will prepare and present an education and awareness program that is approved by the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) on the desert tortoise and other special-status species to personnel and contractors who will be involved with project. This program must be

3.1.2 Pre-construction surveys

Prior to the start of ground-disturbing activities, Jericho Systems, Inc. biological monitor(s) will conduct a pre-construction survey of the site and adjacent areas, to identify any sensitive biological resources (e.g. desert tortoise burrows) that could be affected by the work. JBWD will mark construction, staging, and storage areas with flagging or laths.

3.1.3 Daily monitoring and compliance checks during construction

In the areas where a monitor is required, Jericho Systems, Inc. will provide authorized biologist(s) to monitor construction throughout the project. The monitor(s) will check the area in advance of ground disturbance, during the operation of any heavy equipment, and will check any open trenches or other hazards three times during the day to prevent any harm to desert tortoises. The monitor must be authorized to handle sensitive biological resources if necessary.

3.1.4 Weekly monitoring during construction in developed areas

There are 2 miles of the 4.5 mile pipeline that run through a developed area for this project. For this part of the pipeline construction project a monitor will be required to perform weekly monitoring compliance visits each Monday morning to implement worker awareness measures. The goal of the compliance visits, for several hours each Monday morning is to: (1) track progress of

installation; (2) ensure that other non-tortoise measures are being implemented (maintaining a clean workplace, marking and staying within the right-of-way, etc.); (3) progressively measuring how much habitat and non-habitat are lost to installation, and implementing other various measures in the regulatory documents.

3.1.5 Optional Task Full-time monitoring during initial ground disturbance within the recharge basin

Jericho Systems, Inc. will provide authorized biologist(s) to monitor construction activities within the fenced area for stockpiling soil to salvage gilia plants and grubbing the site of vegetation.

3.1.6 Preparation of reports

Jericho Systems, Inc. be responsible for reporting to the CDFG and USFWS on permit compliance. The CDFG typically requires a report on the results of pre-construction surveys, twice-monthly reports during construction, an annual report, and a final mitigation report. The USFWS requires a final report. Jericho Systems, Inc. will complete and submit reports according to the schedule specified by the agencies.

3.2 Cultural Monitoring Approach

In order to understand the progress of Native American cultures prior to European contact, archaeologists have devised chronological frameworks on the basis of artifacts and site types that date back some 12,000 years. Currently, the chronology most frequently applied in the Mojave Desert divides the region's prehistory into five periods marked by changes in archaeological remains, reflecting different ways in which Native peoples adapted to their surroundings. The five time periods can be named as follows: the Lake Mojave Period, 12,000 years to 7,000 years ago; the Pinto Period, 7,000 years to 4,000 years ago; the Gypsum Period, 4,000 years to 1,500 years ago; the Saratoga Springs Period, 1,500 years to 800 years ago; and the Protohistoric Period, 800 years ago to European contact. The Native American groups living near the APE in recent centuries were the Serrano, whose homeland is centered at the San Bernardino Mountains, and the Chemehuevi, a subgroup of the Southern Paiute whose territory extends east to the Colorado River. Social customs brought the populations together at important base camps or villages for annual ceremonies and tribal interaction with neighboring groups. Although contact with Europeans may have occurred as early as 1771-1772, European influence on Serrano and Chemehuevi lifeways was negligible until the 1810s, when the Spanish/Mexican mission system expanded to the edge of Serrano territory. By the early 20th Century, the majority of Serrano and Chemehuevi population was incorporated into the reservation system.

In the vicinity of present-day Yucca Valley, the first notable cultural feature to appear was a trail that traversed essentially the same route as today's Twentynine Palms Highway (SR 62). The first non-Native Americans to settle in the Morongo basin, in the late 19th century, were miners and cattle ranchers, followed by homesteaders in the early 20th century. One of the earliest of the cattle ranchers was Mark "Chuck" Warren, who settled in the area with his family in the early 1880s and leased extensive acreage around present-day Yucca Valley from the U.S. government to graze his herds. A well that Warren dug a short distance southwest of the present-day Yucca Valley town center, known aptly as Warren's Well, and the house he built nearby soon became a popular stop on Weaver's Trail, and "the center of life in the area for many years." By 1945, the small community that gradually emerged around Warren's Well had gathered enough population to warrant the establishment of a post office named Yucca Valley, but the town was not incorporated until 1991.

