



Subsequent
Initial Study and Mitigated
Negative Declaration
Cactus Avenue Corridor
Groundwater Wells Project

State Clearinghouse # 2020030267

Prepared by:

Eastern Municipal Water District
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With Assistance From:



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December 2022

APPENDIX A: CALEEMOD AIR QUALITY DATA SHEETS

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Cactus Subsequent MND
South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	200.00	1000sqft	4.59	200,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Construction Phase - calculated
- Off-road Equipment -
- Off-road Equipment - calculated
- Trips and VMT - calculated
- Grading -
- Vehicle Trips - No new operations or maintenance trips
- Area Coating - None. There would be no change from existing conditions

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Landscape Equipment - 'None. There would be no change from existing conditions

Water And Wastewater - 'No additional water consumption or wastewater production

Construction Off-road Equipment Mitigation - calculated

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	12000	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	46.00
tblConstructionPhase	NumDays	20.00	64.00
tblConstructionPhase	NumDays	8.00	250.00
tblConstructionPhase	NumDays	18.00	250.00
tblLandscapeEquipment	NumberSummerDays	250	0
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,620.00

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tbITripsAndVMT	VendorTripNumber	0.00	1.00
tbITripsAndVMT	VendorTripNumber	0.00	1.00
tbITripsAndVMT	VendorTripNumber	0.00	1.00
tbITripsAndVMT	VendorTripNumber	0.00	1.00
tbITripsAndVMT	WorkerTripNumber	0.00	4.00
tbITripsAndVMT	WorkerTripNumber	0.00	4.00

2.0 Emissions Summary

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.9535	31.8967	38.0248	0.0917	0.5844	1.3800	1.9644	0.1563	1.3114	1.4677	0.0000	8,845.9867	8,845.9867	2.0030	0.0797	8,919.7952
2024	3.7846	29.8679	37.8186	0.0916	0.5844	1.2430	1.8275	0.1563	1.1801	1.3364	0.0000	8,831.4723	8,831.4723	1.9968	0.0781	8,904.6529
Maximum	3.9535	31.8967	38.0248	0.0917	0.5844	1.3800	1.9644	0.1563	1.3114	1.4677	0.0000	8,845.9867	8,845.9867	2.0030	0.0797	8,919.7952

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.9535	31.8967	38.0248	0.0917	0.5598	1.3800	1.9398	0.1503	1.3114	1.4617	0.0000	8,845.9867	8,845.9867	2.0030	0.0797	8,919.7952
2024	3.7846	29.8679	37.8186	0.0916	0.5598	1.2430	1.8028	0.1503	1.1801	1.3303	0.0000	8,831.4723	8,831.4723	1.9968	0.0781	8,904.6529
Maximum	3.9535	31.8967	38.0248	0.0917	0.5598	1.3800	1.9398	0.1503	1.3114	1.4617	0.0000	8,845.9867	8,845.9867	2.0030	0.0797	8,919.7952

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	4.22	0.00	1.30	3.86	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0727	1.9000e-004	0.0204	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0438	0.0438	1.1000e-004		0.0466
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0727	1.9000e-004	0.0204	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	7.0000e-005	7.0000e-005		0.0438	0.0438	1.1000e-004	0.0000	0.0466

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0727	1.9000e-004	0.0204	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0438	0.0438	1.1000e-004		0.0466
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0727	1.9000e-004	0.0204	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	7.0000e-005	7.0000e-005		0.0438	0.0438	1.1000e-004	0.0000	0.0466

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mobilization	Demolition	4/3/2023	6/5/2023	5	46	
2	Grading	Grading	6/6/2023	5/20/2024	5	250	
3	Paving	Paving	6/6/2023	5/20/2024	5	250	
4	Demobilization	Demolition	5/21/2024	8/16/2024	5	64	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 4.59

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization	Concrete/Industrial Saws	0	8.00	81	0.73
Mobilization	Excavators	0	8.00	158	0.38
Mobilization	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Air Compressors	1	7.00	78	0.48
Grading	Bore/Drill Rigs	1	10.00	221	0.50
Grading	Concrete/Industrial Saws	1	7.00	81	0.73
Grading	Cranes	1	7.00	231	0.29

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Grading	Excavators	1	8.00	158	0.38
Grading	Generator Sets	1	8.00	84	0.74
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	1	7.00	402	0.38
Grading	Paving Equipment	1	7.00	132	0.36
Grading	Pumps	1	7.00	84	0.74
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Sweepers/Scrubbers	1	7.00	64	0.46
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Dumpers/Tenders	2	7.00	16	0.38
Paving	Off-Highway Trucks	1	7.00	402	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	0	6.00	132	0.36
Paving	Rollers	0	6.00	80	0.38
Paving	Rubber Tired Dozers	0		247	0.40
Paving	Rubber Tired Loaders	0		203	0.36
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Welders	1	7.00	46	0.45
Demobilization	Concrete/Industrial Saws	0	8.00	81	0.73
Demobilization	Excavators	0	8.00	158	0.38
Demobilization	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Mobilization	0	4.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	11	28.00	1.00	1,620.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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Paving	5	13.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demobilization	0	4.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Mobilization - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

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3.2 Mobilization - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1100e-003	0.0363	0.0143	1.8000e-004	6.4000e-003	2.1000e-004	6.6100e-003	1.8400e-003	2.0000e-004	2.0500e-003		19.6031	19.6031	6.6000e-004	2.8400e-003	20.4653
Worker	0.0128	8.5700e-003	0.1403	3.9000e-004	0.0447	2.5000e-004	0.0450	0.0119	2.3000e-004	0.0121		39.5837	39.5837	9.6000e-004	9.0000e-004	39.8771
Total	0.0139	0.0449	0.1546	5.7000e-004	0.0511	4.6000e-004	0.0516	0.0137	4.3000e-004	0.0141		59.1868	59.1868	1.6200e-003	3.7400e-003	60.3424

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Mobilization - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1100e-003	0.0363	0.0143	1.8000e-004	6.1800e-003	2.1000e-004	6.3900e-003	1.7900e-003	2.0000e-004	1.9900e-003		19.6031	19.6031	6.6000e-004	2.8400e-003	20.4653
Worker	0.0128	8.5700e-003	0.1403	3.9000e-004	0.0428	2.5000e-004	0.0430	0.0114	2.3000e-004	0.0116		39.5837	39.5837	9.6000e-004	9.0000e-004	39.8771
Total	0.0139	0.0449	0.1546	5.7000e-004	0.0490	4.6000e-004	0.0494	0.0132	4.3000e-004	0.0136		59.1868	59.1868	1.6200e-003	3.7400e-003	60.3424

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.7743	23.8951	28.6707	0.0638		1.0910	1.0910		1.0390	1.0390		6,130.4969	6,130.4969	1.4285		6,166.2103
Total	2.7743	23.8951	28.6707	0.0638	0.0000	1.0910	1.0910	0.0000	1.0390	1.0390		6,130.4969	6,130.4969	1.4285		6,166.2103

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3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0140	0.7806	0.2195	3.7000e-003	0.1134	5.9100e-003	0.1193	0.0311	5.6600e-003	0.0367		407.2424	407.2424	0.0226	0.0647	427.0887
Vendor	1.1100e-003	0.0363	0.0143	1.8000e-004	6.4000e-003	2.1000e-004	6.6100e-003	1.8400e-003	2.0000e-004	2.0500e-003		19.6031	19.6031	6.6000e-004	2.8400e-003	20.4653
Worker	0.0894	0.0600	0.9822	2.7400e-003	0.3130	1.7600e-003	0.3147	0.0830	1.6200e-003	0.0846		277.0859	277.0859	6.7200e-003	6.3300e-003	279.1398
Total	0.1045	0.8769	1.2160	6.6200e-003	0.4327	7.8800e-003	0.4406	0.1159	7.4800e-003	0.1234		703.9314	703.9314	0.0300	0.0739	726.6937

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.7743	23.8951	28.6707	0.0638		1.0910	1.0910		1.0390	1.0390	0.0000	6,130.4968	6,130.4968	1.4285		6,166.2103
Total	2.7743	23.8951	28.6707	0.0638	0.0000	1.0910	1.0910	0.0000	1.0390	1.0390	0.0000	6,130.4968	6,130.4968	1.4285		6,166.2103

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3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0140	0.7806	0.2195	3.7000e-003	0.1091	5.9100e-003	0.1150	0.0300	5.6600e-003	0.0357		407.2424	407.2424	0.0226	0.0647	427.0887
Vendor	1.1100e-003	0.0363	0.0143	1.8000e-004	6.1800e-003	2.1000e-004	6.3900e-003	1.7900e-003	2.0000e-004	1.9900e-003		19.6031	19.6031	6.6000e-004	2.8400e-003	20.4653
Worker	0.0894	0.0600	0.9822	2.7400e-003	0.2994	1.7600e-003	0.3011	0.0797	1.6200e-003	0.0813		277.0859	277.0859	6.7200e-003	6.3300e-003	279.1398
Total	0.1045	0.8769	1.2160	6.6200e-003	0.4146	7.8800e-003	0.4225	0.1115	7.4800e-003	0.1190		703.9314	703.9314	0.0300	0.0739	726.6937

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.6448	22.2575	28.5961	0.0638		0.9763	0.9763		0.9287	0.9287		6,133.6886	6,133.6886	1.4244		6,169.2974
Total	2.6448	22.2575	28.5961	0.0638	0.0000	0.9763	0.9763	0.0000	0.9287	0.9287		6,133.6886	6,133.6886	1.4244		6,169.2974

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3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0139	0.7842	0.2231	3.6500e-003	0.1133	5.9200e-003	0.1193	0.0311	5.6600e-003	0.0367		401.6122	401.6122	0.0227	0.0638	421.2000
Vendor	1.0800e-003	0.0365	0.0141	1.8000e-004	6.4000e-003	2.1000e-004	6.6200e-003	1.8400e-003	2.0000e-004	2.0500e-003		19.3211	19.3211	6.6000e-004	2.8000e-003	20.1723
Worker	0.0834	0.0536	0.9147	2.6600e-003	0.3130	1.6800e-003	0.3147	0.0830	1.5500e-003	0.0846		268.9857	268.9857	6.0800e-003	5.8900e-003	270.8936
Total	0.0984	0.8742	1.1519	6.4900e-003	0.4327	7.8100e-003	0.4405	0.1159	7.4100e-003	0.1233		689.9190	689.9190	0.0295	0.0725	712.2659

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.6448	22.2575	28.5961	0.0638		0.9763	0.9763		0.9287	0.9287	0.0000	6,133.6886	6,133.6886	1.4244		6,169.2974
Total	2.6448	22.2575	28.5961	0.0638	0.0000	0.9763	0.9763	0.0000	0.9287	0.9287	0.0000	6,133.6886	6,133.6886	1.4244		6,169.2974

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0139	0.7842	0.2231	3.6500e-003	0.1091	5.9200e-003	0.1150	0.0300	5.6600e-003	0.0357		401.6122	401.6122	0.0227	0.0638	421.2000
Vendor	1.0800e-003	0.0365	0.0141	1.8000e-004	6.1800e-003	2.1000e-004	6.3900e-003	1.7900e-003	2.0000e-004	1.9900e-003		19.3211	19.3211	6.6000e-004	2.8000e-003	20.1723
Worker	0.0834	0.0536	0.9147	2.6600e-003	0.2994	1.6800e-003	0.3011	0.0797	1.5500e-003	0.0812		268.9857	268.9857	6.0800e-003	5.8900e-003	270.8936
Total	0.0984	0.8742	1.1519	6.4900e-003	0.4146	7.8100e-003	0.4224	0.1115	7.4100e-003	0.1189		689.9190	689.9190	0.0295	0.0725	712.2659

3.4 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9840	7.0606	7.6677	0.0198		0.2801	0.2801		0.2640	0.2640		1,863.3084	1,863.3084	0.5407		1,876.8253
Paving	0.0481					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0321	7.0606	7.6677	0.0198		0.2801	0.2801		0.2640	0.2640		1,863.3084	1,863.3084	0.5407		1,876.8253

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1100e-003	0.0363	0.0143	1.8000e-004	6.4000e-003	2.1000e-004	6.6100e-003	1.8400e-003	2.0000e-004	2.0500e-003		19.6031	19.6031	6.6000e-004	2.8400e-003	20.4653
Worker	0.0415	0.0279	0.4560	1.2700e-003	0.1453	8.2000e-004	0.1461	0.0385	7.5000e-004	0.0393		128.6470	128.6470	3.1200e-003	2.9400e-003	129.6006
Total	0.0426	0.0642	0.4703	1.4500e-003	0.1517	1.0300e-003	0.1527	0.0404	9.5000e-004	0.0413		148.2501	148.2501	3.7800e-003	5.7800e-003	150.0659

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9840	7.0606	7.6677	0.0198		0.2801	0.2801		0.2640	0.2640	0.0000	1,863.3084	1,863.3084	0.5407		1,876.8253
Paving	0.0481					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0321	7.0606	7.6677	0.0198		0.2801	0.2801		0.2640	0.2640	0.0000	1,863.3084	1,863.3084	0.5407		1,876.8253

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1100e-003	0.0363	0.0143	1.8000e-004	6.1800e-003	2.1000e-004	6.3900e-003	1.7900e-003	2.0000e-004	1.9900e-003		19.6031	19.6031	6.6000e-004	2.8400e-003	20.4653
Worker	0.0415	0.0279	0.4560	1.2700e-003	0.1390	8.2000e-004	0.1398	0.0370	7.5000e-004	0.0377		128.6470	128.6470	3.1200e-003	2.9400e-003	129.6006
Total	0.0426	0.0642	0.4703	1.4500e-003	0.1452	1.0300e-003	0.1462	0.0388	9.5000e-004	0.0397		148.2501	148.2501	3.7800e-003	5.7800e-003	150.0659

3.4 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9534	6.6748	7.6318	0.0198		0.2579	0.2579		0.2430	0.2430		1,863.6574	1,863.6574	0.5395		1,877.1452
Paving	0.0481					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0015	6.6748	7.6318	0.0198		0.2579	0.2579		0.2430	0.2430		1,863.6574	1,863.6574	0.5395		1,877.1452

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0800e-003	0.0365	0.0141	1.8000e-004	6.4000e-003	2.1000e-004	6.6200e-003	1.8400e-003	2.0000e-004	2.0500e-003		19.3211	19.3211	6.6000e-004	2.8000e-003	20.1723
Worker	0.0387	0.0249	0.4247	1.2400e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		124.8862	124.8862	2.8200e-003	2.7400e-003	125.7721
Total	0.0398	0.0614	0.4388	1.4200e-003	0.1517	9.9000e-004	0.1527	0.0404	9.2000e-004	0.0413		144.2073	144.2073	3.4800e-003	5.5400e-003	145.9444

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9534	6.6748	7.6318	0.0198		0.2579	0.2579		0.2430	0.2430	0.0000	1,863.6574	1,863.6574	0.5395		1,877.1452
Paving	0.0481					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0015	6.6748	7.6318	0.0198		0.2579	0.2579		0.2430	0.2430	0.0000	1,863.6574	1,863.6574	0.5395		1,877.1452

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0800e-003	0.0365	0.0141	1.8000e-004	6.1800e-003	2.1000e-004	6.3900e-003	1.7900e-003	2.0000e-004	1.9900e-003		19.3211	19.3211	6.6000e-004	2.8000e-003	20.1723
Worker	0.0387	0.0249	0.4247	1.2400e-003	0.1390	7.8000e-004	0.1398	0.0370	7.2000e-004	0.0377		124.8862	124.8862	2.8200e-003	2.7400e-003	125.7721
Total	0.0398	0.0614	0.4388	1.4200e-003	0.1452	9.9000e-004	0.1462	0.0388	9.2000e-004	0.0397		144.2073	144.2073	3.4800e-003	5.5400e-003	145.9444

3.5 Demobilization - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Demobilization - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0800e-003	0.0365	0.0141	1.8000e-004	6.4000e-003	2.1000e-004	6.6200e-003	1.8400e-003	2.0000e-004	2.0500e-003		19.3211	19.3211	6.6000e-004	2.8000e-003	20.1723
Worker	0.0119	7.6600e-003	0.1307	3.8000e-004	0.0447	2.4000e-004	0.0450	0.0119	2.2000e-004	0.0121		38.4265	38.4265	8.7000e-004	8.4000e-004	38.6991
Total	0.0130	0.0441	0.1447	5.6000e-004	0.0511	4.5000e-004	0.0516	0.0137	4.2000e-004	0.0141		57.7476	57.7476	1.5300e-003	3.6400e-003	58.8714

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Demobilization - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0800e-003	0.0365	0.0141	1.8000e-004	6.1800e-003	2.1000e-004	6.3900e-003	1.7900e-003	2.0000e-004	1.9900e-003		19.3211	19.3211	6.6000e-004	2.8000e-003	20.1723
Worker	0.0119	7.6600e-003	0.1307	3.8000e-004	0.0428	2.4000e-004	0.0430	0.0114	2.2000e-004	0.0116		38.4265	38.4265	8.7000e-004	8.4000e-004	38.6991
Total	0.0130	0.0441	0.1447	5.6000e-004	0.0490	4.5000e-004	0.0494	0.0132	4.2000e-004	0.0136		57.7476	57.7476	1.5300e-003	3.6400e-003	58.8714

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.542450	0.061470	0.185138	0.129299	0.023799	0.006448	0.011958	0.009209	0.000810	0.000503	0.024446	0.000751	0.003721

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0727	1.9000e-004	0.0204	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0438	0.0438	1.1000e-004		0.0466
Unmitigated	0.0727	1.9000e-004	0.0204	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0438	0.0438	1.1000e-004		0.0466

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8800e-003	1.9000e-004	0.0204	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0438	0.0438	1.1000e-004		0.0466
Total	0.0727	1.9000e-004	0.0204	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0438	0.0438	1.1000e-004		0.0466

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0708					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8800e-003	1.9000e-004	0.0204	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0438	0.0438	1.1000e-004		0.0466
Total	0.0727	1.9000e-004	0.0204	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0438	0.0438	1.1000e-004		0.0466

7.0 Water Detail

7.1 Mitigation Measures Water

Cactus Subsequent MND - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	0	0	0	0	0.73	

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Cactus Subsequent MND - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Cactus Subsequent MND
South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	200.00	1000sqft	4.59	200,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Construction Phase - calculated
- Off-road Equipment -
- Off-road Equipment - calculated
- Trips and VMT - calculated
- Grading -
- Vehicle Trips - No new operations or maintenance trips
- Area Coating - None. There would be no change from existing conditions

Cactus Subsequent MND - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Landscape Equipment - 'None. There would be no change from existing conditions

Water And Wastewater - 'No additional water consumption or wastewater production

Construction Off-road Equipment Mitigation - calculated

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	12000	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	46.00
tblConstructionPhase	NumDays	20.00	64.00
tblConstructionPhase	NumDays	8.00	250.00
tblConstructionPhase	NumDays	18.00	250.00
tblLandscapeEquipment	NumberSummerDays	250	0
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,620.00

Cactus Subsequent MND - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tbITripsAndVMT	VendorTripNumber	0.00	1.00
tbITripsAndVMT	VendorTripNumber	0.00	1.00
tbITripsAndVMT	VendorTripNumber	0.00	1.00
tbITripsAndVMT	VendorTripNumber	0.00	1.00
tbITripsAndVMT	WorkerTripNumber	0.00	4.00
tbITripsAndVMT	WorkerTripNumber	0.00	4.00

2.0 Emissions Summary

Cactus Subsequent MND - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2946	2.3816	2.8288	6.8300e-003	0.0439	0.1028	0.1467	0.0118	0.0977	0.1095	0.0000	597.8766	597.8766	0.1354	5.5100e-003	602.9050
2024	0.1914	1.5126	1.9096	4.6300e-003	0.0306	0.0628	0.0934	8.1900e-003	0.0596	0.0678	0.0000	405.4465	405.4465	0.0915	3.7200e-003	408.8421
Maximum	0.2946	2.3816	2.8288	6.8300e-003	0.0439	0.1028	0.1467	0.0118	0.0977	0.1095	0.0000	597.8766	597.8766	0.1354	5.5100e-003	602.9050

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2946	2.3816	2.8288	6.8300e-003	0.0421	0.1028	0.1449	0.0113	0.0977	0.1090	0.0000	597.8760	597.8760	0.1354	5.5100e-003	602.9044
2024	0.1914	1.5126	1.9096	4.6300e-003	0.0293	0.0628	0.0921	7.8800e-003	0.0596	0.0675	0.0000	405.4461	405.4461	0.0915	3.7200e-003	408.8417
Maximum	0.2946	2.3816	2.8288	6.8300e-003	0.0421	0.1028	0.1449	0.0113	0.0977	0.1090	0.0000	597.8760	597.8760	0.1354	5.5100e-003	602.9044

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	4.20	0.00	1.30	3.81	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-3-2023	7-2-2023	0.3470	0.3470
2	7-3-2023	10-2-2023	1.1780	1.1780
3	10-3-2023	1-2-2024	1.1782	1.1782
4	1-3-2024	4-2-2024	1.0954	1.0954
5	4-3-2024	7-2-2024	0.5778	0.5778
6	7-3-2024	9-30-2024	0.0009	0.0009
		Highest	1.1782	1.1782

Cactus Subsequent MND - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0129	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0129	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mobilization	Demolition	4/3/2023	6/5/2023	5	46	
2	Grading	Grading	6/6/2023	5/20/2024	5	250	
3	Paving	Paving	6/6/2023	5/20/2024	5	250	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Demobilization	Demolition	5/21/2024	8/16/2024	5	64
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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 4.59

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization	Concrete/Industrial Saws	0	8.00	81	0.73
Mobilization	Excavators	0	8.00	158	0.38
Mobilization	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Air Compressors	1	7.00	78	0.48
Grading	Bore/Drill Rigs	1	10.00	221	0.50
Grading	Concrete/Industrial Saws	1	7.00	81	0.73
Grading	Cranes	1	7.00	231	0.29
Grading	Excavators	1	8.00	158	0.38
Grading	Generator Sets	1	8.00	84	0.74
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	1	7.00	402	0.38
Grading	Paving Equipment	1	7.00	132	0.36
Grading	Pumps	1	7.00	84	0.74
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Sweepers/Scrubbers	1	7.00	64	0.46
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Dumpers/Tenders	2	7.00	16	0.38
Paving	Off-Highway Trucks	1	7.00	402	0.38

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	0	6.00	132	0.36
Paving	Rollers	0	6.00	80	0.38
Paving	Rubber Tired Dozers	0		247	0.40
Paving	Rubber Tired Loaders	0		203	0.36
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Welders	1	7.00	46	0.45
Demobilization	Concrete/Industrial Saws	0	8.00	81	0.73
Demobilization	Excavators	0	8.00	158	0.38
Demobilization	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Mobilization	0	4.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	11	28.00	1.00	1,620.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demobilization	0	4.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

Cactus Subsequent MND - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Mobilization - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000							

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	8.8000e-004	3.3000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.4093	0.4093	1.0000e-005	6.0000e-005	0.4274
Worker	2.9000e-004	2.2000e-004	3.0000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.7899	0.7899	2.0000e-005	2.0000e-005	0.7965
Total	3.1000e-004	1.1000e-003	3.3300e-003	1.0000e-005	1.1600e-003	1.0000e-005	1.1700e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.1992	1.1992	3.0000e-005	8.0000e-005	1.2238

Cactus Subsequent MND - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Mobilization - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000							

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	8.8000e-004	3.3000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.4093	0.4093	1.0000e-005	6.0000e-005	0.4274
Worker	2.9000e-004	2.2000e-004	3.0000e-003	1.0000e-005	9.7000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.7899	0.7899	2.0000e-005	2.0000e-005	0.7965
Total	3.1000e-004	1.1000e-003	3.3300e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1100e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1992	1.1992	3.0000e-005	8.0000e-005	1.2238

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2067	1.7802	2.1360	4.7500e-003		0.0813	0.0813		0.0774	0.0774	0.0000	414.3312	414.3312	0.0966	0.0000	416.7450
Total	0.2067	1.7802	2.1360	4.7500e-003	0.0000	0.0813	0.0813	0.0000	0.0774	0.0774	0.0000	414.3312	414.3312	0.0966	0.0000	416.7450

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0100e-003	0.0613	0.0165	2.8000e-004	8.3100e-003	4.4000e-004	8.7500e-003	2.2800e-003	4.2000e-004	2.7000e-003	0.0000	27.5366	27.5366	1.5300e-003	4.3700e-003	28.8785
Vendor	8.0000e-005	2.8400e-003	1.0800e-003	1.0000e-005	4.7000e-004	2.0000e-005	4.9000e-004	1.4000e-004	2.0000e-005	1.5000e-004	0.0000	1.3259	1.3259	4.0000e-005	1.9000e-004	1.3843
Worker	6.5000e-003	5.0000e-003	0.0681	2.0000e-004	0.0229	1.3000e-004	0.0230	6.0800e-003	1.2000e-004	6.2000e-003	0.0000	17.9101	17.9101	4.6000e-004	4.6000e-004	18.0590
Total	7.5900e-003	0.0691	0.0856	4.9000e-004	0.0317	5.9000e-004	0.0323	8.5000e-003	5.6000e-004	9.0500e-003	0.0000	46.7726	46.7726	2.0300e-003	5.0200e-003	48.3218

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2067	1.7802	2.1360	4.7500e-003		0.0813	0.0813		0.0774	0.0774	0.0000	414.3308	414.3308	0.0966	0.0000	416.7445
Total	0.2067	1.7802	2.1360	4.7500e-003	0.0000	0.0813	0.0813	0.0000	0.0774	0.0774	0.0000	414.3308	414.3308	0.0966	0.0000	416.7445

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0100e-003	0.0613	0.0165	2.8000e-004	8.0000e-003	4.4000e-004	8.4400e-003	2.2000e-003	4.2000e-004	2.6300e-003	0.0000	27.5366	27.5366	1.5300e-003	4.3700e-003	28.8785
Vendor	8.0000e-005	2.8400e-003	1.0800e-003	1.0000e-005	4.5000e-004	2.0000e-005	4.7000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	1.3259	1.3259	4.0000e-005	1.9000e-004	1.3843
Worker	6.5000e-003	5.0000e-003	0.0681	2.0000e-004	0.0219	1.3000e-004	0.0220	5.8300e-003	1.2000e-004	5.9600e-003	0.0000	17.9101	17.9101	4.6000e-004	4.6000e-004	18.0590
Total	7.5900e-003	0.0691	0.0856	4.9000e-004	0.0303	5.9000e-004	0.0309	8.1600e-003	5.6000e-004	8.7400e-003	0.0000	46.7726	46.7726	2.0300e-003	5.0200e-003	48.3218

Cactus Subsequent MND - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1336	1.1240	1.4441	3.2200e-003		0.0493	0.0493		0.0469	0.0469	0.0000	281.0016	281.0016	0.0653	0.0000	282.6330
Total	0.1336	1.1240	1.4441	3.2200e-003	0.0000	0.0493	0.0493	0.0000	0.0469	0.0469	0.0000	281.0016	281.0016	0.0653	0.0000	282.6330

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.8000e-004	0.0417	0.0113	1.8000e-004	5.6300e-003	3.0000e-004	5.9300e-003	1.5500e-003	2.9000e-004	1.8300e-003	0.0000	18.4078	18.4078	1.0400e-003	2.9300e-003	19.3056
Vendor	5.0000e-005	1.9300e-003	7.2000e-004	1.0000e-005	3.2000e-004	1.0000e-005	3.3000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	0.8858	0.8858	3.0000e-005	1.3000e-004	0.9249
Worker	4.1200e-003	3.0200e-003	0.0430	1.3000e-004	0.0155	8.0000e-005	0.0156	4.1200e-003	8.0000e-005	4.2000e-003	0.0000	11.7858	11.7858	2.8000e-004	2.9000e-004	11.8795
Total	4.8500e-003	0.0467	0.0550	3.2000e-004	0.0215	3.9000e-004	0.0219	5.7600e-003	3.8000e-004	6.1300e-003	0.0000	31.0795	31.0795	1.3500e-003	3.3500e-003	32.1100

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1336	1.1240	1.4441	3.2200e-003		0.0493	0.0493		0.0469	0.0469	0.0000	281.0013	281.0013	0.0653	0.0000	282.6326
Total	0.1336	1.1240	1.4441	3.2200e-003	0.0000	0.0493	0.0493	0.0000	0.0469	0.0469	0.0000	281.0013	281.0013	0.0653	0.0000	282.6326

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.8000e-004	0.0417	0.0113	1.8000e-004	5.4200e-003	3.0000e-004	5.7200e-003	1.4900e-003	2.9000e-004	1.7800e-003	0.0000	18.4078	18.4078	1.0400e-003	2.9300e-003	19.3056
Vendor	5.0000e-005	1.9300e-003	7.2000e-004	1.0000e-005	3.1000e-004	1.0000e-005	3.2000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	0.8858	0.8858	3.0000e-005	1.3000e-004	0.9249
Worker	4.1200e-003	3.0200e-003	0.0430	1.3000e-004	0.0148	8.0000e-005	0.0149	3.9500e-003	8.0000e-005	4.0300e-003	0.0000	11.7858	11.7858	2.8000e-004	2.9000e-004	11.8795
Total	4.8500e-003	0.0467	0.0550	3.2000e-004	0.0206	3.9000e-004	0.0210	5.5300e-003	3.8000e-004	5.9100e-003	0.0000	31.0795	31.0795	1.3500e-003	3.3500e-003	32.1100

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0733	0.5260	0.5712	1.4800e-003		0.0209	0.0209		0.0197	0.0197	0.0000	125.9322	125.9322	0.0365	0.0000	126.8457
Paving	3.5800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0769	0.5260	0.5712	1.4800e-003		0.0209	0.0209		0.0197	0.0197	0.0000	125.9322	125.9322	0.0365	0.0000	126.8457

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.8400e-003	1.0800e-003	1.0000e-005	4.7000e-004	2.0000e-005	4.9000e-004	1.4000e-004	2.0000e-005	1.5000e-004	0.0000	1.3259	1.3259	4.0000e-005	1.9000e-004	1.3843
Worker	3.0200e-003	2.3200e-003	0.0316	9.0000e-005	0.0106	6.0000e-005	0.0107	2.8200e-003	6.0000e-005	2.8800e-003	0.0000	8.3154	8.3154	2.1000e-004	2.1000e-004	8.3845
Total	3.1000e-003	5.1600e-003	0.0327	1.0000e-004	0.0111	8.0000e-005	0.0112	2.9600e-003	8.0000e-005	3.0300e-003	0.0000	9.6413	9.6413	2.5000e-004	4.0000e-004	9.7688

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0733	0.5260	0.5712	1.4800e-003		0.0209	0.0209		0.0197	0.0197	0.0000	125.9320	125.9320	0.0365	0.0000	126.8456
Paving	3.5800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0769	0.5260	0.5712	1.4800e-003		0.0209	0.0209		0.0197	0.0197	0.0000	125.9320	125.9320	0.0365	0.0000	126.8456

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.8400e-003	1.0800e-003	1.0000e-005	4.5000e-004	2.0000e-005	4.7000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	1.3259	1.3259	4.0000e-005	1.9000e-004	1.3843
Worker	3.0200e-003	2.3200e-003	0.0316	9.0000e-005	0.0102	6.0000e-005	0.0102	2.7100e-003	6.0000e-005	2.7600e-003	0.0000	8.3154	8.3154	2.1000e-004	2.1000e-004	8.3845
Total	3.1000e-003	5.1600e-003	0.0327	1.0000e-004	0.0106	8.0000e-005	0.0107	2.8400e-003	8.0000e-005	2.9100e-003	0.0000	9.6413	9.6413	2.5000e-004	4.0000e-004	9.7688

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0482	0.3371	0.3854	1.0000e-003		0.0130	0.0130		0.0123	0.0123	0.0000	85.3794	85.3794	0.0247	0.0000	85.9973
Paving	2.4300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0506	0.3371	0.3854	1.0000e-003		0.0130	0.0130		0.0123	0.0123	0.0000	85.3794	85.3794	0.0247	0.0000	85.9973

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	1.9300e-003	7.2000e-004	1.0000e-005	3.2000e-004	1.0000e-005	3.3000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	0.8858	0.8858	3.0000e-005	1.3000e-004	0.9249
Worker	1.9100e-003	1.4000e-003	0.0200	6.0000e-005	7.2000e-003	4.0000e-005	7.2400e-003	1.9100e-003	4.0000e-005	1.9500e-003	0.0000	5.4720	5.4720	1.3000e-004	1.3000e-004	5.5155
Total	1.9600e-003	3.3300e-003	0.0207	7.0000e-005	7.5200e-003	5.0000e-005	7.5700e-003	2.0000e-003	5.0000e-005	2.0500e-003	0.0000	6.3578	6.3578	1.6000e-004	2.6000e-004	6.4404

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0482	0.3371	0.3854	1.0000e-003		0.0130	0.0130		0.0123	0.0123	0.0000	85.3793	85.3793	0.0247	0.0000	85.9972
Paving	2.4300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0506	0.3371	0.3854	1.0000e-003		0.0130	0.0130		0.0123	0.0123	0.0000	85.3793	85.3793	0.0247	0.0000	85.9972

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	1.9300e-003	7.2000e-004	1.0000e-005	3.1000e-004	1.0000e-005	3.2000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	0.8858	0.8858	3.0000e-005	1.3000e-004	0.9249
Worker	1.9100e-003	1.4000e-003	0.0200	6.0000e-005	6.8900e-003	4.0000e-005	6.9300e-003	1.8400e-003	4.0000e-005	1.8700e-003	0.0000	5.4720	5.4720	1.3000e-004	1.3000e-004	5.5155
Total	1.9600e-003	3.3300e-003	0.0207	7.0000e-005	7.2000e-003	5.0000e-005	7.2500e-003	1.9300e-003	5.0000e-005	1.9700e-003	0.0000	6.3578	6.3578	1.6000e-004	2.6000e-004	6.4404

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Demobilization - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000							

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	1.2200e-003	4.6000e-004	1.0000e-005	2.0000e-004	1.0000e-005	2.1000e-004	6.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.5613	0.5613	2.0000e-005	8.0000e-005	0.5861
Worker	3.7000e-004	2.7000e-004	3.8900e-003	1.0000e-005	1.4000e-003	1.0000e-005	1.4100e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.0669	1.0669	3.0000e-005	3.0000e-005	1.0754
Total	4.0000e-004	1.4900e-003	4.3500e-003	2.0000e-005	1.6000e-003	2.0000e-005	1.6200e-003	4.3000e-004	2.0000e-005	4.4000e-004	0.0000	1.6282	1.6282	5.0000e-005	1.1000e-004	1.6614

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Demobilization - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000							

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	1.2200e-003	4.6000e-004	1.0000e-005	1.9000e-004	1.0000e-005	2.0000e-004	6.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.5613	0.5613	2.0000e-005	8.0000e-005	0.5861
Worker	3.7000e-004	2.7000e-004	3.8900e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.0669	1.0669	3.0000e-005	3.0000e-005	1.0754
Total	4.0000e-004	1.4900e-003	4.3500e-003	2.0000e-005	1.5300e-003	2.0000e-005	1.5500e-003	4.2000e-004	2.0000e-005	4.3000e-004	0.0000	1.6282	1.6282	5.0000e-005	1.1000e-004	1.6614

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.542450	0.061470	0.185138	0.129299	0.023799	0.006448	0.011958	0.009209	0.000810	0.000503	0.024446	0.000751	0.003721

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0129					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0129	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000							

7.0 Water Detail

7.1 Mitigation Measures Water

Cactus Subsequent MND - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Cactus Subsequent MND - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Cactus Subsequent MND - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Cactus Subsequent MND - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	0	0	0	0	0.73	

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

APPENDIX B: BIOLOGICAL RESOURCES TECHNICAL REPORT



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October 28, 2022

Rincon Project No: 21-12325

Haley Johnson, Water Resources Planner
Woodard & Curran
24422 Avenida de la Carlota, Suite 180
Laguna Hills, California 92653

Subject: Biological Resources Technical Study in Support of a Subsequent Initial Study-Mitigated Negative Declaration for the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in the City of Moreno Valley, Riverside County, California

Dear Ms. Johnson:

This report documents the findings of a Biological Resources Technical Study (BRTS) conducted by Rincon Consultants, Inc. (Rincon) in support of a subsequent California Environmental Quality Act (CEQA) review for the proposed Raw Water Conveyance Pipeline Phase III Project (project), which is a component of the Cactus Avenue Corridor Groundwater Wells Project. The subsequent Initial Study Mitigated Negative Declaration (IS/MND) being prepared is based on and serves to support the 2020 IS/MND and addendum prepared by Eastern Municipal Water District (EMWD) with support from Woodard and Curran for the Cactus Avenue Corridor Groundwater Wells project (State Clearinghouse #202030267). EMWD proposes the installation of an 18-inch transmission pipeline along Ironwood Avenue from approximately the intersection with Kevin Street east to the intersection with Perris Boulevard and along Perris Boulevard from the intersection with Ironwood Avenue south to the site of a future centralized treatment plant located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane in the city of Moreno Valley (city), Riverside County, California. The length of the pipeline, including one large staging area, was evaluated for biological constraints for the proposed pipeline construction areas. This technical study documents existing site conditions via desktop analysis and field surveys to evaluate potential impacts to sensitive biological resources for the proposed pipeline construction areas, including one large staging area (i.e., project site). The analysis included the project site plus a 100-foot buffer, referred to as the "study area," totaling 16.54 acres (11.34-acre proposed pipeline construction area, 5.2-acre staging area).

Project Location and Description

The project site is located in the city, in the western portion of Riverside County, California (Figure 1 and Figure 2). The project would be constructed entirely within the existing Ironwood Avenue and Perris Boulevard paved road right-of-way. The proposed raw water pipeline would extend east from Well 66 on Ironwood Avenue, at approximately the intersection with Kevin Street, then turn south and extend along Perris Boulevard until it reaches the planned central treatment facility located between Bay Avenue and St. Christopher Lane. The project site's staging area consists of Assessor Parcel Numbers (APN) 479-140-027 and 479-131-012. The project site is located within the United States (U.S.) Geological Survey Riverside East and Sunnymead, California, 7.5-minute topographic quadrangles. The project site is in an area characterized by a mix of residential, commercial, and industrial development.



The Raw Water Conveyance Pipeline Phase III (“project” or “proposed project”) involves construction and operation of approximately 12,500 linear feet of 18-inch diameter polyvinyl chloride (PVC) raw water transmission pipeline with air release valves within Ironwood Avenue and Perris Boulevard. The proposed project would convey raw groundwater from the Well 66 site, located on the south side of Ironwood Avenue at approximately the intersection with Kevin Street. Water from Well 65 is conveyed to the Well 66 site through an existing pipeline in Ironwood Avenue, then the combined flows would be conveyed to the proposed central treatment facility on Perris Boulevard between Bay Avenue and St. Christopher Lane via the proposed project.

The project, together with the other facilities of the Cactus Corridor Groundwater Wells Project, would also augment local water supply in the EMWD service area. In doing so, it would reduce EMWD’s need to purchase additional imported water. Currently, approximately 75 percent of EMWD’s potable water demand is supplied by imported water from the Metropolitan Water District through its connections to the Colorado River Aqueduct and its connections to the State Water Project, while approximately 25 percent of EMWD’s drinking water comes from local EMWD groundwater wells. Most of the groundwater produced by EMWD comes from its wells in the Hemet and San Jacinto areas. EMWD also has existing wells in the Moreno Valley, Perris Valley, and Murrieta areas. In 2025, EMWD’s potable and raw water demands were estimated to be approximately 100,000-acre feet per year, according to its latest Urban Water Management Plan (EMWD 2021).

Methodology

Regulatory Overview

Regulated or sensitive resources studied and analyzed herein include special status plant and wildlife species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees.

Environmental Statutes

For the purpose of this report, potential impacts to biological resources were analyzed based on the following statutes:

- California Environmental Quality Act (CEQA)
- Federal Endangered Species Act (ESA)
- California Endangered Species Act (CESA)
- Federal Clean Water Act (CWA)
- California Fish and Game Code (CFGC)
- Migratory Bird Treaty Act (MBTA)
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- City of Moreno Valley Municipal Code (City of Moreno Valley 1997)
- Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP 2003)



Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed project would have a significant effect on biological resources if it would:

- a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*
- b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*
- c) *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal areas, etc.) through direct removal, filling, hydrological interruption, or other means.*
- d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.*
- e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*
- f) *Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.*

Western Riverside Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP or Plan) is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on Conservation of species and their associated Habitats in Western Riverside County. This Plan is one of several large, multi-jurisdictional habitat-planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region. The MSHCP Plan Area encompasses approximately 1.26 million acres (1,966 square miles); it includes all unincorporated Riverside County land west of the crest of the San Jacinto Mountains to the Orange County line, as well as the jurisdictional areas of the Cities of Temecula, Murrieta, Lake Elsinore, Canyon Lake, Norco, Corona, Riverside, Moreno Valley, Banning, Beaumont, Calimesa, Perris, Hemet, and San Jacinto. It covers multiple species and multiple habitats within a diverse landscape, from urban centers to undeveloped foothills and montane forests, all under multiple jurisdictions. It extends across many bioregions as well, including the Santa Ana Mountains, Riverside Lowlands, San Jacinto Foothills, San Jacinto Mountains, Agua Tibia Mountains, Desert Transition, and San Bernardino Mountains.

Per the requirements of the MSHCP, this report is intended to document the project's consistency with this plan, including required habitat assessments of riparian/riverine areas and vernal pools, listed fairy shrimp, and burrowing owl.



Literature Review

Prior to the field surveys, a literature review was conducted to establish the environmental and regulatory setting of the proposed project. The literature review included review of the U.S. Department of Agriculture (USDA) *Soil Survey for the Western Riverside Area* (2022b), Riverside East and *Sunnymead, CA* USGS 7.5-minute topographic quadrangles, literature detailing the habitat requirements of subject species, aerial photographs (Google Earth 2022), and topographic maps (USGS 2022). The MSHCP, species accounts, and other reference materials were reviewed for habitat assessment requirements as well as habitat suitability elements for special status species. The primary objective of the habitat assessment was to evaluate the project sites potential to support special status species as well as to determine the applicability of other MSHCP and CEQA requirements as they pertain to the proposed project.

In addition, the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2022a), Biogeographic Information and Observation System (BIOS; CDFW 2022b), and U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal (USFWS 2022a) and Information for Planning and Consultation (IPaC; USFWS 2021b) system were reviewed to determine if any special status wildlife, plant or vegetation communities were previously recorded within five (5) miles of the study area. Map review of the U.S. Forest Service (USFS) managed National Wild and Scenic River System was performed to assess whether wild or scenic rivers occurred on site (USFS 2022). The *National Wetlands Inventory* (NWI; USFWS 2022c) was reviewed to determine if any wetland and/or non-wetland waters had been previously documented and mapped on or in the vicinity of the proposed study area. Other resources reviewed included the California Native Plant Society (CNPS) online *Inventory of Rare and Endangered Plants of California* (CNPS 2022), CDFW *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2022c); and CDFW *Special Animals List* (CDFW 2022d).