Based on this brief summary of the prehistory and history of the area, it is apparent that certain types of artifacts and sites might be found in the general vicinity. This information would be conveyed to the construction crew and supervisors so that they know what types of cultural resources might be encountered

3.2.1 Education and Awareness Program

The Cultural Resources Monitoring program will follow fairly standard cultural resources monitoring procedures. These include *presenting an education and awareness program* regarding prehistoric and historic-period cultural resources in the area, the potential of the construction activities to disturb such resources, and the actions to be taken if cultural resources are encountered.

3.2.2 Avoidance of Cultural Resources

Mitigation measures state that an Environmentally Sensitive Area will be marked around the untested portions of Site CA-SBR-13305/H so that portion of the site will be not be impacted by any construction related activity. In order to do so, CRM TECH would acquire a copy of the report and site record so that we can accurately determine these boundaries of the site. Utilizing this information, entering it into our GIS system, and uploading the data into our handheld Trimble GPS we would be able to accurately delineate the untested portions of the site and prevent further disturbances to it.

3.2.3 Monitoring by a Qualified Archaeologist & Native American Representative

The RFP calls for full-time monitoring within 100 feet of Site CA-SBR-13305/H and periodic, twice per work week, spot-check monitoring for other areas of the pipeline construction project (subject to modification based on observations). An optional task would be full-time monitoring during initial ground disturbance within the recharge basin (also subject of modification).

Typical monitoring procedures consist of the following tasks:

1. While present on the site, the archaeological monitor will continuously inspect portions of the APE prior to any earth-disturbing activities to determine if any archaeological resources are present on the surface;
2. Provide on-site monitoring during all earth-moving operations that impact native soils; if cultural resources or human remains are encountered during this time, the archaeologist shall have the power to temporarily halt or divert work in that area until the finds are evaluated and an appropriate treatment plan is developed;
3. Identify, appraise, record, and recover (as appropriate) all artifacts, features, or sites discovered during monitoring, if any;
4. Maintain field documents, photographs, and recovered resources (if any) in an organized manner in the lab so as to facilitate final report production;
5. If any cultural resources are recovered, they will be transported to CRM TECH's lab facility where they will be processed and catalogued; arrangement and preparation for their permanent curation at an appropriate facility will also be initiated;
6. Consult with Native American representatives and/or local historical societies in the event of significant archaeological findings to help determine their importance and appropriate curation facility;
7. Complete site record(s) or site record updates and submit them to the Archaeological Information Center at the San Bernardino County Museum, as required, to document all cultural resources, if any;

8. Analyze and interpret the recovered materials for information that would add to our knowledge regarding the lifeways of the people that lived in the area;
9. Prepare a report to document the methods and results of the procedures listed above.

3.2.4 Preparation of a Monitoring Report

A report of methods and findings will be prepared. According to the RFP, we are to assume that no additional resources will be encountered during monitoring, so that a Negative Monitoring Report would be prepared. If this is the case, then items 3, 5, 6, 7, and 8 (above) would not be conducted and the monitoring report would be fairly brief. The report would satisfy the needs of agencies and be submitted according to a schedule as specified by them.

4 Staff Availability

Both Jericho Systems, Inc. and CRM TECH continuously take on new contracts while completing previously initiated jobs. Both firms have several employees that are able to conduct various tasks and are able to put staff on projects as needed so that the work gets done. Additionally, both firms have access to several part-time, on-call biologists/archaeologists that can be used if either firm find themselves in a bind and need to get more work done faster. Thus, Jericho Systems, Inc and CRM TECH will be able to put their respective monitors in the field immediately as needed.