Field Reconnaissance Survey

A field reconnaissance survey of the study area was conducted to document existing site conditions and the potential presence of sensitive biological resources, including sensitive plant and wildlife species, sensitive plant communities, jurisdictional waters and wetlands, and habitat for nesting birds. Rincon biologist Genelle Watkins conducted the reconnaissance survey on July 22, 2022. The survey of the project site was conducted on foot with the aid of binoculars as necessary for visual inspections.

Identification of potentially jurisdictional aquatic resources during the reconnaissance survey included assessment of potential wetlands and non-wetland waters that may constitute waters of the U.S., waters of the State, streambeds, and/or riparian/riverine or vernal pool resources; however, a formal jurisdictional delineation of waters and wetlands was not completed. During the survey, the biologist noted general site characteristics, documented vegetation, wildlife species observed, and took representative photographs at each project site (Attachment 1). Vegetation communities were mapped by walking transects of the project sites and captured using a Global Positioning System (GPS) capable of sub-meter accuracy. Data gathered from the field surveys was checked for quality and consistency, and all species identified to the finest taxonomic level.



Existing Conditions

Physical Characteristics

The project site is located in arid western Riverside County, which is characterized by long, hot, dry summers and short, relatively wet winters. Average temperatures range from 87 to 95°F during the summer and 67 to 71°F during the winter. The average annual precipitation in the region is 10.34 inches (U.S. Climate Data 2022).

Survey conditions included temperatures ranging from 70 to 83 degrees Fahrenheit (°F), partly cloudy skies because of a wildfire nearby, and winds of 0 to five (5) miles per hour. Current land use at the project site consists of public streets, parks, disturbed lots, developed areas, and residential communities and commercial infrastructure. Areas of similar land use are in the surrounding vicinity. The locations for the proposed pipeline project include the length of Perris Boulevard, and a segment of Ironwood Avenue, ending at Well 66. All are adjacent to commercial and residential developments, including the staging area located southeast of the intersection of Perris Boulevard and Dracaea Avenue. Debris piles of concrete and trash and ongoing construction was observed throughout the study area.

Watershed and Drainages

The project site is within the approximate 2,650-square mile Santa Ana River Watershed. The Santa Ana River Watershed spans from portions of the San Jacinto Mountains, San Bernardino Mountains, San Gabriel Mountains, and Santa Ana Mountains to the cities of Rialto, Lake Elsinore, Anaheim, Huntington Beach, and Irvine. Two major rivers drain the Santa Ana River watershed: the Santa Ana River and the San Jacinto River.

During the field survey, established stormwater drainages were identified within the residential areas adjacent to Perris Boulevard. These man-made drainages observed adjacent to the project were dry at the time of the field survey, exhibited signs of regular maintenance such as trenching of existing public walkways and development of new building infrastructure, and were mostly clear of vegetation. The project site showed no signs of persistent emergent vegetation, emergent mosses, or lichens. Riparian/Riverine systems or other potentially jurisdictional resources were not observed during the survey.

Topography and Soils

Topography throughout the project site was relatively level with elevations ranging from 1,642 feet above mean sea level (msl) in the northern portion of the project site and gradually increases to approximately 1,655 feet above msl in the southern portion of the project site. The project site primarily consists of level ground within disturbed vacant lots, developed park areas and shopping centers, and residential and commercial areas.

The USDA Natural Resources Conservation Service (NRCS) Web Soil Survey delineates 10 soil map units found within the project site, listed below and in Table 1 Summary of Soil Units within the Study Area:

- Greenfield sandy loam 2 to 8 percent slopes, eroded
- Hanford coarse sandy loam, 2 to 8 percent slopes
- Monserate sandy loam, 5 to 15 percent slopes



- Pachappa fine sandy loam, 2 to 8 percent slopes, eroded
- Ramona sandy loam, 0 to 2 percent slopes, MLRA 19
- Ramona sandy loam, 2 to 5 percent slopes, eroded
- Ramona sandy loam, 0 to 5 percent slopes, severely eroded
- Ramona sandy loam 5 to 8 percent slopes, severely eroded
- Ramona very fine sandy loam, 0 to 8 percent slopes, eroded
- Tujunga loamy sand, 0 to 8 percent slopes

Site specific soil observations were not determined to be consistent with those mapped by the USDA NRCS Web Soil Survey because the site is primarily within a paved roadway. These 10 map units can be organized into six soil series that are described below. No soils present at the project site are included on the *National Hydric Soils List* (USDA NRCS 2022c), save for the Tujunga loamy sand map unit.

Table 1 Summary of Soil Units within the Study Area

Study Area	Soil Units
Pipeline Construction Area	<ul style="list-style-type: none"> ▪ Hanford coarse sandy loam, 2 to 8 percent slopes ▪ Ramona sandy loam, 2 to 5 percent slopes, eroded ▪ Monserate sandy loam, shallow, 5 to 15 percent slopes, eroded ▪ Ramona sandy loam, 2 to 5 percent slopes, eroded ▪ Ramona very fine sandy loam, 0 to 8 percent slopes ▪ Ramona sandy loam, 5 to 8 percent slopes, severely eroded ▪ Greenfield sandy loam, 2 to 8 percent slopes, eroded ▪ Tujunga loamy sand, channeled, 0 to 8 percent slopes
Staging Area	<ul style="list-style-type: none"> ▪ Ramona sandy loam, 0 to 2 percent slopes, MLRA 19 ▪ Ramona sandy loam, 2 to 5 percent slopes, eroded ▪ Pachappa fine sandy loam, 2 to 8 percent slopes

Greenfield Soils

This series consists of deep, well drained soils that formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources. Greenfield sandy loam is found on alluvial fans and terraces at elevations from 100 to 3,500 feet above msl in dry, subhumid and mesothermal climates. It can be used to produce a wide variety of irrigated field, forage, and fruit crops as well as for growing dryland grain and pasture. Vegetation on uncultivated areas consists of annual grass, forbs, shrubs, and scattered oak (*Quercus* sp.) trees, however within the study area all Greenfield soils are disturbed, and no oak trees or other native vegetation is present.

Hanford Soils

This series consists of very deep, well drained soils that formed in moderately coarse textured alluvium dominantly from granite. Hanford soils are typically found on stream bottoms, flood plains and alluvial fans from 150 to 3,500 feet above msl in dry, subhumid and mesothermal climates. They are used for growing a wide range of fruits, vegetables, and general farm crops, as well as for urban development and dairies. Vegetation in uncultivated areas is mainly annual grasses and associated herbaceous species.



Monserate Soils

This soil series is a member of the fine-loamy, mixed, thermic family of Typic Durixeralfs. Typically, Monserate soils have brown and yellowish-red, slightly acidic, sandy loam A horizons, reddish brown, neutral, sandy clay loam B2t horizons underlain by silica-cemented duripans. This series is typically found on nearly-level to moderately-steep old, dissected terraces and fans from 700 to 2,500 feet above msl in dry, subhumid and mesothermal climates. This soil type is used principally for growing grain, grain hay or pasture, some citrus, and field and truck crops when irrigation water is available. Naturalized vegetation is mainly annual grasses and forbs, widely spaced native canyon oak (*Quercus chrysolepis*), and shrubs on eroded slopes.

Pachappa Soils

The Pachappa series consists of well drained (minimal) Noncalcic Brown soils developed from moderately coarse textured alluvium. They occur on gently sloping alluvial fans and flood plains under annual grass-herb vegetation at elevations under 1,000 feet above msl in a semiarid to dry subhumid mesothermal climate. Characteristically the Pachappa soils have grayish brown, slightly acid A1 horizons and brown, slightly finer textured neutral B2 horizons that overlie moderately alkaline, slightly calcareous B3ca horizons and very slightly calcareous stratified C horizons. This soil is mostly found under irrigation for alfalfa (*Medicago sativa*), small grains and row crops as well as dry farm small grains and normally generate good yields. Annual grasses, herbs, and shrubs are found growing on this soil.

Ramona Soils

The Ramona series is a member of the fine-loamy, mixed, thermic family of Typic Haploxeralfs. Typically, Ramona soils have brown, slightly and medium acid, sandy loam and fine sandy loam A horizons, reddish brown and yellowish red, slightly acid, sandy clay loam B2t horizons, and strong brown, neutral, fine sandy loam C horizons. This soil is typically found on nearly-level to moderately steep terrace and fans derived from granitic and related rock sources at elevations of 250 to 3,500 feet above msl in dry, subhumid and mesothermal climates. This soil type is mostly used for the production of grain, grain-hay, pasture, irrigated citrus (*Citrus* sp.), olives (*Olea* sp.), truck crops, and deciduous fruits. Uncultivated areas have a cover of annual grasses, forbs, chamise (*Adenostoma fasciculatum*), or chaparral.

Tujunga Soils

The Tujunga series is a member of the mixed, thermic Typic Xeropsamments, consisting of very deep, excessively drained soils, formed in alluvium from granitic sources. Tujunga soils are on alluvial fans and floodplains found in urban areas. The soils range from a pale brown to dark grayish brown color, fine sandy loam A horizons and coarse sandy loam C horizons. This soil is used for grazing, fruits, and urban residential or commercial development. Uncultivated areas have shrub cover, annual grasses, and forbs; ornamental species and turf-grass are common in urban areas. This soil type is classified as hydric and listed on the NRCS' Hydric Soils List (USDA NRCS 2022c).

Vegetation Communities and Land Cover Types

One (1) vegetation community and two (2) land cover types occur within the study area (Figure 4). A list of plant and animal species observed within the study area are included in Attachment 2.



Disturbed Habitat

Disturbed habitat is the dominant land cover type throughout the proposed staging area. Areas that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association, but continue to retain a soil substrate, were characterized as disturbed habitat. Vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance. These areas are not typically artificially irrigated but receive water from precipitation or runoff. Disturbed habitat is located throughout the staging area and predominately devoid of vegetation. Non-native annual grassland vegetation species, such as wild oats (*Avena fatua*) and ripgut brome (*Bromus diandrus*), were found sparsely scattered within the staging area, but were not the dominant land cover. Disturbed habitat land cover was dominant throughout the 5.2 acre proposed pipeline construction staging area, including the 100-foot buffer.

Urban/Developed

Developed land cover is the dominant land cover type found within the study area and consists of developments such as residential housing, commercial buildings, industrial buildings, asphalt roads, graveled access roads, parking areas, and storage areas. These areas have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Native tree species were not observed along the project site, but several non-native species such as Jacaranda (*Jacaranda mimosifolia*), European olive (*Olea europaea*), London plane (*Platanus x acerifolia*), Tree-of-Heaven (*Ailanthus altissima*), Peruvian pepper tree (*Schinus molle*), Mexican fan palm (*Washingtonia robusta*), and crimson bottle brush (*Callistemon citrinus*) were identified. Although tree species were not dense enough to constitute their own distinct vegetation community, planted individuals were primarily observed immediately adjacent to the project site in ornamental landscapes, such as Sunnymead Park. This land cover type covers a total of 11.34 acres within the pipeline construction area, including the 100-foot buffer.

General Wildlife

The project site provides limited habitat for wildlife species that commonly occur within urban communities in Riverside County. Common urban-adapted avian species were observed on site during the survey, including: red-tailed hawk (*Buteo jamaicensis*), cliff swallow (*Petrochelidon pyrrhonota*), black phoebe (*Sayornis nigricans*), song sparrow (*Melospiza melodia*), common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), Anna's hummingbird (*Calypte anna*), and black-chinned hummingbird (*Archilochus alexandri*). Western fence lizard (*Sceloporus occidentalis*) was the only reptile observed within the study area.

Sensitive Biological Resources

Based on review of aerial photographs and the field reconnaissance survey, Rincon evaluated the potential presence of sensitive biological resources on and adjacent to the site.



Special Status Species

Local, state, and federal agencies regulate special status species and generally require an assessment of their presence or potential presence to be conducted prior to the approval of a proposed project. Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDDB, species occurrence records from other sites in the vicinity of the study area, and previous reports for the project site. The potential for each special status species to occur in the study area was evaluated according to the following criteria:

- **No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Not Expected.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Low Potential.** Some of the habitat components meeting the species requirements are present, although the habitat adjacent to the site may be unsuitable. Occurrences in the region may be lacking or isolated from the site due to surrounding development. The species has a low probability of being found on the site due to the isolated nature and low habitat quality.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDDB, other reports) on the site recently (within the last five [5] years).

The literature review identified 45 sensitive plant species and 34 sensitive wildlife species within the CNPS nine (9)-quad and CNDDDB five (5)-mile search of the study area, respectively. Presumably, this is because the study area is located between Box Spring Mountain Reserve Park and the Perris Reservoir (Attachment 3; Table 2). Additionally, eight (8) sensitive natural communities: canyon live oak ravine forest, Riversidian alluvial fan sage scrub, southern coast live oak riparian forest, southern cottonwood willow riparian forest, southern riparian forest, southern riparian scrub, southern sycamore alder riparian woodland, and southern willow scrub were identified as occurring within the study area; however, only southern sycamore alder riparian woodland occurred within five miles of the project site. Sensitive plant species and natural communities were not observed within the study area because due to high disturbance and heavy development in and around the area.

Special Status Plant Species

The project site is located within a highly developed urban area, highly disturbed and surrounded by existing commercial and residential development. Due to the lack of specific habitat types or suitable substrates as well as the high levels of historic and existing disturbance, special status plant species are not expected to occur on the sites, discussed in further detail in Attachment 3.



Special Status Wildlife Species

The project site is located within a highly developed urban area, is highly disturbed, and surrounded by existing commercial and residential development. The study area is not suitable for most special status wildlife species due to the lack of native vegetation communities and specific habitats, as well as high levels of historic and existing disturbance and isolation from native habitats. The literature review identified 34 special status wildlife species recorded within five (5) miles of the study area. Twenty-seven (27) of these species have no potential or are not expected to occur within the study area due to lack of suitable habitat (e.g., riparian areas, woodland, coastal sage scrub habitat, etc., described in Attachment 3).

Low quality or marginal foraging, scanning, and/or nesting habitat exists within the study area for four (4) sensitive wildlife bird species with a low potential to occur. This includes Cooper's Hawk (*Accipiter cooperii*), burrowing owl (*Athene cunicularia*), Loggerhead shrike (*Lanius ludovicianus*), and California horned lark (*Eremophila alpestris actia*). One (1) reptile species of special concern, coastal whiptail (*Aspidoscelis tigris stejnegeri*) also has a low potential to occur. Species of special concern, Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) and western yellow bat (*Lasiurus xanthinus*) are the two (2) mammal species with a low potential to occur. Undeveloped areas adjacent to the project site containing marginally suitable habitats are largely dominated by sparse, non-native ruderal species. The potential for these species to occur is low due to the site-specific locations within highly developed/urbanized areas and limited available habitat structure to form burrows and nests, which would likely deter individuals from long-term use of both the project site. Additionally, no small mammal burrows or any inactive or active burrows were observed during the field reconnaissance survey.

Nesting Birds

Ornamental trees, grass, shrubs and bare ground found within disturbed habitats and urban/developed areas within the study area could provide suitable nesting habitat for several common avian species observed during the reconnaissance survey. Bird nests and eggs are protected by CFGC 3503 and the Migratory Bird Treaty Act (MBTA). Common species such as mourning dove and house finch have the potential to nest in shrubs, even in highly disturbed settings. Construction of the project thus has the potential to directly (by destroying a nest) or indirectly (construction noise, dust, and other human disturbances that may cause a nest to fail) impact nesting birds protected under the CFGC and MBTA. Overall, the project site is considered low quality for nesting birds due to lack of vegetation, recent signs of grading, and the project site's adjacency to heavily travelled roadways. However, immediately adjacent ornamental vegetation and mature trees provide nesting opportunities and active nests have a moderate to high probability of being present adjacent to project activities.

Sensitive Plant Communities

No sensitive plant communities as identified by the CNDDDB or local ordinances, or riparian habitat, are present within the study area.

Jurisdictional Waters and Wetlands

The project site consists primarily of developed areas, disturbed habitats, and vacant lots, and is adjacent to urban roadways. Most of the surrounding land use includes streets, sidewalks, residential



and commercially developed areas intermixed with isolated areas of open space and public land. Aside from the Perris Valley Storm Drain several miles to the south of the project site, the NWI did not identify any additional potential aquatic features within or adjacent to the project site.

During the field survey, man-made stormwater drainages were present in residential areas; all of which lacked wetland vegetation and are not connected to an established water source. All observed drainage features throughout the project site were dry and influenced by urban, residential, or stormwater runoff, and sources lacked ordinary high-water markings. The topography is relatively flat throughout the project site and vegetation has grown presumably due to nuisance runoff and impervious surfaces in the nearby areas. There is not a direct point source of water that feeds into any of the drainages on the project site.

Further, no hydric soils are present on the project site, save for a small segment between Elder Avenue and the exit ramp to eastbound Highway 60, containing Tujunga loamy sand. Based off site conditions and the literature search, no waters or wetlands potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), Santa Ana Regional Water Quality Control Board (RWQCB), or CDFW were observed within the project site during the field reconnaissance survey.

Riparian/Riverine, Vernal Pool and Fairy Shrimp Habitat

Riparian/riverine areas are lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or depend on a nearby freshwater source or areas that contain a freshwater flow during all or a portion of the year (County of Riverside 2003). These areas may support one (1) or more species listed in the MSHCP. Vernal pools are seasonal wetlands that occur in depressions, typically have wetland indicators that represent all three (3) parameters (soils, vegetation, and hydrology), and are defined based on vernal pool indicator plant species during the wetter portion of the growing season but normally lack wetland indicators associated with vegetation and/or hydrology during the drier portion of the growing season.

The project site and its components were assessed for riparian/riverine and vernal pool habitat as required by the Western Riverside MSHCP. Based upon the findings of Rincon's reconnaissance surveys, no riparian/riverine habitats are present within the study area due to urbanization. The remainder of the project site is heavily disturbed due to past agricultural uses, urban development, and are currently either unvegetated, developed, or dominated by exotic upland species, which are not conducive to supporting riparian/riverine habitats. Additionally, no vernal pools or fairy shrimp habitat were observed within the study area which is underlain by moderately to excessively well-drained soils. Thus, vernal pools and/or seasonal wetlands would not be expected to form during the wet season.

Wildlife Movement

According to the Western Riverside County Regional Conservation Authority (RCA) MSHCP Information Tool, the project site is not located within an MSHCP Criteria Area, Public-Quasi Public Reserve Lands, or a Core or Linkage (RCA 2022). The CDFW BIOS (2022b) classifies a portion of the study area immediately adjacent to the site as a connection with implementation flexibility but does not include any mapped essential habitat connectivity areas in the immediate vicinity of the site. The closest mapped essential habitat connectivity areas are located approximately 2.5 miles to the northeast near the Kalmia Hills and approximately three (3) miles to the northwest in the vicinity of Box Springs Mountain Reserve Park. The project site is separated from these identified essential habitat connectivity areas by public roadways



and residential areas, and therefore the site is not expected to contribute to a significant wildlife migratory corridor.

Resources Protected by Local Policies and Ordinances

Several trees are located in the public right-of-way, parkway, and/or public parks. No protected trees, as designated by the City's Tree Management Policy, exist on the project site. The study area falls within the County of Riverside Stephens' Kangaroo Rat (*Dipodomys stephensi*) Plan and Fee area. However, because the study area is urbanized and contains only a small fragmented (5.2 acres) area of disturbed habitat to be utilized as the staging area, which is otherwise surrounded by development, limited habitat exists to support the species and it is unlikely to be present.

Conservation Plans

The project site is located within the boundaries of the Western Riverside MSHCP, but not within a designated survey area identified for any other MSHCP covered species. The northern portion of the site on Ironwood Avenue is located less than one (1) mile from a habitat assessment area for burrowing owl as classified by the MSHCP. Additionally, the project site is not located within a criteria cell or within Public/Quasi Public conserved lands. The closest Public/Quasi-Public conserved lands are located approximately three (3) miles northeast of Well 66 within the Box Springs Mountain Reserve Park (County of Riverside 2022).

Impact Analysis and Mitigation Measures

Special Status Species

As mentioned above, 45 sensitive plant species and 34 sensitive wildlife species are known to occur or have potential to occur within the CNPS nine (9) quad and CNDDDB five (5)-mile radius search of the study area, respectively. Due to the lack of specific habitats or suitable substrates as well as the high levels of historic and existing disturbance, sensitive plant species are not expected to occur on the site. Therefore, no impacts to sensitive plant species are expected.

Of the 34 sensitive wildlife species identified, 27 of these species are not expected to occur due to lack of suitable habitat (e.g., riparian, scrub, woodland). Seven (7) sensitive wildlife species were determined to have a low potential to occur within the study area: CDFW Watch List Cooper's hawk and California horned lark; and CDFW Species of Special Concern coastal whiptail, Los Angeles pocket mouse, western yellow bat, loggerhead shrike, and burrowing owl. These seven (7) species were determined to have a low potential to occur in the study area due to the observation of small pockets of open habitat with sparse vegetation in the adjacent parcels and within the staging area. The project site's immediate adjacency to urban development and disturbed nature of the staging area substantially diminishes the quality of the habitat. The rest of the study area is located within highly developed areas lacking vegetation or undergoing construction. The entire study area exhibited signs of previous disturbance, and none of these species were observed during the field surveys.