5 Cost

Jericho Systems, Inc, and CRM TECH have conducted scores of these types of monitoring programs and propose a flat, fully burdened, hourly rate of \$65 per hour for monitoring and for report writing. Biological monitors may consist of Shay Lawrey, Daniel Smith, and Michael Kegarice. Archaeological monitors may consist of Robert Porter, Nina Gallardo, Daniel Perez, Daniel Ballester, John Goodman, or Michael Hogan. All of these monitors have years of experience and are highly qualified. While monitors are expected to provide synopses of their daily/weekly/monthly work, the biological report writer for this project will be Shay Lawrey and the cultural report writers for this project may be Michael Hogan, John Goodman, Terri Jacquemain, Daniel Perez, or Tom Tang. The hourly, fully-burdened rate for all services is \$65 per hour on a time and material basis.

It seems that the JBWD is expecting the Consultant Team to hire the Native American monitor. We are willing and prepared to do so. However, it is likely that available Native American monitors may have vastly different billing rates. Given that possibility, we can estimate a fully-burdened billing rate of \$35 per hour for the Native American monitor. Typically the Native American monitor does not produce a final report, such that there would be no charges for report writing.

The only reimbursable expenses that will be billed is mileage at a rate of 0.55 per mile. The distance to the project site makes it necessary to be reimbursed for mileage to and from the job site. No other reimbursable expenses will be added to our invoices. All other costs are included in our hourly rates noted above. Reimbursable mileage expenses would apply to the biological, archaeological monitor and the Native American monitors.

We expect the pipeline construction aspect of the project will take approximately 50 working days assuming an average of about 500 linear feet of pipe installed per day. About half of the pipeline alignment will occur in developed areas and will only require weekly compliance checks.

5.1 Table of Proposed Estimated Costs

Task	Estimated Hours	Costs Est. based on estimated hours
Biological Monitoring @ \$65/hour		
Biological Education Program	20	\$ 1,300.00
Pre-construction surveys/Daily full time monitoring	200	\$ 13,000.00
Weekly monitoring during construction in developed areas	40	\$ 2,600.00
Optional Task Full-time monitoring during initial ground disturbance within the recharge basin	120	\$ 7,800.00
Preparation of reports	40	\$ 2,600.00
Subtotal		\$ 27,040.00
Cultural Monitoring @ \$65/hour		
Cultural Education Program	20	\$ 1,300.00
Daily Monitoring near Site CA-SBR-13305/H	40	\$ 2,600.00
Periodic, twice per work week, spot-check monitoring for other areas of the pipeline	144	\$ 9,360.00
Optional Task Full-time monitoring during initial ground disturbance within the recharge basin	120	\$ 7,800.00
Preparation of a Monitoring Report	40	\$ 2,600.00
Subtotal		\$ 23,400.00
Native American Monitor @ \$35/hour		
Daily Monitoring near Site CA-SBR-13305/H	40	\$ 1,400.00
Periodic, twice per work week, spot-check monitoring for other areas of the pipeline	144	\$ 5,040.00
Optional Task Full-time monitoring during initial ground disturbance within the recharge basin	120	\$ 4,200.00
Subtotal		\$ 10,640.00
		\$61,600.00
Estimated total		
Reimbursable Cost	\$0.55/ mile	

Appendix A. Resumes of key personnel at Jericho Systems, Inc.



SHAY LAWREY

PRESIDENT

JERICO SYSTEMS, INC.

ROLE

Subject Matter Expert – Principal in Charge

SUMMARY

As the President of Jericho Systems, Inc, an environmental consulting firm in Redlands, California, Ms. Lawrey serves as the project lead on the projects undertaken by the firm. With nearly two decades of experience in natural resource management, special status species survey, regulatory permitting, and construction monitoring, she specializes in complex projects usually involving endangered species, sensitive habitats, and/or jurisdictional waters, and regulatory permits. She has expertise with desert, and riverine/riparian ecosystems. The San Bernardino kangaroo rat, desert tortoise, Mohave ground squirrel, burrowing owl, southern rubber boa, least Bell's vireo and southwestern willow flycatcher are the special status species Ms. Lawrey most often works with.

SELECT PROJECT EXPERIENCE

Designated Biologist Mojave Water Agency's Regional Recharge and Recovery (R³) and Oro Grande Wash Recharge Construction Projects. Ms. Lawrey was the California Department of Fish and Game (CDFG) designated biologist as per the California Endangered Species Act Incidental Take Permit (ITP) Number 2081-2010-027-06. Ms. Lawrey provided a CDFG approved environmental awareness class and full-time construction monitoring for the year-long construction phase of these projects. Shay was tasked with contractor compliance focusing on the terms and conditions of the CESA 2081 ITP, the Clean Water Act Sections 404/401 permits and CDFG Streambed Alteration Agreement.

Designated Biologist and on-call to Inland Valley Development Agency / San Bernardino International Airport Authority for various projects including the Mountain View Avenue and Widening Project (Phase I) located in San Bernardino County, California. Conduct biological survey, prepare and provide an environmental awareness class and provide construction monitoring. Design and implement a radio-tracking study of the San Bernardino kangaroo rat in coordination with the U.S. Fish and Wildlife Service (USFWS).

Santa Ana Watershed Project Authority (SAWPA): Ms. Lawrey was contracted by SAWPA to conduct and prepare biological resources damage assessments and follow up monitoring of two sanitary sewer overflows of the Inland Empire Brine Line Reach V into Bedford Wash

Years of Experience: 19

Education:

M.A., Biology, Occidental College, Los Angeles, CA, 1997

B.A., Environmental Studies, University of California Santa Cruz, 1993

Permits / Licenses:

US Fish and Wildlife Service Federal 10(a) Recovery Permit (TE-094308-3) to survey for San Bernardino kangaroo rat (*Dipodomys merriami parvus*) and Southwestern willow flycatcher (*Empidonax traillii extimus*)

California Department of Fish and Game Scientific Collecting Permit (SC-007256)

Publications:

Feather Lead Concentrations and 207Pb/206Pb Ratios Reveal Lead Exposure History of California Condors (*Gymnogyps californianus*) Environ. Sci. Technol., 2010, 44 (7), pp 2639–2647 (March 3, 2010)

and Temescal Wash that occurred on 10-18-11 and 05-15-12

Santa Ana Watershed Project Authority's Santa Ana River Interceptor (SARI) Repair and Rehabilitation Project. Ms. Lawrey was the CDFG and USFWS designated biologist and point of contact as per the project's regulatory permits. She provided oversight on the project relative to biological resources and regulatory permit compliance during construction in Prado.

On call biologist to the Mojave Desert Resource Conservation District for mitigation land annual monitoring and reporting for various parcels of land located within their service area

Victor Valley Waste Water Authority Upper Narrows Interceptor Replacement Project biological resources assessment, species survey, jurisdictional delineation, regulatory permitting and coordination relative to natural resources issues with FEMA, U.S. Army Corps of Engineers, USFWS, CDFG, Environmental Protection Agency, Regional Water Quality Control Board, San Manuel Mission Band of Indians, and County of San Bernardino Flood Control District.

Victor Valley Waste Water Authority Waste Water Treatment Plant outfall downstream water monitoring.

WORK HISTORY

President, **Jericho Systems Inc.** Land use planning and natural resources management. Specializes in California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) and acquisition of federal Clean Water Act Sections 404 and 401 discharge of fill permits, California Fish and Game Code Section 1600 Streambed Alteration Agreements, and incidental take permits under the California Endangered Species Act (CESA) and federal Endangered Species Act (ESA).

Ecologist/Regulatory Specialist, **Tom Dodson & Associates.** Specialized in CEQA and NEPA document preparation and compliance, regulatory permitting, habitat monitoring, and construction monitoring.

Senior Planner, **San Bernardino County Department of Public Works (DPW).** Ensure DWP compliance with local, state and federal environmental regulations. Obtain all required regulatory permits for DPW operations and maintenance, flood control, transportation, and emergency projects. Prepare CEQA and NEPA documents for DPW projects. Manage and attend public hearings



DANIEL SMITH

SENIOR ENVIRONMENTAL TECHNICIAN

JERICO SYSTEMS, INC.