Impacts from construction activities could potentially interfere with or deter these species from nesting, roosting, or foraging in the study area. To avoid and minimize the potential for impacts to these species, implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3, below, are recommended for project construction.



As described in *Existing Conditions*, the trees within the study area could provide suitable nesting habitat for several common avian species. All trees on the project site are located around the perimeter of the main roads, and within residential backyards in proximity to the staging area. The proposed project would not remove any trees; therefore, construction activities are not expected to result in direct impacts to birds who may use these trees for nesting. If project activities are to take place during the nesting bird season (typically January through September) direct impacts to ground nesting bird species are possible; therefore, pre-construction surveys recommended in Mitigation Measure BIO-2 would be required to avoid direct impacts to these species. Indirect impacts such as construction noise, dust, and increased human presence could disturb nests if they are present in adjacent trees. To ensure avoidance of direct or indirect impacts, implementation of Mitigation Measures BIO-1 and BIO-2 would require pre-construction burrowing owl and nesting bird surveys to minimize all potential impacts to nesting birds to less than significant.

Mitigation Measures

BIO-1 Burrowing Owl Pre-construction Clearance Survey

A qualified wildlife biologist shall conduct a pre-construction survey of proposed impact areas to confirm presence/absence of burrowing owl individuals no more than 14 days prior to construction. The survey methodology shall be consistent with the methods outlined in the California Department of Fish and Wildlife (CDFW) *Staff Report on Burrowing Owl Mitigation* (2012). If no active breeding or wintering owls are identified, no further mitigation is required.

If burrowing owl is detected on site, the following mitigation measures shall be implemented in accordance with the *CDFW Staff Report on Burrowing Owl Mitigation* (2012):

- EMWD shall hire a qualified wildlife biologist that would be on site during initial ground-disturbing activities in potential burrowing owl habitat identified in the biological resources assessment.
- No ground-disturbing activities shall be permitted within a buffer no less than 200 meters (656 feet) from an active burrow, depending on the level of disturbance as defined by the Canadian Wildlife Service Environment (2009), unless the qualified biologist determines a reduced buffer would not adversely affect the burrowing owl(s).
- Active burrows shall not be disturbed during the nesting season (February 1 to August 31).
- During the nonbreeding season (September 1 to January 31), ground-disturbing work can proceed near active burrows as long as the work occurs no closer than 50 meters (165 feet) from the burrow, depending on whether the level of disturbance is low, such as surveying, drive by, lowline 2" or less, plowed in (CWSE 2009), and if the active burrow is not directly affected by the project activity. A smaller/larger buffer may be established by the qualified biologist following monitoring and assessments of the project's effects on the burrowing owls. If active winter burrows are found that would be directly affected by ground-disturbing activities, owls can be excluded from winter burrows according to recommendations made in the *Staff Report on Burrowing Owl Mitigation* (2012). Additionally, if burrowing owls are found on-site, a qualified biologist shall prepare and submit a passive relocation program in accordance with Appendix E (i.e., *Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans*) of the *CDFW's Staff Report on Burrowing Owl Mitigation* (2012) for CDFW review and approval prior to the commencement of disturbance activities on-site.



- Burrowing owls shall not be excluded from burrows until a Burrowing Owl Exclusion Plan is developed based on the recommendations made in Appendix E, *Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans*, of the CDFW *Staff Report on Burrowing Owl Mitigation* (2012). The Burrowing Owl Exclusion Plan will be submitted to CDFW for review and approval prior to the commencement of disturbance activities on-site.
- Prior to passive relocation, the EMWD shall be responsible for acquiring compensatory mitigation at a ratio of 1:1 for lost breeding and/or wintering habitat to be implemented on- or off-site, including permanent conservation and management of burrowing owl habitat through the recordation of a conservation easement, funding of a non-wasting endowment, and implementation of a Mitigation Land Management Plan based on the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012) and CDFW guidance. Mitigation lands would be identified through coordination with CDFW and on, adjacent, or proximate to the impact site where feasible and where habitat is suitable to support burrowing owl. If required, by CDFW, compensatory mitigation should be completed prior to passive relocation of owls and completion of construction.
- When a qualified biologist determines that burrowing owls are no longer occupying the project site and passive relocation is complete, construction activities may begin. A final letter should be prepared by the qualified biologist documenting the results of the passive relocation. The letter shall be submitted to CDFW.

BIO-2 Pre-construction Nesting Bird Surveys

To avoid impacts to nesting birds, activities associated with vegetation removal, construction, and/ or grading shall be conducted September 16 and January 14, which is outside the peak nesting/ breeding bird season. If vegetation removal, construction, and/or grading must occur during the peak nesting/breeding season (January 15 through September 15), EMWD shall ensure that impacts to nesting/breeding birds are avoided through the implementation of preconstruction surveys, establishment of an exclusionary buffer zone, and ongoing monitoring, if necessary. EMWD shall designate a qualified biologist experienced in identifying local and migratory bird species; conducting bird surveys using appropriate survey methodology (such as CDFW-accepted species-specific survey protocols, available here: <https://www.wildlife.ca.gov/conservation/survey-protocols>); nesting surveying techniques; recognizing breeding and nesting behaviors; locating nests and breeding territories; identifying nesting stages and nest success; determining/establishing appropriate avoidance and minimization measures; and monitoring the efficacy of implemented avoidance and minimization measures.

- Prior to activities associated with vegetation removal, construction, and/ or grading during the peak bird nesting/breeding season (January 15 through September 15), the biologist shall conduct surveys for active nests. Preconstruction nesting bird surveys should be conducted no more than three days prior to the start of clearance/construction work. If ground-disturbing activities are delayed, additional preconstruction surveys should be conducted so that no more than three days have elapsed between the survey and ground-disturbing activities.
- Surveys shall encompass all suitable areas within 100 feet of the construction zone, including trees, shrubs, bare ground, burrows, cavities, and structures. Survey duration shall take into consideration the size of the site; density, and complexity of the land cover type; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected are complete and accurate. Preconstruction surveys shall focus on both direct and indirect evidence of nesting,



including nest locations and nesting behavior (e.g., copulation, carrying of food or nest materials, nest building, removal of fecal sacks, flushing suddenly from atypically close range, agitation, aggressive interactions, feigning injury or distraction displays, or other behaviors).

- Active nests found within 100 feet of the construction zone shall be delineated with highly visible construction fencing or other exclusionary material that would inhibit entry by personnel or equipment into the buffer zone. Installation of the exclusionary material shall be completed by the qualified biologist prior to initiation of construction activities. The biologist shall identify an appropriate protective buffer zone around the nest depending on the sensitivity of the species, the nature of the construction activity, and the amount of existing disturbance in the vicinity. In general, the qualified biologist should designate a buffer of 50 to 200 feet for common nesting birds and 200 to 500 feet for special status nesting birds and nesting raptors. If excluding work activities from any established buffers is not feasible, the biologist may establish a modified buffer exclusion utilizing specific biological and/or ecological attributes of the project location and avian species. The buffer zone shall remain intact and maintained while the nest is active (i.e., occupied or being constructed by at least one adult bird) and until young birds have fledged and no continued use of the nest is observed, as determined by the biologist. No construction activities shall be allowed within the buffer until nesting activity has ended to ensure protection of nesting birds. If the biologist determines nesting activities could fail as a result of work activities, all work shall cease within the buffer exclusion, and no entry into the buffer will occur. Construction activities within the no-work buffer may proceed after the biologist determines the nest is no longer active due to natural causes (e.g., young have fledged, predation, or other non-human causes of nest failure). The barrier shall be removed by construction personnel at the direction of the biologist.

BIO-3 Coastal Whiptail, Yellow Bat, and LA Pocket Mouse WEAP Training and Pre-construction Survey

Because there is marginal habitat present within small pockets of open habitat with sparse vegetation in the adjacent parcels to the study area and within the staging area to support the presence of coastal whiptail, western yellow bat, and LA pocket mouse, a pre-construction survey prior to ground disturbance activity shall be carried out by a qualified biologist. Worker Environmental Awareness Program (WEAP) training shall also be conducted prior to any ground disturbance activities, to address the potential for these species to occur within the project area. The training will address best management practices (BMPs) prior to, during, and after construction, including appropriate protocol to follow if any special-status species are identified. All participants in construction activities will be required to attend this training prior to ground disturbance, and a signature from each participant will be required at the conclusion of the training.

Preconstruction surveys should be conducted no more than three days prior to the start of clearance/construction work. This survey will include 100 percent ground coverage transects on foot to look for evidence of coastal whiptail, LA pocket mouse, and yellow bat. Additionally, surveys for yellow bat will consist of a visual inspection on foot of all trees adjacent to the work area, and an evening emergence survey. If found, species will be avoided, or relocated out of the project area in direct coordination with CDFW. If ground-disturbing activities are delayed, additional preconstruction surveys should be conducted so that no more than three days have elapsed between the survey and ground-disturbing activities. With the implementation of the above mitigation measures, impacts to biological resources would be less than significant.



Sensitive Plant Communities

The study area did not contain riparian habitat, sage scrub, or other sensitive natural communities. The study area is highly developed and disturbed, with residential and commercial infrastructure present throughout. Areas lacking commercial and residential communities contain landscaped public parks and other small, fragmented open spaces for recreation.

Jurisdictional Waters and Wetlands

The study area does not contain any jurisdictional drainages or wetlands, and does not contain vegetational features, which are all likely due to anthropogenic uses and the developed nature. As such, no impacts to jurisdictional waters and wetlands are expected with implementation of the proposed project.

Riparian/Riverine, Vernal Pool and Fairy Shrimp Habitat

Based upon the findings of Rincon's reconnaissance survey, no riparian/riverine habitat is present within the project site. The construction footprint of the groundwater pipeline would be limited to Perris Boulevard and Ironwood Avenue, with surrounding sites consisting of parks, disturbed lots, developed areas, and sites undergoing residential and industrial development. No riparian/riverine habitat occurs within the proposed project site or staging area. Therefore, no further actions related to riparian/riverine habitat are required pursuant to the MSHCP. Additionally, no jurisdictional features under the jurisdiction of the USACE, RWQCB, or CDFW are located within the project site.

No vernal pools or fairy shrimp habitat were observed within the study area. The project site is underlain by moderately to excessively well-drained soils. Overall, the project site, including the staging area, are heavily disturbed, containing existing development, are currently unvegetated, developed, or dominated by exotic upland species not conducive to supporting vernal pools or vernal pool species. Additionally, there was no evidence of standing water observed on site or within the laydown area. No vernal pool or fairy shrimp habitat occurs within the project site; and therefore, no further actions related to vernal pools are required pursuant to the MSHCP.

Wildlife Movement

As discussed above, the study area is not located within an MSHCP Criteria Area, Public-Quasi Public Reserve Lands or within a Core or Linkage (RCA 2022). In addition, CDFW BIOS (2022b) does not include any mapped essential habitat connectivity areas within the immediate vicinity of the site. The closest mapped essential habitat connectivity areas are located approximately five (5) miles to the northeast adjacent to Kamila Hills and approximately 1.1 miles to the northwest in the vicinity of Box Springs Mountain Reserve Park. The site is separated from these habitat connectivity areas by existing development and paved roadways. In addition, the site is surrounded by existing development and heavily traveled transportation corridors, including the Interstate 60 freeway; therefore, the site and staging area is not expected to contribute to a significant migratory wildlife corridor. Therefore, no impacts to wildlife movement are expected.



Local Policies and Ordinances

Stephens' Kangaroo Rat Plan Area

The project is subject to the County of Riverside Ordinance No. 663 (Stephens' Kangaroo Rat Mitigation Fee Ordinance) which requires that all proposed development projects located within the fee area are reviewed to determine the most appropriate course of action to ensure the survival of the species through one or more of the following: (1) on-site mitigation of impacts to the Stephens' Kangaroo Rat through the reservation or addition of lands included within or immediately adjacent to a potential habitat reserve site, or (2) payment of the Mitigation Fee or (3) any combination of (1) and (2) consistent with the intent and purpose of the ordinance. The project site lacks suitable grassland, coastal scrub, and sagebrush habitat to support the species. The site is highly urbanized and disturbed, and the small, vacant areas intermittently dispersed throughout the site are surrounded by residential and commercial infrastructure. This species is not expected to be present within the study area and any non-developed habitat is considered unsuitable given its disturbed and fragmented nature. Therefore, the proposed project would not result in impacts to or loss of suitable habitat for Stephens' kangaroo rat.

Protected Trees

The project is subject to the City's Tree Management Policy (Ord. 923 § 1, 2017) within the City's Municipal Code, Chapter 14.40 Tree Care. Trees located in the public right-of-way, parkway, or in a public park, shall be maintained by the responsible party or entity in compliance with International Society of Arboriculture (ISA) recommendations and ANSI A300 Standards. This policy defines a tree as any woody plant, which is 15 feet or more in height at maturity, with a single or multiple trunks, often unbranched for several feet above the ground and having a definite crown. This policy declares that all persons and public entities shall comply with provisions of this policy, including any amendments. Additionally, the City of Moreno Valley Municipal Code protects heritage trees, defined as those with a 15" diameter (measured at 24 inches above ground level). No person shall cut, destroy, top, or disfigure a heritage tree within city limits, excluding trees grown in nurseries and tree farms for sale. No city tree or heritage removal is proposed and therefore no City-protected trees would be impacted by the project.

Conservation Plans

The proposed project is located within the boundaries of the Western Riverside MSHCP. None of the project alignment is located within existing or proposed reserve or criteria areas of the MSHCP. The proposed project is not located within a criteria cell or within Public/Quasi Public conserved lands. The closest Public/Quasi-Public conserved lands are located approximately 0.6 mile northwest of Groundwater Well 66 Opt. D-3 at the Poorman Reservoir. Based on the project site's distance and separation from Public/Quasi-Public lands and the existing development between them, the proposed project is not expected to impact these conserved areas. Throughout the project site the potential for burrowing owl to occur is low given that the site is located within highly disturbed areas surrounded by urban development which would normally deter individuals from long-term use of the site. Indirect impacts are not expected with the implementation of the mitigation measures proposed; additionally, any project related disturbances would not rise above current existing levels found at the project site as the adjacent areas contain heavy vehicular traffic on the adjacent paved roads, public sidewalks, and



residential and commercially developed areas. The project would therefore not conflict with the provisions of the MSHCP.

Thank you for the opportunity to provide this BRTS. Please contact the undersigned with any questions.

Sincerely,

Rincon Consultants, Inc.

A handwritten signature in black ink, appearing to read "Genelle Watkins".

Genelle Watkins
Biologist/Certified Arborist (WE 12998 A)

A handwritten signature in black ink, appearing to read "Angie Harbin".

Angie Harbin
Natural Resources Director

Attachments

Figures

Attachment 1 Project Site Photographs

Attachment 2 Observed Plant and Animal Species List

Attachment 3 Special Status Species Potential for Occurrence



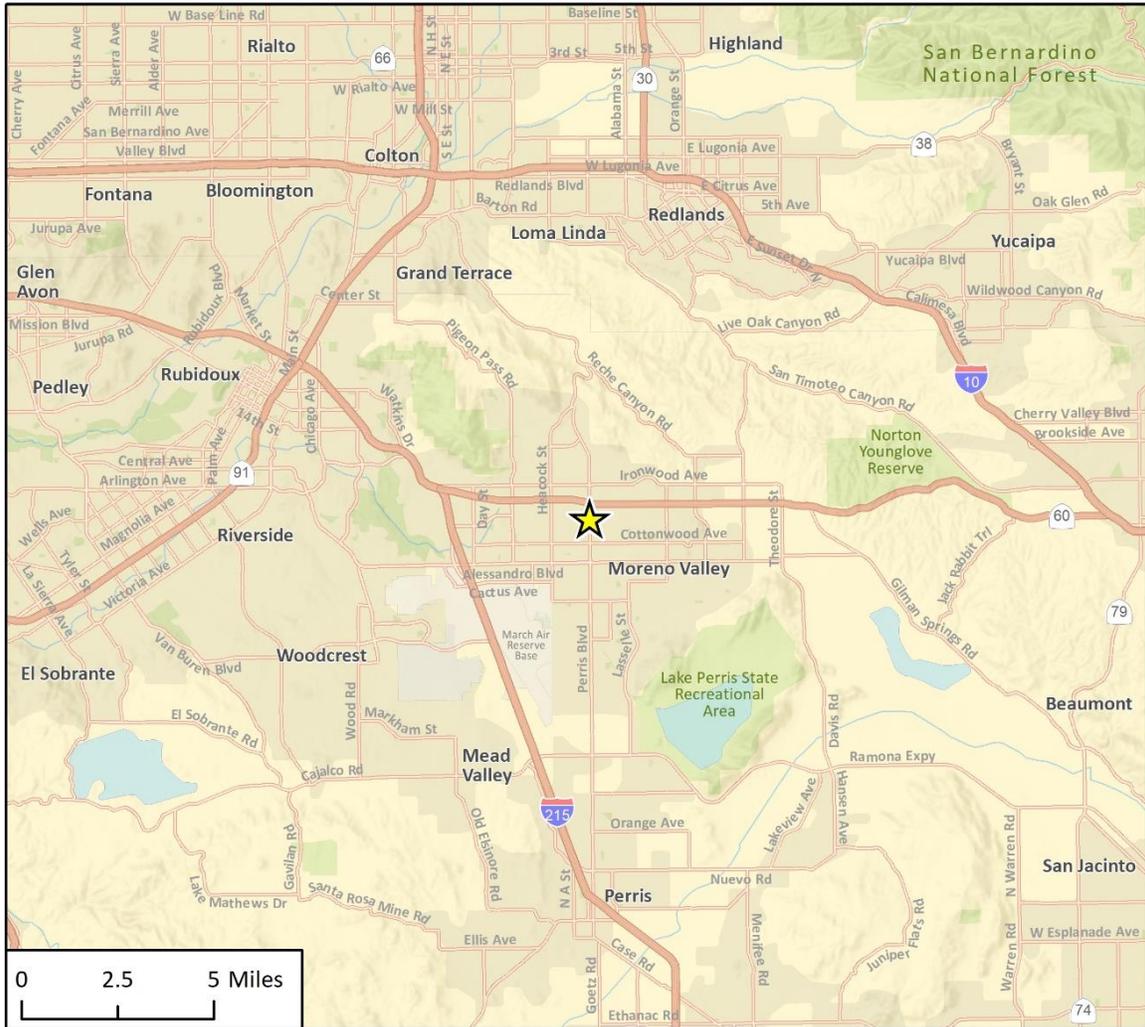
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Figure 1 Regional Location



Basemap provided by Esri and its licensors © 2022.