ROLE - Construction Monitor

SUMMARY

Daniel Smith has accompanied qualified desert tortoise biologists (Lisa Patterson previously Kegarice, Steve Gardner, Louis LaPierre, and Shay Lawrey) for over 500 hours in the field. Primary duties over the past decade include conducting desert tortoise surveys and monitoring construction projects within desert tortoise habitat. Mr. Smith has more than 5,000 hours experience in construction monitoring.

Years of Experience: 10

Education:

B.A., Criminal Justice,
California State University
of Fullerton, 2008.

Certificate from the 2001
Desert Tortoise Council
Workshops: covered topics
in desert tortoise handling,
egg handling, artificial
burrow construction,
construction monitoring and
regulatory requirements.

SELECT PROJECT EXPERIENCE

**San Bernardino county Department of Public Works
Transportation Department Barstow Area Road Maintenance
Project.** Desert Tortoise monitoring, provide awareness training,
prepare daily monitoring logs.

City of Victorville's La Mesa/ Nisqualli Interchange Project. Desert
Tortoise, burrowing owl, Mohave ground squirrel and jurisdictional
waters monitoring.

Victor Valley Wastewater Reclamation Authority. Desert Tortoise
surveys for plant expansion.

Southern California Logistics Airport – Desert Tortoise monitoring

WORK HISTORY

Senior Environmental Technician, **Jericho Systems Inc.** Specializes in
construction monitoring and species surveys with expertise in southern
California ecosystems and regulatory compliance. Conducts general
biological surveys and habitat suitability evaluations for desert tortoise
and burrowing owl. Conducts focused, protocol-level, surveys desert
tortoise, burrowing owl and southern rubber boa. Daniel also provides
construction monitoring for several sensitive biological resources
including wetlands, stickleback, southwestern arroyo toad, speckled
dace, southern rubber boa and desert tortoise.

Contract Biologist/ Construction Monitor, **Tom Dodson & Associates.**
Provide construction monitoring on projects requiring a desert tortoise
monitor. Twelve years experience small-scale herpetoculture of
approximately 12 species of reptiles and amphibians (predominately
snakes but also, turtles and toads) including eight species native to
California.



MICHAEL KEGARICE

CONTRACT ENVIRONMENTAL TECHNICIAN

JERICO SYSTEMS, INC.

ROLE - Construction Monitor

SUMMARY

Michael Kegarice gained his early desert tortoise experience by accompanying qualified desert tortoise biologists (Lisa Patterson previously Kegarice, Steve Gardner, Louis LaPierre, and Shay Lawrey) for over 500 hours in the field during protocol surveys. Michael's primary duties over the past decade include conducting desert tortoise surveys and monitoring construction projects within desert tortoise habitat. Mr. Kegarice has more than 10,000 hours experience in construction monitoring in desert tortoise habitat.

SELECT PROJECT EXPERIENCE

BNSF Cajon Pass 3rd Main Track. Environmental Site Manager responsible for project compliance with CEQA and NEPA, as well as compliance with all regulatory permits secured for the project including CDFG 2081 and 1600 permits, USFWS Incidental Take permit, and Clean Water Act Sections 404 and 401 permits. Duties included but were not exclusive to monitoring construction; coordinating the cultural, Native American, and paleontological monitors; inspect species exclusionary fencing; and conduct storm water pollution prevention plan measures.

29 Palms MCAGCC North Mainside Phase 1. Provide desert tortoise monitoring and worker awareness training for NEPA compliance. Prepare daily monitoring logs.

Mojave Water Agency Morongo Basin Pipeline. Provide desert tortoise monitoring for CEQA compliance.

Twentynine Palms Water District. Conduct various biological surveys for CEQA document preparation and compliance.

BNSF signal berm construction to Victorville to Blythe. Provide desert tortoise monitoring.

WORK HISTORY

Contract Biologist/ Construction Monitor, **Tom Dodson & Associates & Jericho Systems Inc.** Specializes in construction monitoring and species surveys with expertise in southern California ecosystems and regulatory compliance. Conducts general biological surveys and habitat suitability evaluations for desert tortoise and burrowing owl. Conducts focused, protocol-level, surveys desert tortoise, burrowing owl and southern rubber boa. For the last ten years, Michael has provided attentive and conscientious construction monitoring for several sensitive biological resources including jurisdictional waters, southern rubber boa burrowing owl and especially desert tortoise.

Years of Experience: 14

Certificate:

1999 Desert Tortoise Council Workshops: covered topics in desert tortoise handling, egg handling, artificial burrow construction, construction monitoring and regulatory requirements.

Appendix B. Resumes of key personnel at CRM TECH

MICHAEL HOGAN, Ph.D., RPA*

PRINCIPAL INVESTIGATOR/ARCHAEOLOGIST

Education

- 1991 Ph.D., Anthropology, University of California, Riverside.
1981 B.S., Anthropology, University of California, Riverside; with honors.
1980-1981 Education Abroad Program, Lima, Peru.
- 2002 Section 106—National Historic Preservation Act: Federal Law at the Local Level.
UCLA Extension Course #888.
- 2002 "Recognizing Historic Artifacts," workshop presented by Richard Norwood,
Historical Archaeologist.
- 2002 "Wending Your Way through the Regulatory Maze," symposium presented by the
Association of Environmental Professionals.
- 1992 "Southern California Ceramics Workshop," presented by Jerry Schaefer.
1992 "Historic Artifact Workshop," presented by Anne Duffield-Stoll.

Professional Experience

- 2002- Principal Investigator, CRM TECH, Riverside/Colton, California.
1999-2002 Project Archaeologist/Field Director, CRM TECH, Riverside.
1996-1998 Project Director and Ethnographer, Statistical Research, Inc., Redlands.
1992-1998 Assistant Research Anthropologist, University of California, Riverside
1992-1995 Project Director, Archaeological Research Unit, U. C. Riverside.
1993-1994 Adjunct Professor, Riverside Community College, Mt. San Jacinto College, U.C.
Riverside, Chapman University, and San Bernardino Valley College.
1991-1992 Crew Chief, Archaeological Research Unit, U. C. Riverside.
1984-1998 Project Director, Field Director, Crew Chief, and Archaeological Technician for
various southern California cultural resources management firms.

Research Interests

Cultural Resource Management, Southern Californian Archaeology, Settlement and Exchange
Patterns, Specialization and Stratification, Culture Change, Native American Culture, Cultural
Diversity.

Cultural Resources Management Reports

Principal investigator, author, co-author, and contributor of numerous cultural resources
management study reports since 1986.

Memberships

- * Register of Professional Archaeologists.
Society for American Archaeology.
Society for California Archaeology.
Pacific Coast Archaeological Society.
Coachella Valley Archaeological Society.

Bai "Tom" Tang

PRINCIPAL INVESTIGATOR/HISTORIAN/ARCHITECTURAL HISTORIAN

Education

- 1988-1993 Graduate Program in Public History/Historic Preservation, UC Riverside.
1987 M.A., American History, Yale University, New Haven, Connecticut.
1982 B.A., History, Northwestern University, Xi'an, China.
- 2000 "Introduction to Section 106 Review," presented by the Advisory Council on Historic Preservation and the University of Nevada, Reno.
1994 "Assessing the Significance of Historic Archaeological Sites," presented by the Historic Preservation Program, University of Nevada, Reno.

Professional Experience

- 2002- Principal Investigator, CRM TECH, Riverside/Colton, California.
1993-2002 Project Historian/Architectural Historian, CRM TECH, Riverside, California.
1993-1997 Project Historian, Greenwood and Associates, Pacific Palisades, California.
1991-1993 Project Historian, Archaeological Research Unit, UC Riverside.
1990 Intern Researcher, California State Office of Historic Preservation, Sacramento.
1990-1992 Teaching Assistant, History of Modern World, UC Riverside.
1988-1993 Research Assistant, American Social History, UC Riverside.
1985-1988 Research Assistant, Modern Chinese History, Yale University.
1985-1986 Teaching Assistant, Modern Chinese History, Yale University.
1982-1985 Lecturer, History, Xi'an Foreign Languages Institute, Xi'an, China.