Project Location

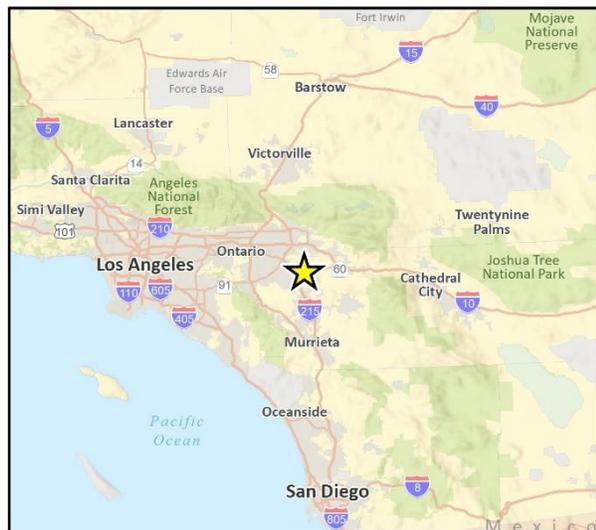
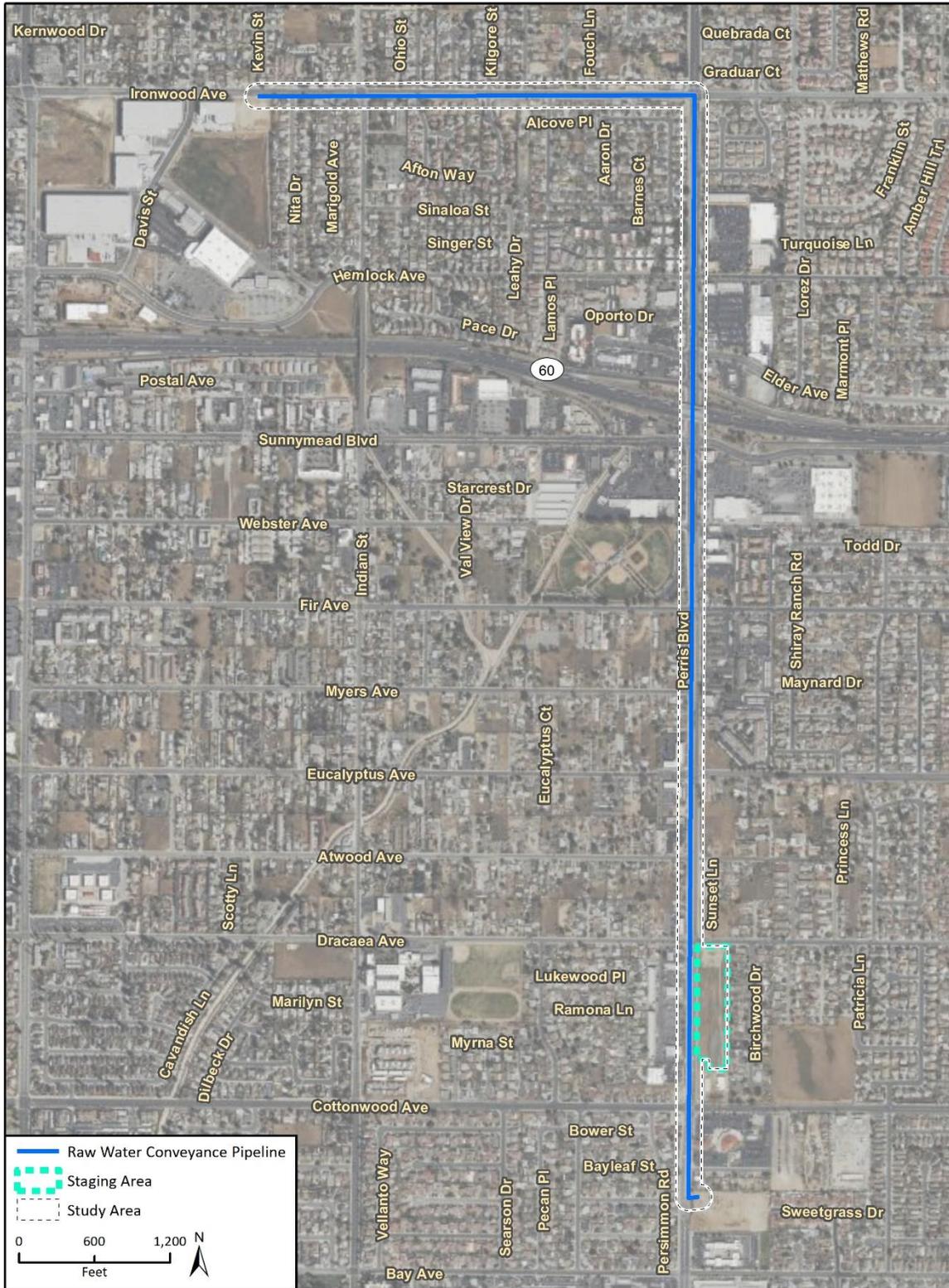


Fig 1 Regional Location

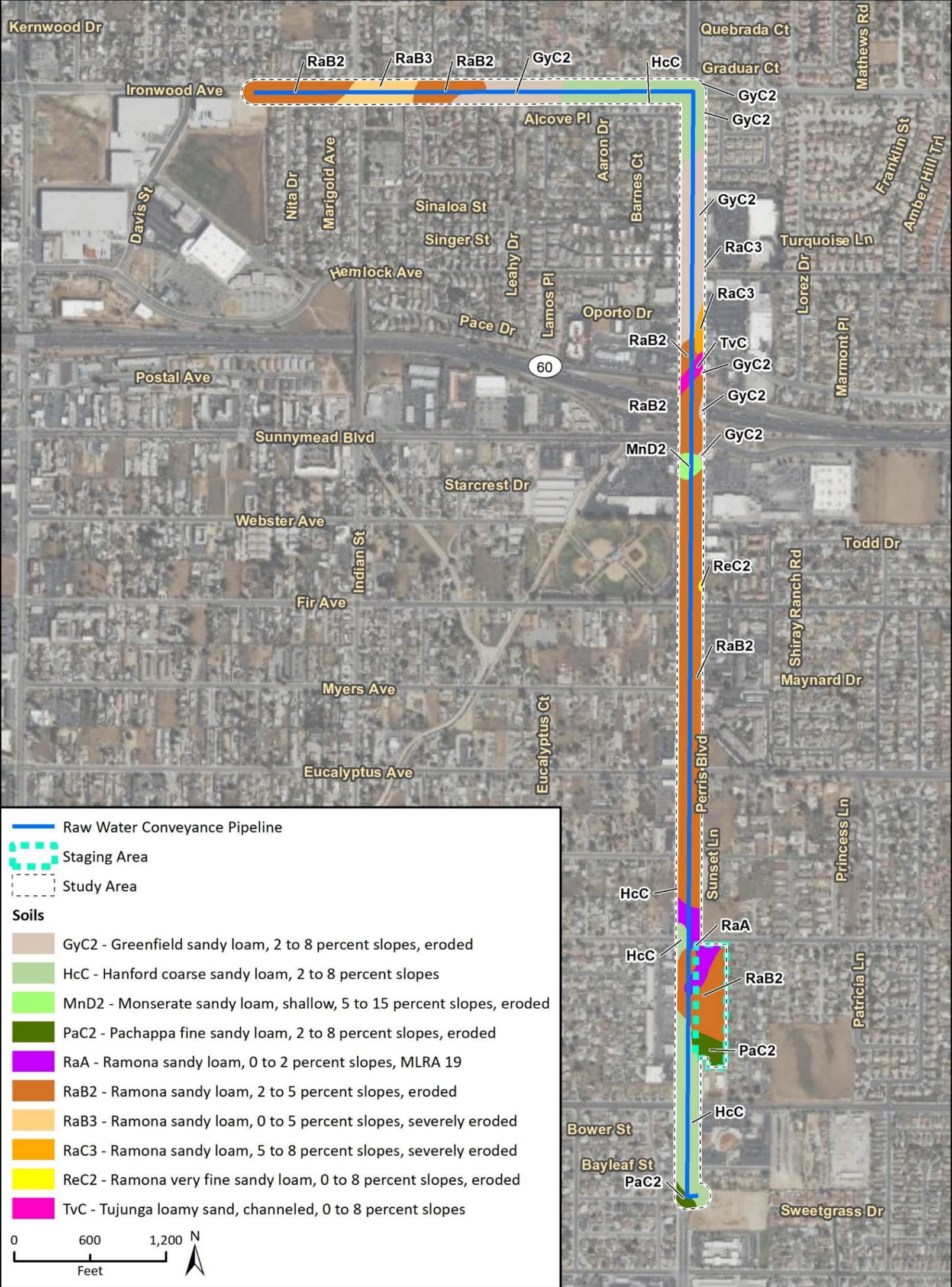
Figure 2 Project Location



Imagery provided by Microsoft Bing and its licensors © 2022.

Fig. X Project Location

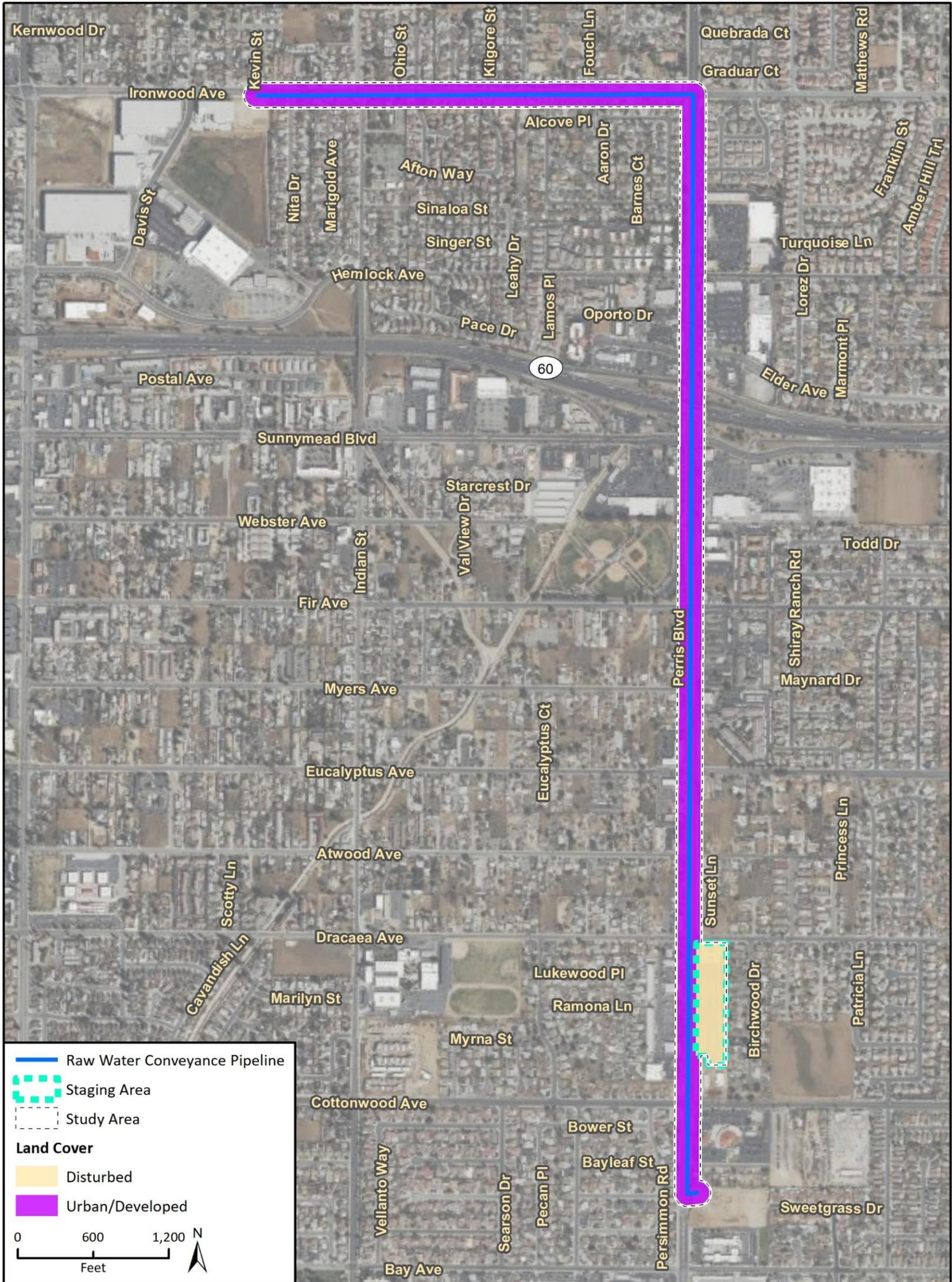
Figure 3 USDA NRCS Soils Map



Imagery provided by Microsoft Bing and its licensors © 2022.

Fig. A-301b

Figure 4 Vegetation Communities and Land Cover Types



Imagery provided by Microsoft Bing and its licensors © 2022.

Attachment 1

Project Site Photographs



Photograph 1. Staging/laydown area, at northern edge, south of Dracaea Avenue. View to the south. Site is completely disturbed with ornamental trees and grasses in the adjacent residential community.



Photograph 2. Staging/laydown area, at the northern edge, center of the site. View to the south with scattered non-native vegetation. Site is completely disturbed and recently tilled.



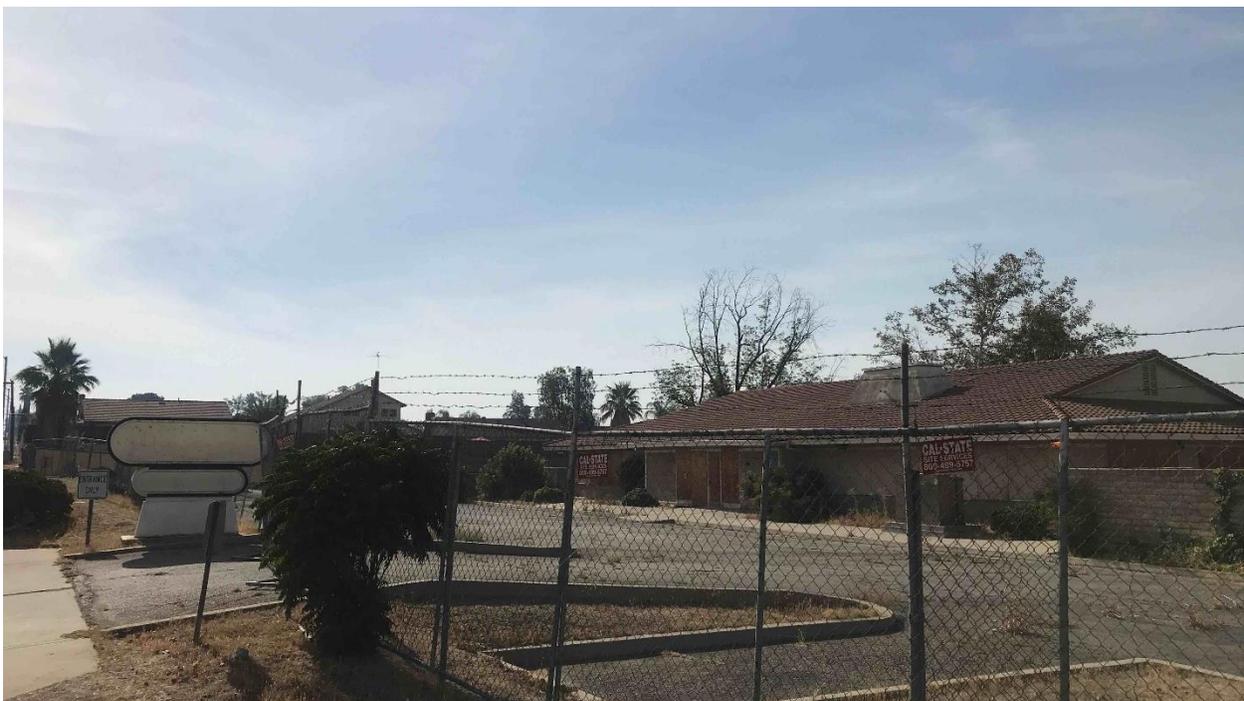
Photograph 3. Pipeline segment at intersection of Perris Blvd and St Christopher Lane, facing north. Note Tree of Heaven and Peruvian pepper trees) alongside the road.



Photograph 4. Pipeline segment at the intersection of Perris Blvd and Fir Avenue, facing south. Sunnymead Park, to off camera to the right, is characterized by landscape vegetation such as Mexican fan palm, London plane, and treasure flower.



Photograph 5. Pipeline segment at Abbey Lane and Perris Blvd, facing south. Area developed with commercial infrastructure and resident communities; landscaped vegetation scattered throughout both.



Photograph 6. Abandoned structure at Ironwood Avenue and Kilgore Street. Entire area was fenced off and inaccessible.



Photograph 7. End of the project site at Well 66. Photo taken at northern section facing southwest, showing completely disturbed and graded conditions.



Photograph 8. End of pipeline segment at Ironwood Avenue and Nita Drive, adjacent to Well 66. Photo facing east, displaying the ornamental oleander (*Nerium oleander*) and lemon gum eucalyptus (*Corymbia citriodora*), with residential homes along the perimeter.

Attachment 2

Observed Species List



Observed Animal Species List

Scientific Name	Common Name	Status (if applicable) ¹	Native or Introduced
Birds			
<i>Archilochus alexandri</i>	black-chinned hummingbird		Native
<i>Calypte anna</i>	Anna's hummingbird		Native
<i>Corvus brachyrhynchos</i>	American crow		Native
<i>Corvus corax</i>	common raven		Native
<i>Haemorhous mexicanus</i>	house finch		Native
<i>Melospiza melodia</i>	song sparrow		Native
<i>Mimus polyglottos</i>	northern mockingbird		Native
<i>Passer domesticus</i>	house sparrow		Introduced
<i>Petrochelidon pyrrhonota</i>	cliff swallow		Native
<i>Zenaida macroura</i>	mourning dove		Native

¹ Listed on the Special Animal List (July 2022) (CDFW 2022d).

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Observed Plant Species List

Scientific Name	Common Name	Status (if applicable) ¹	Native or Introduced ²
<i>Agave americana</i>	century plant		Introduced
<i>Ailanthus altissima</i>	Tree of Heaven		Introduced, Cal-IPC Moderate
<i>Ambrosia spp.</i>	bursage		Native
<i>Avena fatua</i>	wild oat		Introduced, Cal-IPC Moderate
<i>Brassica nigra</i>	black mustard		Introduced; Cal-IPC Moderate
<i>Bromus diandrus</i>	ripgut brome		Introduced; Cal-IPC Moderate
<i>Callistemon citrinus</i>	crimson bottlebrush		Introduced
<i>Cinnamomum camphora</i>	camphor tree		Introduced
<i>Corymbia citriodora</i>	lemon gum eucalyptus		Introduced
<i>Datura wrightii</i>	jimson weed		Native
<i>Dietes iridioides</i>	African iris		Introduced
<i>Gazania rigens</i>	treasure flower		Introduced
<i>Helianthus annuus</i>	common sunflower		Introduced
<i>Hirschfeldia incana</i>	short pod mustard		Introduced, Cal-IPC Moderate
<i>Jacaranda mimosifolia</i>	Jacaranda		Introduced
<i>Juniperus horizontalis</i>	creeping juniper		Native
<i>Koeleruteria paniculata</i>	goldenrain		Introduced
<i>Lactuca serriola</i>	prickly lettuce		Introduced
<i>Lantana camara</i>	lantana		Introduced; Cal-IPC Watch
<i>Legerstroemia</i>	crepe myrtle		Introduced
<i>Ligustrum lucidum</i>	glossy privet		Introduced; Cal-IPC Limited
<i>Liquidambar styraciflua</i>	Liquid gum		Introduced
<i>Nerium oleander</i>	oleander		Introduced
<i>Olea europaea</i>	European olive		Introduced; Cal-IPC Limited
<i>Pennisetum setaceum</i>	fountain grass		Introduced; Cal-IPC High
<i>Phoenix canariensis</i>	canary island date palm		Introduced; Cal-IPC Limited
<i>Pittosporum undulatum</i>	Pittosporum		Introduced; Cal-IPC Watch
<i>Plantanus x acerifolia</i>	London plane		Native (hybrid)
<i>Salsola tragus</i>	Prickly russian thistle		Introduced; Cal-IPC Limited
<i>Schinus molle</i>	Peruvian pepper		Introduced; Cal-IPC Limited
<i>Silybum marianum</i>	milk thistle		Introduced; Cal-IPC Limited
<i>Syagrus romanzoffiana</i>	Queen palm		Introduced
<i>Taraxacum officinale</i>	common dandelion		Native
<i>Trachelospermum jasminoides</i>	star jasmine		Introduced
<i>Washingtonia robusta</i>	Mexican fan palm		Introduced; Cal-IPC Moderate

¹ CRPR: California Rate Plant Rank

¹ Listed on the Special Vascular Plants, Bryophytes, And Lichens List (July 2022) (CDFW 2022c).

² Jepson 2012 and Cal-IPC 2022

Attachment 3

Special Status Species Potential for Occurrence



Table 2 Special Status Species Potential for Occurrence

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/ Observations
Plants and Lichens				
<i>Abronia villosa</i> var. <i>aurita</i> chaparral sand- verbena"	None/None G5T2?/S2 1B.1"	Annual herb. Chaparral, coastal scrub, desert dunes. Sandy. Elevations: 245-5250ft. (75-1600m.) Blooms (Jan)Mar-Sep.	No potential	Project site does not provide suitable habitat to support species
<i>Allium munzii</i> Munz's onion	FE/SCT G1/S1 1B.1	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland. Clay, mesic. Elevations: 975-3510ft. (297-1070m.) Blooms Mar-May.	No potential	Project site does not provide suitable habitat to support species
<i>Artemisia palmeri</i> San Diego sagewort	None/None G3?/S3? 4.2	Perennial deciduous shrub. Chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland. Mesic, sandy. Elevations: 50-3000ft. (15-915m.) Blooms (Feb)May-Sep.	No potential	Project site does not provide suitable habitat to support species
<i>Asplenium vespertinum</i> western spleenwort	None/None G4/S4 4.2	Perennial rhizomatous herb. Chaparral, cismontane woodland, coastal scrub. Rocky. Elevations: 590-3280ft. (180-1000m.) Blooms Feb-Jun.	No potential	Project site does not provide suitable habitat to support species
<i>Astragalus hornii</i> var. <i>hornii</i> Horn's milk-vetch	None/None GUT1/S1 1B.1	Annual herb. Meadows and seeps, playas. Alkaline, lake margins. Elevations: 195-2790ft. (60-850m.) Blooms May-Oct.	No potential	Project site does not provide suitable habitat to support species
<i>Astragalus pachypus</i> var. <i>jaegeri</i> Jaeger's milk- vetch	None/None G4T1/S1 1B.1	Perennial shrub. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Rocky (sometimes), sandy (sometimes). Elevations: 1200-3200ft. (365-975m.) Blooms Dec-Jun.	No potential	Project site does not provide suitable habitat to support species
<i>Atriplex coronata</i> var. <i>notatior</i> San Jacinto Valley crownscale	FE/None G4T1/S1 1B.1	Annual herb. Playas, valley and foothill grassland, vernal pools. Alkaline. Elevations: 455-1640ft. (139-500m.) Blooms Apr-Aug.	No potential	Project site does not provide suitable habitat to support species
<i>Atriplex parishii</i> Parish's brittlescale	None/None G1G2/S1 1B.1	Annual herb. Chenopod scrub, playas, vernal pools. Alkaline. Elevations: 80-6235ft. (25-1900m.) Blooms Jun-Oct.	No potential	Project site does not provide suitable habitat to support species
<i>Berberis nevini</i> Nevin's barberry	FE/SCE G1/S1 1B.1	Perennial evergreen shrub. Chaparral, cismontane woodland, coastal scrub, riparian scrub. Gravelly (sometimes), sandy (sometimes). Elevations: 230-2705ft. (70-825m.) Blooms (Feb)Mar-Jun.	No potential	Project site does not provide suitable habitat to support species



Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/ Observations
<i>Brodiaea filifolia</i> thread-leaved brodiaea	"FT/SCE G2/S2 1B.1"	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Clay (often). Elevations: 80-3675ft. (25-1120m.) Blooms Mar-Jun.	No potential	Project site does not provide suitable habitat to support species
<i>Calochortus plummerae</i> Plummer's mariposa-lily	"None/None G4/S4 4.2"	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Granitic, rocky. Elevations: 330-5580ft. (100-1700m.) Blooms May-Jul.	No potential	Project site does not provide suitable habitat to support species
<i>Carex comosa</i> bristly sedge	"None/None G5/S2 2B.1"	Perennial rhizomatous herb. Coastal prairie, marshes and swamps, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. Elevations: 0-2050ft. (0-625m.) Blooms May-Sep.	No potential	Project site does not provide suitable habitat to support species
<i>Caulanthus simulans</i> Payson's jewelflower	"None/None G4/S4 4.2"	Annual herb. Chaparral, coastal scrub. Granitic, sandy. Elevations: 295-7220ft. (90-2200m.) Blooms (Feb)Mar-May(Jun).	No potential	Project site does not provide suitable habitat to support species
<i>Centromadia pungens ssp. laevis</i> smooth tarplant	"None/None G3G4T2/S2 1B.1"	Annual herb. Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland. Alkaline. Elevations: 0-2100ft. (0-640m.) Blooms Apr-Sep.	No potential	Although last occurrence recorded approximately 4 miles away; habitat and sandy loam soils not suitable to support species
<i>Chorizanthe leptotheca</i> Peninsular spineflower	"None/None G3/S3 4.2"	Annual herb. Chaparral, coastal scrub, lower montane coniferous forest. Granitic. Elevations: 985-6235ft. (300-1900m.) Blooms May-Aug.	No potential	Project site does not provide suitable habitat to support species
<i>Chorizanthe parryi var. parryi</i> Parry's spineflower	"None/None G3T2/S2 1B.1"	Annual herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Openings, Rocky (sometimes), sandy (sometimes). Elevations: 900-4005ft. (275-1220m.) Blooms Apr-Jun.	No potential	Project site does not provide suitable habitat to support species
<i>Chorizanthe polygonoides var. longispina</i> long-spined spineflower	"None/None G5T3/S3 1B.2"	Annual herb. Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Clay (often). Elevations: 100-5020ft. (30-1530m.) Blooms Apr-Jul.	No potential	Project site does not provide suitable habitat to support species
<i>Chorizanthe xanti var. leucotheca</i> white-bracted spineflower	"None/None G4T3/S3 1B.2"	Annual herb. Coastal scrub, mojavean desert scrub, pinyon and juniper woodland. Gravelly (sometimes), sandy (sometimes). Elevations: 985-3935ft. (300-1200m.) Blooms Apr-Jun.	No potential	Project site does not provide suitable habitat to support species



Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/ Observations
<i>Convolvulus simulans</i> small-flowered morning-glory	"None/None G4/S4 4.2"	Annual herb. Chaparral, coastal scrub, valley and foothill grassland. Clay, seeps, serpentinite. Elevations: 100-2430ft. (30-740m.) Blooms Mar-Jul.	No potential	Project site does not provide suitable habitat to support species
<i>Deinandra paniculata</i> paniculate tarplant	"None/None G4/S4 4.2"	Annual herb. Coastal scrub, valley and foothill grassland, vernal pools. Usually in vernal mesic sites. Sometimes in vernal pools or on mima mounds near them. Elevations: 80-3085ft. (25-940m.) Blooms (Mar)Apr-Nov.	No potential	Project site does not provide suitable habitat to support species
<i>Diplacus clevelandii</i> Cleveland's bush monkeyflower	"None/None G4/S4 4.2"	Perennial rhizomatous herb. Chaparral, cismontane woodland, lower montane coniferous forest. Disturbed gravelly roadsides and slopes. Gabbro soils. Elevations: 1475-6560ft. (450-2000m.) Blooms Apr-Jul.	No potential	Project site does not provide suitable habitat to support species
<i>Dodecahema leptoceras</i> slender-horned spineflower	"FE/SCE G1/S1 1B.1"	Annual herb. Chaparral, cismontane woodland, coastal scrub. Flood deposited terraces and washes; associates include Encelia, Dalea, Lepidospartum, etc. Sandy soils. Elevations: 655-2495ft. (200-760m.) Blooms Apr-Jun.	No potential	Project site does not provide suitable habitat to support species
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> Santa Ana River woollystar	FE/SCE G4T1/S1 1B.1	Perennial herb. Chaparral, coastal scrub. In sandy soils on river floodplains or terraced fluvial deposits. Elevations: 300-2000ft. (91-610m.) Blooms Apr-Sep.	No potential	Project site does not provide suitable habitat to support species
<i>Galium californicum</i> ssp. <i>primum</i> Alvin Meadow bedstraw	None/None G5T2/S2 1B.2	Perennial herb. Chaparral, lower montane coniferous forest. Grows in shade of trees and shrubs at the lower edge of the pine belt, in pine forest-chaparral ecotone. Granitic, sandy soils. Elevations: 4430-5580ft. (1350-1700m.) Blooms May-Jul.	No potential	Project site does not provide suitable habitat to support species
<i>Harpagonella palmeri</i> Palmer's grapplinghook	None/None G4/S3 4.2	Annual herb. Chaparral, coastal scrub, valley and foothill grassland. Clay soils; open grassy areas within shrubland. Elevations: 65-3135ft. (20-955m.) Blooms Mar-May.	No potential	Project site does not provide suitable habitat to support species
<i>Helianthus nuttallii</i> ssp. <i>parishii</i> Los Angeles sunflower	None/None G5TX/SX 1A	Perennial rhizomatous herb. Marshes and swamps. Elevations: 35-5005ft. (10-1525m.) Blooms Aug-Oct.	No potential	Project site does not provide suitable habitat to support species



Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/ Observations
<i>Hordeum intercedens</i> vernal barley	None/None G3G4/S3S4 3.2	Annual herb. Coastal dunes, coastal scrub, valley and foothill grassland, vernal pools. Vernal pools, dry, saline streambeds, alkaline flats. 5-. Elevations: 15-3280ft. (5-1000m.) Blooms Mar-Jun.	No potential	Project site does not provide suitable habitat to support species
<i>Horkelia cuneata</i> var. <i>puberula</i> mesa horkelia	None/None G4T1/S1 1B.1	Perennial herb. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Elevations: 230-2660ft. (70-810m.) Blooms Feb-Jul(Sep).	No potential	Project site does not provide suitable habitat to support species
<i>Imperata brevifolia</i> California satintail	None/None G4/S3 2B.1	Perennial rhizomatous herb. Chaparral, coastal scrub, meadows and seeps, mojavean desert scrub, riparian scrub. Mesic sites, alkali seeps, riparian areas. 3-. Elevations: 0-3985ft. (0-1215m.) Blooms Sep-May.	No potential	Project site does not provide suitable habitat to support species
<i>Juglans californica</i> Southern California black walnut	None/None G4/S4 4.2	Perennial deciduous tree. Chaparral, cismontane woodland, coastal scrub, riparian woodland. Slopes, canyons, alluvial habitats. Elevations: 165-2955ft. (50-900m.) Blooms Mar-Aug.	Not present	Tree not present on site
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	None/None G4T2/S2 1B.1	Annual herb. Marshes and swamps, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-. Elevations: 5-4005ft. (1-1220m.) Blooms Feb-Jun.	No potential	Project site does not provide suitable habitat to support species
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepper-grass	None/None G5T3/S3 4.3	Annual herb. Chaparral, coastal scrub. Dry soils, shrubland. 4-. Elevations: 5-2905ft. (1-885m.) Blooms Jan-Jul.	No potential	Project site does not provide suitable habitat to support species
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i> ocellated Humboldt lily	None/None G4T4?/S4? 4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland. Yellow-pine forest or openings, oak canyons. Elevations: 100-5905ft. (30-1800m.) Blooms Mar-Jul(Aug).	No potential	Project site does not provide suitable habitat to support species
<i>Lycium parishii</i> Parish's desert-thorn	None/None G4/S1 2B.3	Perennial shrub. Coastal scrub, sonoran desert scrub. Elevations: 445-3280ft. (135-1000m.) Blooms Mar-Apr.	No potential	Project site does not provide suitable habitat to support species
<i>Myosurus minimus</i> ssp. <i>apus</i> little mousetail	None/None G5T2Q/S2 3.1	Annual herb. Valley and foothill grassland, vernal pools. Alkaline soils. Elevations: 65-2100ft. (20-640m.) Blooms Mar-Jun.	No potential	Project site does not provide suitable habitat to support species



Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/ Observations
<i>Nama stenocarpa</i> mud nama	None/None G4G5/S1S2 2B.2	Annual/perennial herb. Marshes and swamps. Lake shores, river banks, intermittently wet areas. Elevations: 15-1640ft. (5-500m.) Blooms Jan-Jul.	No potential	Project site does not provide suitable habitat to support species
<i>Navarretia fossalis</i> spreading navarretia	FT/None G2/S2 1B.1	Annual herb. Chenopod scrub, marshes and swamps, playas, vernal pools. San Diego hardpan and San Diego claypan vernal pools; in swales and vernal pools, often surrounded by other habitat types. Elevations: 100-2150ft. (30-655m.) Blooms Apr-Jun.	No potential	Project site does not provide suitable habitat to support species
<i>Pseudorontium cyathiferum</i> Deep Canyon snapdragon	None/None G4G5/S1 2B.3	Annual herb. Sonoran desert scrub. Rocky sites. Elevations: 0-2625ft. (0-800m.) Blooms Feb-Apr.	No potential	Project site does not provide suitable habitat to support species
<i>Quercus engelmannii</i> Engelmann oak	None/None G3/S3 4.2	Perennial deciduous tree. Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. Elevations: 165-4265ft. (50-1300m.) Blooms Mar-Jun.	No potential	Project site does not provide suitable habitat to support species
<i>Romneya coulteri</i> Coulter's matilija poppy	None/None G4/S4 4.2	Perennial rhizomatous herb. Chaparral, coastal scrub. In washes and on slopes; also after burns. Elevations: 65-3935ft. (20-1200m.) Blooms Mar-Jul(Aug).	No potential	Project site does not provide suitable habitat to support species
<i>Senecio aphanactis</i> chaparral ragwort	None/None G3/S2 2B.2	Annual herb. Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. Elevations: 50-2625ft. (15-800m.) Blooms Jan-Apr(May).	No potential	Project site does not provide suitable habitat to support species
<i>Sidalcea neomexicana</i> salt spring checkerbloom	None/None G4/S2 2B.2	Perennial herb. Chaparral, coastal scrub, lower montane coniferous forest, mojavean desert scrub, playas. Alkali springs and marshes. Elevations: 50-5020ft. (15-1530m.) Blooms Mar-Jun.	No potential	Project site does not provide suitable habitat to support species
<i>Sphenopholis obtusata</i> prairie wedge grass	None/None G5/S2 2B.2	Perennial herb. Cismontane woodland, meadows and seeps. Open moist sites, along rivers and springs, alkaline desert seeps. Elevations: 985-6560ft. (300-2000m.) Blooms Apr-Jul.	No potential	Project site does not provide suitable habitat to support species
<i>Texosporium sancti-jacobi</i> woven-spored lichen	None/None G3/S2 3	Crustose lichen (terricolous). Chaparral. Open sites; in California with <i>Adenostoma fasciculatum</i> , <i>Eriogonum</i> , <i>Selaginella</i> . Found on soil, small mammal pellets, dead twigs, and on <i>Selaginella</i> . Elevations: 195-2165ft. (60-660m.)	No potential	Project site does not provide suitable habitat to support species



Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/ Observations
<i>Tortula californica</i> California screw moss	None/None G2G3/S2? 1B.2	Moss. Chenopod scrub, valley and foothill grassland. Moss growing on sandy soil. Elevations: 35-4790ft. (10-1460m.)	No potential	Project site does not provide suitable habitat to support species
Invertebrates				
<i>Bombus crotchii</i> Crotch bumble bee	None/None G2/S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	No potential	Last occurrence recorded approx. 1.4 miles northwest of project in 2020. Habitat not suitable to support species due to lack of food plant genera
<i>Neolarra alba</i> white cuckoo bee	None/None GH/SH	Known only from localities in Southern California. Cleptoparasitic in the nests of perdita bees.	No potential	Project site does not provide suitable habitat to support species
<i>Rhaphiomidas terminatus abdominalis</i> Delhi Sands flower-loving fly	FE/None G1T1/S1	Found only in areas of the Delhi Sands formation in southwestern San Bernardino and northwestern Riverside counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation. Oviposition req. shade.	No potential	Project site does not provide suitable habitat to support species
<i>Streptocephalus woottoni</i> Riverside fairy shrimp	FE/None G1G2/S1S2	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	No potential	Project site does not provide suitable habitat to support species
Amphibians				
<i>Spa hammondii</i> western spadefoot	None/None G2G3/S3 SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	No potential	Project site does not provide suitable habitat to support species
Reptiles				
<i>Anniella stebbinsi</i> Southern California legless lizard	None/None G3/S3 SSC	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	No potential	Project site does not provide suitable habitat to support species



Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/ Observations
<i>Aspidoscelis hyperythra</i> orange-throated whiptail	None/None G5/S2S3 WL	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.	No potential	Project site does not provide suitable habitat to support species
<i>Aspidoscelis tigris stejnegeri</i> coastal whiptail	None/None G5T5/S3 SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	Low potential	Project site's staging area provides limited suitable habitat to support species due to large open space staging area; however, site is highly developed/disturbed, lacking riparian and woodland areas
<i>Charina umbratica</i> southern rubber boa	None/ST G2G3/S2S3	Known from the San Bernardino and San Jacinto mtns; found in a variety of montane forest habitats. Snakes resembling <i>C. umbratica</i> reported from Mt. Pinos and Tehachapi mtns group with <i>C. bottae</i> based on mtDNA. Further research needed. Found in vicinity of streams or wet meadows; requires loose, moist soil for burrowing; seeks cover in rotting logs, rock outcrops, and under surface litter.	No potential	Project site does not provide suitable habitat to support species
<i>Crotalus ruber</i> red-diamond rattlesnake	None/None G4/S3 SSC	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	No potential	Project site does not provide suitable habitat to support species
<i>Phrynosoma blainvillii</i> coast horned lizard	None/None G3G4/S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	No potential	Project site does not provide suitable habitat to support species
<i>Salvadora hexalepis virgultea</i> coast patch-nosed snake	None/None G5T4/S2S3 SSC	Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites.	No potential	Project site does not provide suitable habitat to support species



Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/ Observations
Birds				
<i>Accipiter cooperii</i> Cooper's hawk	None/None G5/S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Low potential	Mature tree adjacent to project site provides suitable nesting habitat to support species
<i>Aimophila ruficeps canescens</i> southern California rufous-crowned sparrow	None/None G5T3/S3 WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	No potential	Project site does not provide suitable habitat to support species
<i>Artemisospiza belli belli</i> Bell's sage sparrow	None/None G5T2T3/S3 WL	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	No potential	suitable habitat present approx. 1.5 miles away; therefore, species may fly over, but site not suitable for nesting. Last recorded occurrence in 2002
<i>Athene cunicularia</i> burrowing owl	None/None G4/S3 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Low Potential	Suitable habitat present within open space staging area to support species. Last recorded occurrence approx. 2 miles away in the last 10 years
<i>Buteo regalis</i> ferruginous hawk	None/None G4/S3S4 WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	No potential	Project site lacks suitable habitat. Last occurrence recorded in 2005 approximately 3.2 miles from site.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FT/SE G5T2T3/S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	No potential	Project site does not provide suitable habitat to support species
<i>Eremophila alpestris actia</i> California horned lark	None/None G5T4Q/S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Low Potential	Limited suitable habitat exists on the project site to support species due to open space within the staging area. Last recorded occurrence approx. 4.8 miles from site



Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/ Observations
<i>Icteria virens</i> yellow-breasted chat	None/None G5/S3 SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	No potential	Project site does not provide suitable habitat to support species
<i>Lanius ludovicianus</i> loggerhead shrike	None/None G4/S4 SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Low potential	Suitable foraging and scanning habitat on site to support species due to open space in staging area; nesting habitat not present.
<i>Poliioptila californica californica</i> coastal California gnatcatcher	FT/None G4G5T3Q/S2 SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	No potential	Project site does not provide suitable habitat to support species
<i>Setophaga petechia</i> yellow warbler	None/None G5/S3S4 SSC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	No potential	Project site does not provide suitable habitat to support species
<i>Spinus lawrencei</i> Lawrence's goldfinch	None/None G3G4/S4	Nests in open oak or other arid woodland and chaparral, near water. Nearby herbaceous habitats used for feeding. Closely associated with oaks.	No potential	Project site does not provide suitable habitat to support species
<i>Vireo bellii pusillus</i> least Bell's vireo	FE/SE G5T2/S2	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	No potential	Project site does not provide suitable habitat to support species
Mammals				
<i>Chaetodipus fallax fallax</i> northwestern San Diego pocket mouse	None/None G5T3T4/S3S4 SSC	Inhabits coastal sage scrub, sagebrush scrub, grasslands, and chaparral communities. Found in open, sandy areas in southwestern California and northern Baja California. Prefers moderately gravelly and rocky substrates.	No potential	Last recorded occurrence in 1999; however no suitable coastal sage scrub or brush habitat exists on project site



Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/ Observations
<i>Dipodomys merriami parvus</i> San Bernardino kangaroo rat	FE/SCE G5T1/S1 SSC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	Not expected	Marginally suitable soil type within staging area has potential to support species; however, vegetation and land cover is not suitable.
<i>Dipodomys stephensi</i> Stephens' kangaroo rat	FE/ST G2/S2	Found primarily in annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass & filaree. Will burrow into firm soil and use the burrows of California ground squirrels and pocket gophers. Occurs only in southern California.	Not expected	Limited suitable soil type within staging area has potential to support species; however, area has recently been tilled, and is highly disturbed.
<i>Eumops perotis californicus</i> western mastiff bat	None/None G4G5T4/S3S4 SSC	Occurs in open, semi-arid to arid habitats, including coniferous and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces and caves, and buildings. Roosts typically occur high above ground.	No potential	Project site does not provide suitable habitat to support species
<i>Lasiurus xanthinus</i> western yellow bat	None/None G4G5/S3 SSC	Occurs in arid regions of the southwestern United States. Typically found in riparian woodlands, oak or pinyon-juniper woodland, desert wash, palm oasis habitats, and urban or suburban areas. Roosts in trees, often between palm fronds.	Low potential	Vacant structure and scattered palm trees adjacent to the project may provide limited habitat to support species; last occurrence recorded in 1980s.
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	None/None G5T3T4/S3S4	Occurs in Los Angeles, San Bernardino, Riverside, and San Diego Counties of southern California. Typically found in open shrub habitats. Will also occur in woodland habitats with open understory adjacent to shrublands.	No potential	Project site does not provide suitable habitat to support species
<i>Nyctinomops femorosaccus</i> pocketed free-tailed bat	None/None G5/S3 SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	No potential	Project site does not provide suitable habitat to support species
<i>Onychomys torridus ramona</i> southern grasshopper mouse	None/None G5T3/S3 SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.	No potential	Project site does not provide suitable habitat to support species



Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/ Observations
<i>Perognathus longimembris brevinasus</i> Los Angeles pocket mouse	None/None G5T2/S1S2 SSC	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	Low potential	Last occurrence recorded immediately adjacent to project in 1991. Only marginally suitable habitat within staging area.
<i>Taxidea taxus</i> American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	No potential	Project site does not provide suitable habitat to support species

Status: Federal/State

FE = Federal Endangered

FT = Federal Threatened

CFT = Candidate Federal Threatened

FDL = Federal Delisted

SE = State Endangered

ST = State Threatened

SCE = Candidate State Endangered

SR = State Rare

SDL = State Delisted

SSC = CDFW Species of Special Concern

FP = CDFW Fully Protected

WL = CDFW Watch List

CRPR (CNPS California Rare Plant Rank)

1A = Presumed Extinct in California

1B = Rare, Threatened, or Endangered in California and elsewhere

2 = Rare, Threatened, or Endangered in California, but more common elsewhere

3 = Need more information (a Review List)

4 = Plants of Limited Distribution (a Watch List)

CRPR Threat Code Extension

.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)

.2 = Fairly endangered in California (20-80% of occurrences threatened)

.3 = Not very endangered in California (<20% of occurrences threatened)

Other Statuses

G1 or S1 Critically Imperiled Globally or Subnationally (state)

G2 or S2 Imperiled Globally or Subnationally (state)

G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)

G4/5 or S4/5 Apparently secure, common, and abundant

GH or SH Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery

Additional notations may be provided as follows

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)

Q – Questionable taxonomy that may reduce conservation priority

? – Inexact numeric rank

APPENDIX C: HISTORICAL PROPERTIES IDENTIFICATION REPORT



Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project

Historic Properties Identification Report

prepared for

Woodard & Curran

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October 2022



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Confidentiality

The following document contains sensitive and confidential information concerning archaeological sites. This report should be held confidential and is not for public distribution. Archaeological site locations are exempt from the California Public Records Act, as specified in Government Code 6254.10, and from the Freedom of Information Act (Exemption 3), under the legal authority of both the National Historic Preservation Act (PL 102-574, Section 304[a]) and the Archaeological Resources Protection Act (PL 96-95, Section 9[a]). Sections of this report contain maps and other sensitive information. Distribution should be restricted appropriately.