Honors and Awards

- 1988-1990 University of California Graduate Fellowship, UC Riverside.
1985-1987 Yale University Fellowship, Yale University Graduate School.
1980, 1981 President's Honor List, Northwestern University, Xi'an, China.

Cultural Resources Management Reports

Preliminary Analyses and Recommendations Regarding California's Cultural Resources Inventory System (With Special Reference to Condition 14 of NPS 1990 Program Review Report). California State Office of Historic Preservation working paper, Sacramento, September 1990.

Numerous cultural resources management reports with the Archaeological Research Unit, Greenwood and Associates, and CRM TECH, since October 1991.

Membership

California Preservation Foundation.

John D. Goodman II

PROJECT DIRECTOR/PROJECT ARCHAEOLOGIST/ARTIFACT ANALYST

Education

- 1993 M.S., Anthropology, University of California, Riverside.
- 1985 B.S., Anthropology, University of California, Riverside.
- 2005 Training Session on Senate Bill 18, sponsored by the Government Office of Planning and Research, Riverside, CA.
- 2002 Protecting Heritage Resources under Section 106 of the National Historic Preservation Act; sponsored by the Advisory Council on Historic Preservation, Arcadia, CA.,
- 2000 Federal Historic Preservation Law for the Forest Service (NEPA, NHPA [National Historic Preservation Act], and Section 106 training; sponsored by the Advisory Council on Historic Preservation, San Bernardino, CA.
- 1994 National Environmental Policy Act (NEPA) workshop; Flagstaff, AZ.

Professional Experience

- 2011-2008- Project Archaeologist, Artifact Analyst, CRM TECH, Colton, California
- 2006-2008 Independent sub-contractor (faunal analyses and historical archaeology)
- 2006-2008 Project Director, Statistical Research, Inc., Redlands, California
- 2003-2006 Project Manager/Principal Investigator, Stantec Consulting, Inc. (formerly The Keith Companies [TKC]), Palm Desert, California.
- 2000-2003 Supervisory Archaeologist, Heritage Resources Program, United States Department of Agriculture, Forest Service, San Bernardino National Forest.
- 1993-2000 Project Manager, Historic Archaeologist, Faunal Specialist, Human Osteologist, and shell Specialist, SWCA Inc., Environmental Consultants, Flagstaff, Arizona.
- 1982-1993 Project Director/Staff Archaeologist, Physical Anthropologist, Faunal Specialist, and Lithic Specialist, Archaeological Research Unit, University of California, Riverside (part-time employee).

Research Interests

Subsistence practices and related technologies of both prehistoric and historical-period groups; special interest in Archaic sites of western states; ethnic/group markers; zooarchaeology/faunal analyses, lithic analyses, and historical archaeology.

Cultural Resources Management Reports

Field Director, co-author, and contributor of many cultural resources management study reports since 1986.

Memberships

Society for American Archaeology.

Daniel Ballester

PROJECT ARCHAEOLOGIST/FIELD DIRECTOR GIS / GRAPHICS SPECIALIST

EDUCATION

- 2012 (Expected) M.A. Geographical Information Systems, University of Redlands, California
2007 Certificate in Geographic Information Systems (GIS), California State University, San Bernardino.
1998 B.A., Anthropology, California State University, San Bernardino
1997 Archaeological Field School, University of Las Vegas and University of California, Riverside.
1994 University of Puerto Rico, Rio Piedras, Puerto Rico.