Please cite this report as follows:

Flaherty, Leanna, Laura Maldonado, Chris Duran, Breana Campbell, and John C. Bergner IV

2022 Raw Water Conveyance Pipeline Phase III Project, Historic Properties Identification Report, Riverside County, California. Rincon Consultants Project No. 21-12325. Report on file at the Eastern Information Center, University of California, Riverside.

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Executive Summary

Woodard & Curran retained Rincon Consultants, Inc. (Rincon) to prepare a Historic Properties Identification Report (HPIR) for the Eastern Municipal Water District's (EMWD) Raw Water Conveyance Pipeline Phase III Project (proposed project) in the city of Moreno Valley, Riverside County, California. The proposed project is part of the larger Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The proposed project, together with the other facilities of the Cactus Avenue Corridor Groundwater Wells Project, is part of the Perris North Basin Contamination Prevention and Remediation Program, which has an overall goal of cleaning up contamination areas of concern in the Perris North Groundwater Basin while also increasing EMWD local potable water supplies. The proposed project involves the installation of an 18-inch transmission pipeline along Ironwood Avenue from Well 65/66 to Perris Boulevard then south along Perris Boulevard from Ironwood Avenue to the site of a future centralized treatment plant.

This HPIR includes a cultural resources records search of the California Historical Resources Information System (CHRIS), a Sacred Lands File (SLF) search, additional background research, a pedestrian field survey, and the preparation of this HPIR. EMWD is likely to seek funding from the State Water Resources Control Board; therefore, this study has been completed in accordance with the requirements of a California Environmental Quality Act (CEQA)-Plus investigation, which includes an evaluation of project impacts under CEQA, Section 106 of the National Historic Preservation Act (NHPA), and the National Environmental Policy Act in case a federal nexus is established during the project (i.e., federal funding and/or permitting).

The CHRIS records search conducted by the Eastern Information Center identified nine previously recorded cultural resources within 0.5-mile of the proposed project Area of Potential Effects (APE). The recorded boundary of one resource (P-33-028824) is located 75 feet north of the APE across an adjacent roadway. P-33-028824 consists of an historic-period 15-foot by 6-foot foundation slab, a utility pole with 1930 and 1947 inspection nails, and a single clear glass bottle fragment.

A search of the SLF by the Native American Heritage Commission (NAHC) returned negative results. Subsequently, outreach efforts were conducted with local Native American groups to obtain information on known Native American resources located in the project APE or vicinity. A total of nine responses have been received as of the date of this report. Seven tribes (Agua Caliente Band of Cahuilla Indians, Augustine Band of Cahuilla Mission Indians, Cahuilla Band of Indians, Pechanga Band of Luiseño Indians, Rincon Band of Luiseño Indians, Soboba Band of Luiseño Indians, and Serrano Nation of Mission Indians) expressed concerns, requested additional information, made suggestions, and/or requested consultation with the lead federal agency. One tribe (The Yuhaaviatam of San Manuel Nation) commented the proposed project is not located near any known cultural resources, and another tribe (The Fort Yuma Quechan) responded with no comments and stated they will defer to local tribes.

In addition, Rincon also conducted outreach with local historical groups to obtain additional information on historic-period cultural resources in the area. One response was received as of the date of this report (from the March Field Air Museum), with no comments or concerns in regard to the proposed project.

The pedestrian field survey of the proposed project APE did not identify any new archaeological or built environment resources. A Rincon archaeologist attempted to relocate the previously recorded

resource documented 75 feet north of the project APE (P-33-028824); however, the resource is located on a private plot of land with fencing blocking access. As this site is outside of the APE and will not be impacted by the project it requires no further management consideration.

The SLF search was returned with negative results and no cultural resources were identified within the proposed project APE as a result of the records search. Though several Tribes expressed concerns related to the proposed project, no specific Native American archaeological resources were identified within the APE as a result of the outreach conducted. Given the level of previous ground disturbance within the project area (i.e., grading and construction activities) the proposed project APE is considered to have low archaeological sensitivity. Based on the results of the records search, SLF search, Native American and local historical group outreach, and pedestrian field survey, no known unique archaeological resources, historical resources, or historic properties are located within the APE. Therefore, Rincon recommends a finding of ***no impact to historical resources and less-than-significant impact to archaeological resources*** under CEQA and ***no historic properties affected*** under Section 106 of NHPA. No further cultural resources work is recommended for the project.

Rincon presents the following recommendation in case of unanticipated discovery of cultural resources during project development. The project is also required to adhere to regulations regarding the unanticipated discovery of human remains, detailed below.

Unanticipated Discovery of Cultural Resources

In the event that archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determines it to be appropriate, archaeological testing for California Register of Historical Resources (CRHR) eligibility shall be completed. If the resource proves to be eligible for the CRHR and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of California Code of Regulations (CCR) Guidelines Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. EMWD shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the CHRIS, per CCR Guidelines Section 15126.4(b)(3)(C).

Human Remains

If human remains are found, regulations outlined in the State of California Health and Safety Code Section 7050.5 state no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified

immediately. If the human remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of being granted access and provide recommendations as to the treatment of the remains to the landowner.

1 Introduction

Woodard & Curran retained Rincon Consultants, Inc. (Rincon) to prepare a Historic Properties Identification Report (HPIR) for the Eastern Municipal Water District (EMWD) Raw Water Conveyance Pipeline Phase III (project) located in the cities of Moreno Valley, Riverside County, California. The purpose of this report is to document the tasks Rincon conducted; specifically, a cultural resources records search, a Sacred Lands File (SLF) search, Native American outreach, local historical group outreach, historical imagery review, and a pedestrian field survey. Rincon understands EMWD may seek funding from the State Water Resources Control Board (SWRCB) for the project, and that federal funds may be used. Therefore, this cultural resources study was completed in accordance with California Environmental Quality Act (CEQA)-Plus standards for compliance with CEQA, the National Environmental Policy Act, and Section 106 of the National Historic Preservation Act (NHPA).

1.1 Project Undertaking Location

The proposed project Area of Potential Effects (APE) lies within the city of Moreno Valley in western Riverside County, California (see Figure 1, Figure 2, and Figure 3). More specifically, it lies in Township 2 South, Range 3 West, Section 31 and 32, and Township 3 South, Range 3 West, Sections 5-8 of the United States Geological Survey of *Sunnymead, California* 7.5-minute topographic quadrangle. The APE is in an area characterized by a mix of agricultural, residential, commercial, and light industrial development.

1.2 Project Undertaking Description

The proposed project consists of an 18-inch transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 65/66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program. The pipeline, which would be approximately 12,500 linear feet in total length, would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using “bore and jack” methods. One approximately 5-acre temporary construction staging area is also proposed, which will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue.

Figure 1 Regional Location Map



Basemap provided by Esri and its licensors © 2022.

★ Project Location

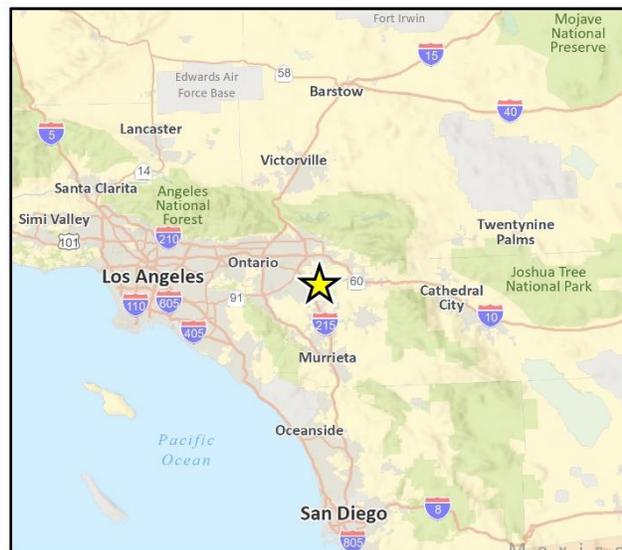
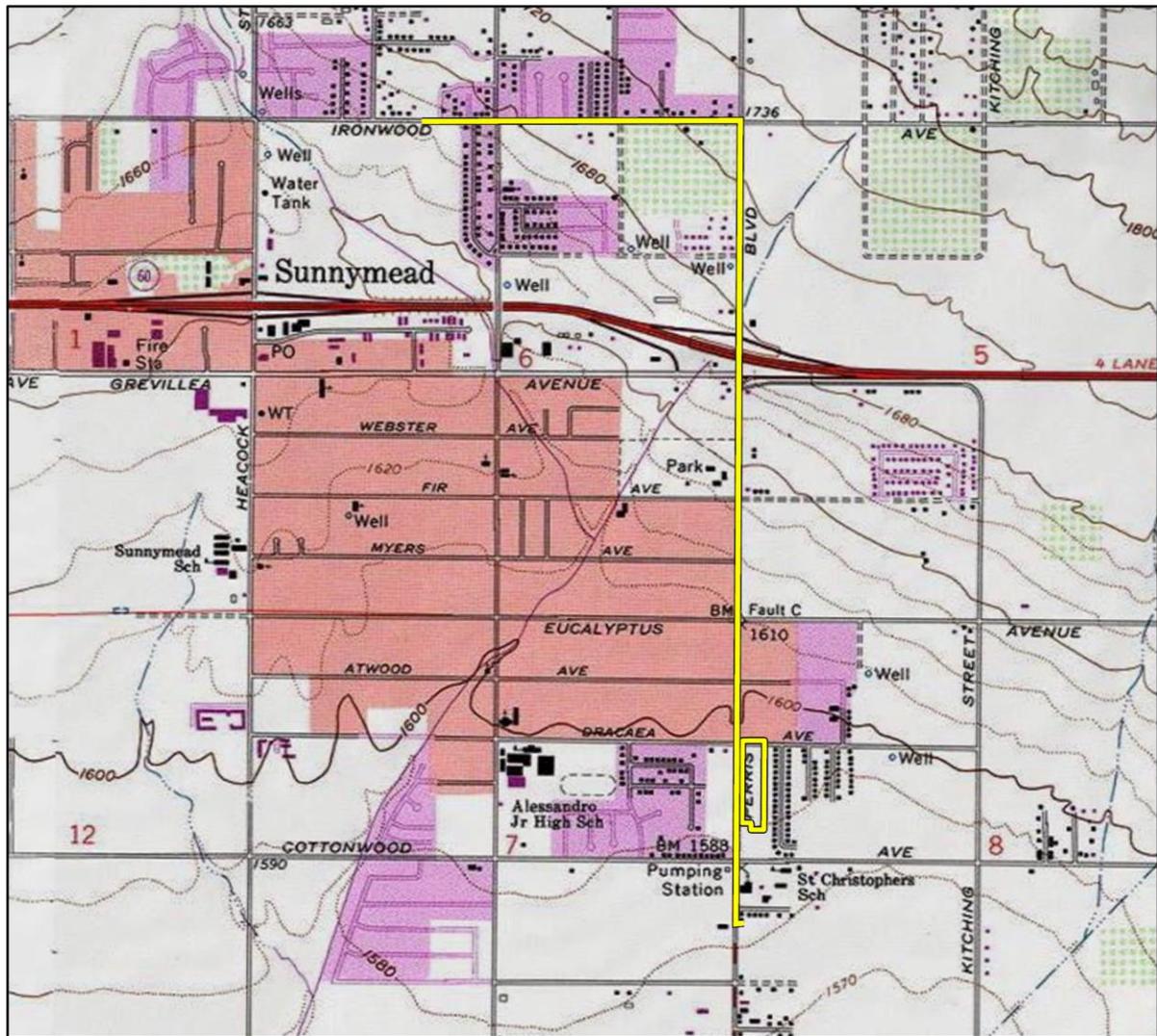


Fig 1 Regional Location

Figure 2 Project Location Map



Basemap provided by National Geographic Society, Esri and their licensors © 2022. Sunnymead Quadrangle. T02S R03W S31,32 & T03S R03W S05-08. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

CRFig 1 Proj Locn Map

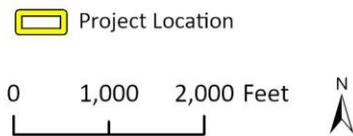
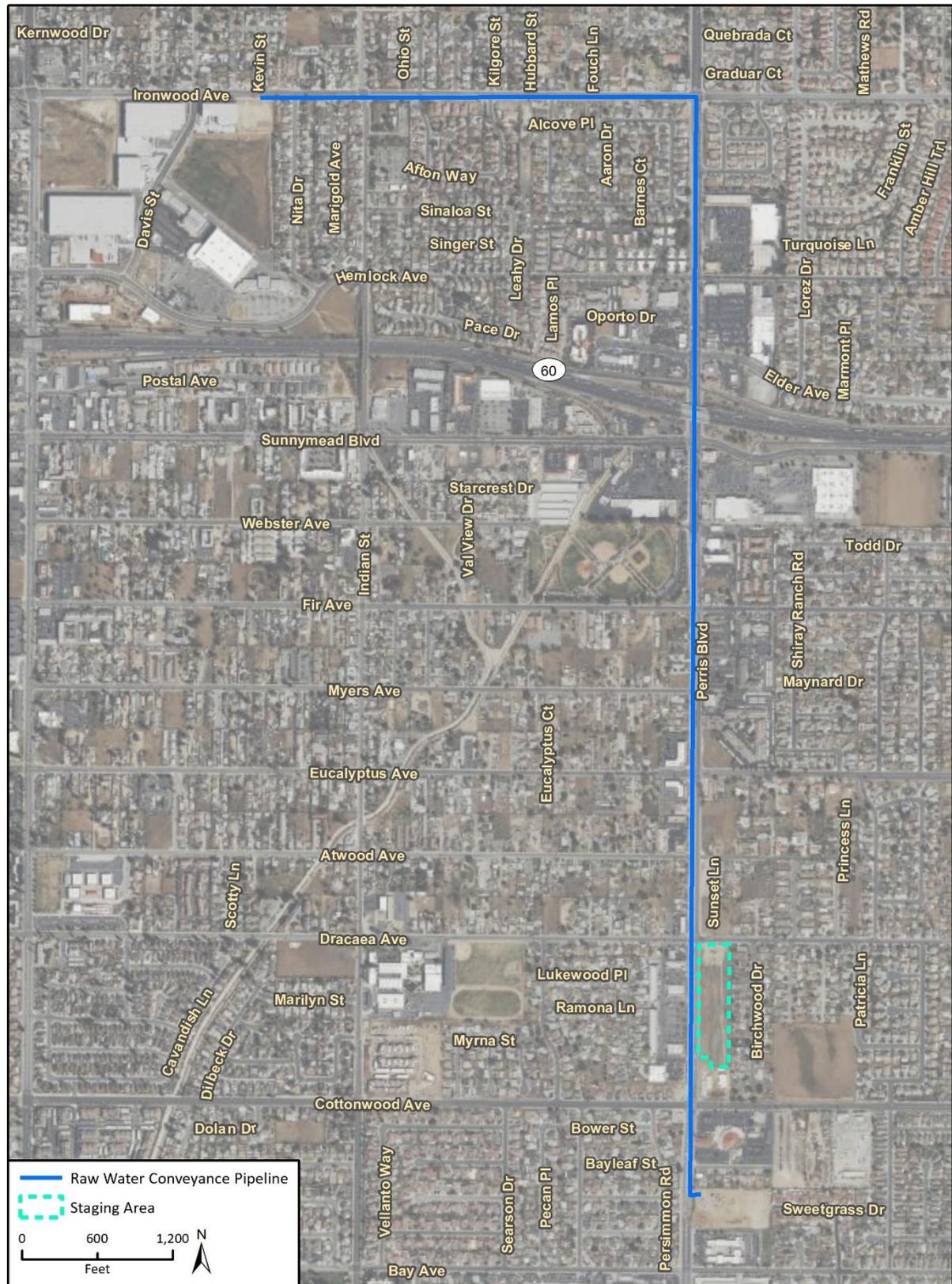


Figure 3 Raw Water Conveyance Pipeline and Staging Area



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Fig X Project Location

The proposed project is part of the larger Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The proposed project, together with the other facilities of the Cactus Avenue Corridor Groundwater Wells Project, is part of the Perris North Basin Contamination Prevention and Remediation Program, which has an overall goal of cleaning up contamination areas of concern in the Perris North Groundwater Basin while also increasing EMWD local potable supplies. Currently, groundwater in the Perris North Groundwater Management Zone is contaminated. Potential contamination sources were identified by EMWD through implementation of the Drinking Water Source Assessment Program, as well as the SWRCB's GeoTracker and Department of Toxic Substances Control's EnviroStor database research, in developing a map of the comingled plume. The proposed project, together with the other facilities of the Cactus Corridor Groundwater Wells Project, would also augment local water supply in the EMWD service area. In doing so, it would reduce EMWD's need to purchase additional imported water.

1.3 Area of Potential Effects and Area of Direct Impact

The APE is the geographic area or areas in which an undertaking may directly or indirectly cause changes in the character or use of historic properties. Determination of the APE is influenced by the undertaking's setting, the scale and nature of the undertaking, and the different kinds of effects that may result from the undertaking (36 CFR 800.16[d]). The APE for the proposed project was developed in consultation with EMWD to identify resources in the area that have potential for historic significance, that should be evaluated for eligibility for the National Register of Historical Places (NRHP), and that may be directly or indirectly affected by the undertaking, pursuant to 36 CFR 800.16(d).

For the proposed project, the APE is coterminous with the proposed undertaking footprint (See Appendix A). In total, the acreage of the horizontal APE is approximately 53 acres. With the exception of the staging area, the APE is already developed, consisting of the rights-of-way for both Perris Boulevard and Ironwood Ave. The staging area consists of an empty dirt lot that has been heavily graded.

The APE must be considered as a three-dimensional space including any ground disturbance associated with construction. The below ground vertical APE is assumed to be a maximum of 40 feet below ground surface to account for the pits that may be necessary should the "bore and jack" method be utilized where trenchless installation techniques may be required; the maximum depth is limited to 40 feet due to the low potential for any intact cultural resources finds below that level.

The above ground vertical APE is assumed to be a maximum of 3 feet above ground surface to account for the height of the pipeline valve covers that will be installed to enclose air release and vacuum valves. After construction is complete, all pipeline construction areas would be restored to pre-construction conditions (i.e., no permanent disturbance footprint), with exception of the valve covers. Because most of the project elements will be subterranean, no indirect effects (i.e., visual, auditory, or atmospheric) are anticipated for the project.

1.4 Project Personnel

Rincon Principal Christopher Duran, MA, Registered Professional Archaeologist (RPA), reviewed this report for quality control. Mr. Duran meets the Secretary of the Interior's (SOI) Professional Qualifications Standards for historic and prehistoric archaeology (National Park Service 1983). Rincon Cultural Resources Program Manager Breana Campbell-King, MA, RPA, provided oversight

and reviewed the project for archaeological resources. Rincon Archaeologist and Cultural Resources Project Manager Leanna Flaherty, MA, RPA, provided project management, conducted Native American and historical group outreach, and is the primary author of this report. Both Ms. Campbell-King and Ms. Flaherty meet the SOI's Professional Qualifications Standards for prehistoric and historic archaeology. Archaeologist Laura Maldonado, MA, conducted Native American and historical group outreach and is a contributing author of this report. John C. Bergner IV, MA, RPA, was the field lead for this project. Geographic Information Systems Analyst Allysen Valencia prepared the figures found in this report.

2 Regulatory Setting

This section includes a discussion of the applicable federal, state, and local laws, ordinances, regulations, and standards governing cultural resources, to which the proposed project should adhere before and during implementation.

2.1 CEQA-Plus Studies

A CEQA-Plus study includes compliance with state regulations, as well as specific federal cross-cutting regulations pursuant to the requirements of the NEPA, in the event a federal nexus is established during the course of the undertaking's execution. A federal nexus may be established if federal funding and/or permitting is obtained or required. Compliance with both regulations allows the lead agency to apply the results of this technical study to both levels of regulation should a nexus be established later.

2.2 Federal

National Historic Preservation Act

The proposed project is considered a federal undertaking due to the potential for federal funding; it is, therefore, subject to Section 106 of the NHPA, which applies when a project, activity, or program is funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including projects carried out by or on behalf of a federal agency; those carried out with federal financial assistance; and those requiring a federal permit, license, or approval. Cultural resources are considered during federal undertakings chiefly under Section 106 of the NHPA of 1966 (as amended) and through one of its implementing regulations, 36 CFR 800 (Protection of Historic Properties), and the National Environmental Policy Act. Properties of traditional, religious, and cultural importance to Native Americans are considered under Section 101 (d)(6)(A) and Section 106 (36 CFR 800.3-800.10) of the NHPA. Other federal laws governing cultural resources include the Archaeological Data Preservation Act of 1974, the American Indian Religious Freedom Act of 1978, the Archaeological Resources Protection Act of 1979, and the Native American Graves Protection and Repatriation Act of 1989, among others.