WORKSHOPS AND CLASSES

- 2010-2011 Numerous workshops and classes related to ArcGIS
2002 "Section 106—National Historic Preservation Act: Federal Law at the Local Level," UCLA Extension Course # 888.
2002 "Historic Archaeology Workshop," presented by Richard Norwood, Base Archaeologist, Edwards Air Force Base; presented at CRM TECH, Riverside, California.
1997 Archaeological Field School, University of Las Vegas and University of California, Riverside.

PROFESSIONAL EXPERIENCE

- 2002-Present Field Director and GIS Specialist, CRM TECH, Colton.
• Report writing, site record preparation, and supervisory responsibilities over all aspects of fieldwork and field crew. Manages and updates CRM TECH's GIS database, produces maps and extracts data using GIS. Manages field crews for field surveys, testing and data recovery projects. Oversees work to ensure correct procedures.
- 2011-2012 GIS Specialist for Caltrans District 8 Project, Garcia and Associates, San Anselmo, California.
• Recorded sites using hand-held GPS unit; responsible for accurately inputting data.
- 2009-2010 Field Crew Chief, Garcia and Associates, San Anselmo, California.
2009-2010 Field Crew, ECorp, Redlands.
1999-2002 Project Archaeologist, CRM TECH, Colton.
• Conducted field surveys, site recording, site testing and data recovery; familiar with all types of prehistoric and historic period sites.
- 1998-1999 Field Crew, K.E.A. Environmental, San Diego.
1998 Field Crew, A.S.M. Affiliates, Encinitas.
1998 Field Crew, Archaeological Research Unit, University of California, Riverside.

JOSHUA BASIN WATER DISTRICT
SUPPLEMENTAL DATA SHEET

Regular Meeting of the Board of Directors

January 16, 2013

To: President and Board of Directors
From: Joe Guzzetta, General Manager

TOPIC: STRATEGIC PLANNING WORKSHOP

RECOMMENDATION: That the Board set a date in March for the annual strategic planning workshop and authorize staff to retain a facilitator to assist in the planning process, at a cost not to exceed \$2,500.

ANALYSIS: The Executive Committee (President Luckman and Vice President Coate) has suggested holding the annual Strategic Planning Workshop in March. The purpose of the workshop is to outline the District's direction and goals both short term and long term. The Board has used Pat Caldwell as a facilitator in the past and was pleased with her services. Having an objective professional conduct the planning has resulted in a very streamlined and collaborative plan that makes the District's direction clear to the Board, staff, and the community.

The items on the current Strategic Plan are well under way and it would be appropriate for the current Board to conduct a strategic planning workshop to identify the overall direction and priorities of the District, since the Board as constituted has not done so.

Ms. Caldwell is available during the first three weeks of March.

JOSHUA BASIN WATER DISTRICT
SUPPLEMENTAL DATA SHEET

Regular Meeting of the Board of Directors

January 16, 2013

Report to: Board of Directors
From: Joe Guzzetta, General Manager

TOPIC: TRIP TO WASHINGTON DC TO SEEK FUNDS FOR
GROUNDWATER PIPELINE AND RECHARGE PROJECT

RECOMMENDATION: That the Board authorize Vice President Frank Coate to go to
Washington DC to seek additional funds for the Groundwater
Recharge Project

ANALYSIS: This is the time of year when our representative in Washington
DC recommends visiting Washington in order to meet with
legislators and staff of various departments in order to seek
funds for the Groundwater Recharge Project. The District has
submitted two grant applications for funding which we would
like to discuss with the appropriate individuals.

In addition, the annual Washington conference of the
Association of California Water Agencies will take place at the
end of February. As details of the agenda for that conference
emerge we will evaluate whether or not there is benefit of
attending any sessions of the conference.

Cost of attendance for Vice President Coate will depend
primarily on the airline and hotel costs which won't be made
until the Board approves the trip. The total cost is expected to
be in the range of \$1,500 but could be more or less depending
on the exact number of days and whether or not any ACWA
sessions are attended.

It is not uncommon for several board members of other water
agencies to attend, and the President and Vice President would
encourage any other interested JBWD Board members to
attend as well. As is the practice with most agencies, the
general manager will accompany Vice President Coate.