Section 106 of the NHPA (16 United States Code 470f) requires federal agencies to take into account the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, the significance is assessed of any adversely affected historic property and mitigation measures are proposed to resolve the adverse effects to an acceptable level. Historic properties are those significant cultural resources listed in or are eligible for listing in the National Register of Historic Properties (NRHP). Generally, districts, sites, buildings, structures, and object that possess integrity are eligible for inclusion in the NRHP if they meet the following the criteria (36 CFR 60.4):

- a. Are associated with events that have made a significant contribution to the broad patterns of our history
- b. Are associated with the lives of persons significant in our past

- c. Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
- d. Have yielded, or may be likely to yield, information important in prehistory or history

Ordinarily, cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures having been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for NRHP listing, unless they satisfy certain conditions. In general, a resource must be 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

National Register of Historic Places

Although the project does not have a federal nexus, properties which are listed in or have been formally determined eligible for listing in the NRHP are automatically listed in the CRHR. The following is therefore presented to provide applicable regulatory context. The NRHP was authorized by Section 101 of the National Historic Preservation Act and is the nation's official list of cultural resources worthy of preservation. The NRHP recognizes the quality of significance in American, state, and local history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects. Per 36 CFR Part 60.4, a property is eligible for listing in the NRHP if it meets one or more of the following criteria:

- Criterion A:** Are associated with events that have made a significant contribution to the broad patterns of our history
- Criterion B:** Are associated with the lives of persons significant in our past
- Criterion C:** Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
- Criterion D:** Have yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting at least one of the above designation criteria, resources must also retain integrity. The National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, defined as follows:

- Location:** The place where the historic property was constructed or the place where the historic event occurred
- Design:** The combination of elements that create the form, plan, space, structure, and style of a property
- Setting:** The physical environment of a historic property
- Materials:** The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property
- Workmanship:** The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory

- Feeling:** A property’s expression of the aesthetic or historic sense of a particular period of time
- Association:** The direct link between an important historic event or person and a historic property

Certain properties are generally considered ineligible for listing in the NRHP, including cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions, relocated structures, or commemorative properties. Additionally, a property must be at least 50 years of age to be eligible for listing in the NRHP. The National Park Service states that 50 years is the general estimate of the time needed to develop the necessary historical perspective to evaluate significance (National Park Service 1997:41). Properties which are less than 50 years must be determined to have “exceptional importance” to be considered eligible for NRHP listing.

2.3 State

California Environmental Quality Act

CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1) or tribal cultural resources (PRC Section 21074[a][1][A]-[B]). A historical resource is a resource listed or determined to be eligible for listing in the CRHR, a resource included in a local register of historical resources, or an object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be *historically significant* (CEQA Guidelines, Section 15064.5[a][1-3]). A site can be defined as a location that has historic, cultural or archaeological value due to observed material evidence of events, activities, and/or structural remains (Office of Historic Preservation [OHP] 1995: 7). An *isolate resource* is an archaeological artifact that cannot be directly tied to an archaeological site (OHP 1995: 3). A cultural resource may or may not be considered a historical resource or tribal cultural resource pursuant to CEQA.

A resource shall be considered *historically significant* if it meets any of the following criteria:

- 1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage
- 2) Is associated with the lives of persons important to our past
- 3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
- 4) Has yielded, or may be likely to yield, information important in prehistory or history

Generally, a cultural resource must be at least 50 years of age to be considered for listing on the CRHR. Resources that have achieved significance in the past 50 years may also be eligible for inclusion in the CRHR, provided that enough time has lapsed to obtain a scholarly perspective on the events or individuals associated with the resource (OHP n.d.: 3).

If it can be demonstrated that a project will cause damage to a *unique archaeological resource*, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b]).

PRC Section 21083.2(g) defines a *unique archaeological resource* as an artifact, object, or site about which it can be demonstrated clearly that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- 1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
- 2) Has a special and particular quality such as being the oldest of its type or the best available example of its type
- 3) Is directly associated with a scientifically recognized important prehistoric or historic event or person

California Assembly Bill (AB) 52 was enacted July 1, 2015; it expands CEQA by defining a new resource category called *tribal cultural resources* (TCR). AB 52 establishes “a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment” (PRC Section 21084.2). It further states the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a TCR, when feasible (PRC Section 21084.3).

PRC Section 21074(a)(1)(A) and (B) defines TCR as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” and meets either of the following criteria:

- 1) Listed or eligible for listing in the CRHR, or in a local register of historical resources, as defined in PRC Section 5020.1(k)
- 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American Tribe.

California Register of Historical Resources

The CRHR was established in 1992 and codified by PRC §§5024.1 and 4852. The CRHR is an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change (Public Resources Code, 5024.1(a)). The criteria for eligibility for the CRHR are consistent with the NRHP criteria but have been modified for state use in order to include a range of historical resources that better reflect the history of California (Public Resources Code, 5024.1(b)). Unlike the NRHP however, the CRHR does not have a defined age threshold for eligibility; rather, a resource may be eligible for the CRHR if it can be demonstrated sufficient time has passed to understand its historical or architectural significance (California Office of Historic Preservation 2006). Furthermore, resources may still be eligible for listing in the CRHR even if they do not retain sufficient integrity for NRHP eligibility (California Office of Historic Preservation 2006). Generally, the California Office of Historic Preservation recommends resources over 45 years of age be recorded and evaluated for historical resources eligibility (California Office of Historic Preservation 1995:2).

A properties is eligible for listing in the CRHR if it meets one of more of the following criteria:

- Criterion 1:** Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage

- Criterion 2:** Is associated with the lives of persons important to our past
- Criterion 3:** Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
- Criterion 4:** Has yielded, or may be likely to yield, information important in prehistory or history

California Health and Safety Code

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined if the remains are subject to the Coroner's authority. If the human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of this identification.

California Public Resources Code §5097.98

Section 5097.98 of the California Public Resources Code states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code §7050.5, shall immediately notify those persons (i.e., the Most Likely Descendant [MLD]) that it believes to be descended from the deceased. With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site.

3 Natural and Cultural Setting

3.1 Natural Setting

The project APE lies within the Moreno Valley, which is bounded by the Badlands to the east, a series of low-lying granitic hills (including Box Spring Mountains) to the north and west, and the San Jacinto River to the south. The elevation of the project site ranges from 1,450 to 1,660 feet above mean sea level. Most of the project APE is developed and is characterized by a mix of agricultural, residential, commercial, and industrial uses.

3.2 Cultural Setting

During the twentieth century, many archaeologists developed chronological sequences to explain prehistoric cultural changes in all or portions of southern California (c.f., Jones and Klar 2007; Moratto 1984). Wallace (1955, 1978) devised a prehistoric chronology for the southern California region based on early studies and focused on data synthesis that included four horizons: Early Man, Milling Stone, Intermediate, and Late Prehistoric. Though initially lacking the chronological precision of absolute dates (Moratto 1984: 159), Wallace's (1955) synthesis has been modified and improved using thousands of radiocarbon dates obtained by southern California researchers over recent decades (Byrd and Raab 2007: 217; Koerper and Drover 1983; Koerper et al. 2002; Mason and Peterson 1994). The composite prehistoric chronological sequence for southern California is based on Wallace (1955), Warren (1968), and later studies including Koerper and Drover (1983).

Early Man Horizon (10,000 – 6000 BCE)

Numerous pre-8000 BCE sites have been identified along the mainland coast and Channel Islands of southern California (c.f., Erlandson 1991; Johnson et al. 2002; Jones and Klar 2007; Moratto 1984; Rick et al. 2001: 609). The Arlington Springs site on Santa Rosa Island produced human femurs dated to approximately 13,000 years ago (Arnold et al. 2004; Johnson et al. 2002). On nearby San Miguel Island, human occupation at Daisy Cave (SMI-261) has been dated to nearly 13,000 years ago and included basketry greater than 12,000 years old, the earliest on the Pacific Coast (Arnold et al. 2004).

Although few Clovis- or Folsom-style fluted points have been found in southern California (e.g., Dillon 2002; Erlandson et al. 1987), Early Man Horizon sites are associated generally with a greater emphasis on hunting than later horizons. Recent data indicate the Early Man economy was a diverse mixture of hunting and gathering, including a significant focus on aquatic resources in coastal areas (e.g., Jones et al. 2002) and on inland Pleistocene lakeshores (Moratto 1984). A warm and dry 3,000-year period called the Altithermal began around 6000 BCE. The conditions of the Altithermal are likely responsible for the change in human subsistence patterns at this time, including a greater emphasis on plant foods and small game.

Milling Stone Horizon (6000 – 3000 BCE)

The Milling Stone Horizon is defined as “marked by extensive use of milling stones and mullers, a general lack of well-made projectile points, and burials with rock cairns” (Wallace 1955: 219). The dominance of such artifact types indicates a subsistence strategy oriented around collecting plant foods and small animals. A broad spectrum of food resources was consumed including small and

large terrestrial mammals, sea mammals, birds, shellfish and other littoral and estuarine species, near-shore fishes, yucca, agave, and seeds and other plant products (Kowta 1969; Reinman 1964). Variability in artifact collections over time and from the coast to inland sites indicates Milling Stone Horizon subsistence strategies adapted to environmental conditions (Byrd and Raab 2007: 220). Locally available tool stone dominates lithic artifacts associated with Milling Stone Horizon sites; ground stone tools, such as manos and metates, and chopping, scraping, and cutting tools, are common. Kowta (1969) attributes the presence of numerous scraper-plane tools in Milling Stone Horizon collections to the processing of agave or yucca for food or fiber. The mortar and pestle, associated with acorns or other foods processed through pounding, were first used during the Milling Stone Horizon and increased dramatically in later periods (Wallace 1955, 1978; Warren 1968).

Two types of artifacts considered diagnostic of the Milling Stone period are the cogged stone and discoidal, most of which have been found on sites dating between 4000 and 1000 BCE (Moratto 1984: 149), though possibly as far back as 5500 BCE (Couch et al. 2009). The cogged stone is a ground stone object that has gear-like teeth on the perimeter and is produced from a variety of materials. The function of cogged stones is unknown, but many scholars have postulated ritualistic, or ceremonial uses (c.f., Dixon 1968: 64-65; Eberhart 1961: 367) based on the materials used and their location near to burials and other established ceremonial artifacts as compared to typical habitation debris. Similar to cogged stones, discoidals are found in the archaeological record subsequent to the introduction of the cogged stone. Cogged stones and discoidals were often buried purposefully, or “cached.” They are most common in sites along the coastal drainages from southern Ventura County southward and are particularly abundant at some Orange County sites, although a few specimens have been found inland as far east as Cajon Pass (Dixon 1968: 63; Moratto 1984: 149). Cogged stones have been collected in Riverside County and their distribution appears to center on the Santa Ana River basin (Eberhart 1961), within which the project site lies.

Intermediate Horizon (3000 BCE – CE 500)

Wallace’s Intermediate Horizon dates from approximately 3000 BCE to CE 500 and is characterized by a shift toward a hunting and maritime subsistence strategy, as well as greater use of plant foods. During the Intermediate Horizon, a noticeable trend occurred toward greater adaptation to local resources including a broad variety of fish, land mammal, and sea mammal remains along the coast. Tool kits for hunting, fishing, and processing food and materials reflect this increased diversity, with flake scrapers, drills, various projectile points, and shell fishhooks being manufactured.

Mortars and pestles became more common during this transitional period, gradually replacing manos and metates as the dominant milling equipment. Many archaeologists believe this change in milling stones signals a change from the processing and consuming of hard seed resources to the increasing reliance on acorn (c.f., Glassow et al. 1988; True 1993). Mortuary practices during the Intermediate typically included fully flexed burials oriented toward the north or west (Warren 1968: 2-3).

Late Prehistoric Horizon (CE 500 – Historic Contact)

During Wallace’s (1955, 1978) Late Prehistoric Horizon the diversity of plant food resources and land and sea mammal hunting increased even further than during the Intermediate Horizon. More classes of artifacts were observed during this period and high-quality exotic lithic materials were used for small finely worked projectile points associated with the bow and arrow. Steatite containers were made for cooking and storage and an increased use of asphalt for waterproofing is

noted. More artistic artifacts were recovered from Late Prehistoric sites and cremation became a common mortuary custom. Larger, more permanent villages supported an increased population size and social structure (Wallace 1955: 223).

Warren (1968) attributes this dramatic change in material culture, burial practices, and subsistence focus to the westward migration of desert people he called the Takic, or Numic, Tradition in Los Angeles, Orange, and western Riverside counties. This Takic Tradition was formerly referred to as the “Shoshonean wedge” (Warren 1968), but this nomenclature is no longer used to avoid confusion with ethnohistoric and modern Shoshonean groups (Heizer 1978: 5; Shipley 1978: 88, 90). The Takic expansion remains a major question in southern California prehistory and has been a matter of debate in archaeological and linguistic research. Linguistic, biological, and archaeological evidence supports the hypothesis Takic peoples from the Southern San Joaquin Valley and/or western Mojave Desert entered southern California ca. 3,500 years ago to occupy the Los Angeles/Orange County area (Sutton 2009). Modern Gabrieleño/Tongva in western Riverside County are generally considered by archaeologists to be descendants of these prehistoric Uto-Aztecan, Takic-speaking populations who settled along the California coast during the Late Prehistoric Horizon. Sutton argues surrounding Cupan groups (Serrano, Cahuilla, Cupeño, and Luiseño), were biologically Yuman peoples who were in the area prior to the Takic expansion but adopted Takic languages around 1,500 years ago.

3.3 Ethnographic Context

The project site is situated in an area near the boundaries of several Native American groups documented by anthropologists in the early twentieth century (e.g., Kroeber 1908). The historically identified territories occupied by the Cahuilla, Luiseño, Serrano, and Gabrieleño all exist within a 25-mile range of the project site. While these boundaries are based on interviews with informants and research in archives, such as the records of the Hispanic Catholic Missions in the region, it is likely such boundaries were not static; rather, they were probably fluid and may have changed through time. Below are synopses of ethnographic data for each of the four Native American groups.

Cahuilla

The project site is situated in the vicinity historically occupied by a Native American group known as the Cahuilla, though near the boundary with the Juaneño and Luiseño (Bean 1978; Heizer 1978; Kroeber 1925). The term Cahuilla likely derived from the native word *káwiya*, meaning “master” or “boss” (Bean 1978: 575). Traditional Cahuilla ethnographic territory extended west to east from the present-day city of Riverside to the central portion of the Salton Sea in the Colorado Desert, and south to north from the San Jacinto Valley to the San Bernardino Mountains.

The Cahuilla, like their neighbors to west, the Luiseño and Juaneño, and the Cupeño to the south, are speakers of a Cupan language. The Cupan languages are part of the Takic linguistic subfamily of the Uto-Aztecan language family. Anthropologists posit the Cahuilla migrated to southern California approximately 2,000 to 3,000 years ago, most likely from the southern Sierra Nevada mountain ranges of east-central California with other Takic speaking social groups (Moratto 1984: 559).

Cahuilla social organization was hierarchical and contained three primary levels (Bean 1978: 580). The highest level was the cultural nationality, encompassing everyone speaking a common language. The next level included the two patrimoiety of the Wildcats (*tuktum*) and the Coyotes (*'istam*). Every clan of the Cahuilla was in one or the other of these moiety. The lowest level

consisted of the numerous political-ritual-corporate units called sibs, or a patrilineal clan (Bean 1978: 580).

Cahuilla villages were usually located in canyons or on alluvial fans near a source of accessible water. Each lineage group maintained their own houses (kish) and granaries, and constructed ramadas for work and cooking. Sweathouses and song houses (for non-religious music) were also often present. Each community also had a separate house for the lineage or clan leader. Ceremonial houses associated with clan leaders were where major religious ceremonies were held. Houses and ancillary structures were often spaced apart, and a "village" could extend over a mile or two. Each lineage had ownership rights to various resource collecting locations, "including food collecting, hunting, and other areas. Individuals also owned specific areas or resources, e.g., plant foods, hunting areas, mineral collecting places, or sacred spots used only by shamans, healers and the like" (Bean 1990:2).

The Cahuilla hunted a variety of game, including mountain sheep, cottontail, jackrabbit, mice, and wood rats, as well as predators such as mountain lion, coyote, wolf, bobcat, and fox. Various birds were consumed, including quail, duck, and dove, plus various types of reptiles, amphibians, and insects. The Cahuilla employed a wide variety of tools and implements to gather and collect food resources. For hunting, these included the bow and arrow, traps, nets, slings and blinds for hunting land mammals and birds, and nets for fishing. Rabbits and hares were commonly brought down by the throwing stick, but when communal hunts were organized, the Cahuilla often utilized clubs and very large nets to capture these animals.

Foodstuffs were processed using a variety of tools, including portable stone mortars, bedrock mortars and pestles, basket hopper mortars, manos and metates, bedrock grinding slicks, hammerstones and anvils, and many others. Food was consumed from a number of woven and carved wood vessels and pottery vessels. The ground meal and unprocessed hard seeds were stored in large finely woven baskets, and the unprocessed mesquite beans were stored in large granaries woven of willow branches and raised off the ground on platforms to keep them from vermin. The Cahuilla made pottery vessels and traded with the Yuman-speaking groups across the Colorado River and to the south.

The Cahuilla had adopted limited agricultural practices by the time Euro-Americans traveled into their territory. Bean has suggested their "proto-agricultural techniques and a marginal agriculture" consisting of beans, squash and corn may have been adopted from the Colorado River groups to the east (Bean 1978: 578). Certainly, by the time of the first Romero Expedition in 1823-24, the Cahuilla were observed growing corn, pumpkins, and beans in small gardens around springs near the town of Thermal in the Coachella Valley (Bean and Mason 1962: 104). The introduction of European plants, such as barley and other grain crops, suggest an interaction with the missions or local Mexican rancheros. Despite the increasing use and diversity of crops, no evidence indicates small-scale agriculture was anything more than a supplement to Cahuilla subsistence, and it apparently did not alter social organization.

By 1819, several Spanish mission outposts, known as *asistencias*, were established near Cahuilla territory at San Bernardino and San Jacinto, including the asistencia near Redlands. Cahuilla interaction with Europeans at this time was not as intense as it was for native groups living along the coast, likely due to the local topography and lack of water which made the area less attractive to colonists. By the 1820s, European interaction increased as mission ranchos were established in the region and local Cahuilla were employed to work on them.

The Bradshaw Trail was established in 1862 and was the first major east-west stage and freight route through the Coachella Valley. Traversing the San Gorgonio Pass, the trail connected gold mines on the Colorado River with the coast. Bradshaw based his trail on the Cocomaricopa Trail, with maps and guidance provided by local Native Americans. Journals by early travelers along the Bradshaw Trail told of encountering Cahuilla villages and walk-in wells during their journey through the Coachella Valley. The continued influx of immigrants into the region introduced the Cahuilla to European diseases. The single worst recorded event was a smallpox epidemic which swept through Southern California in 1862-63, significantly reducing the Cahuilla population. By 1891, only 1,160 Cahuilla remained in what was left of their territory, down from an aboriginal population of 6,000–10,000 (Bean 1978: 583-584). By 1974, approximately 900 people claimed Cahuilla descent, most of whom resided on reservations.

Between 1875 and 1891, the United States established ten reservations for the Cahuilla in their traditional territory. These include the Agua Caliente, Augustine, Cabazon, Cahuilla, Los Coyotes, Morongo, Ramona, Santa Rosa, Soboba, and Torres-Martinez reservations (Bean 1978: 585). Other groups share four of the reservations, including the Chemehuevi, Cupeño, and Serrano.

Luiसेño

The project site is located at the northern extent of the area traditionally occupied by the Luiसेño, who inhabited the north half of San Diego County and western edge of Riverside County (Bean and Shipek 1978; Heizer 1978; Kroeber 1925). The term Luiसेño was applied to the Native Americans managed by Mission San Luis Rey and later used for the Payomkawichum nation living in the area where the mission was founded (Mithun 2001: 539-540). Luiसेño territory encompassed the drainages of the San Luis Rey River and the Santa Margarita River, covering numerous ecological zones (Bean and Shipek 1978).

Prior to European contact, the Luiसेño lived in permanent, politically autonomous villages, ranging in size from 50 to 400 people, and associated seasonal camps. Each village controlled a larger resource territory and maintained ties to other villages through trade and social networks. Trespassing in another village's resource area was cause for war (Bean and Shipek 1978). Villages consisted of dome-shaped dwellings (*kish*), sweat lodges, and a ceremonial enclosure (*vamkech*). Leadership in the villages focused on the chief, or Nota, and a council of elders (*puuplem*). The chief controlled religious, economic, and war-related activities (Bean and Shipek 1978).

The Luiसेño religion was focused on Chinigchinich, a mythological hero. Religious rituals took place in a brush enclosure housing a representation of Chinigchinich. Ritual ceremonies included puberty initiation rites, burial and cremation ceremonies, hunting rituals, and peace rituals (Bean and Shipek 1978).

Luiसेño subsistence focused on the acorn and was supplemented by gathering other plant resources, and shellfish, fishing, and hunting. Plant foods typically included pine nuts, seeds from various grasses, manzanita, sunflower, sage, chía, lemonade berry, prickly pear, and lamb's-quarter. Acorns were leached and served in various ways. Seeds were ground. Prey included deer, antelope, rabbit, quail, ducks, and other birds. Fish were caught in rivers and creeks. Fish and sea mammals were taken from the shore or dugout canoes. Shellfish were collected from the shore and included abalone, turban, mussels, clams, scallops, and other species (Bean and Shipek 1978).

Serrano

The Serrano are another Native American group who occupied territory near the project site. The Serrano occupied an area in and around the San Bernardino Mountains between approximately 450 and 3,350 meters (1,500 to 11,000 feet) above mean sea level. Their territory extended west of the Cajon Pass, east past Twentynine Palms, north of Victorville, and south to Yucaipa Valley. The Serrano language is part of the Serran division of a branch of the Takic family of the Uto-Aztecan linguistic stock (Mithun 2006: 539, 543). The two Serran languages, Kitanemuk and Serrano, are closely related. Kitanemuk lands were northwest of Serrano lands. Serrano was spoken originally by a relatively small group located in the San Bernardino and Sierra Madre mountains, and the term “Serrano” has come to be ethnically defined as the name of the people in the San Bernardino Mountains (Kroeber 1925: 611). The Vanyume, who lived along the Mojave River and associated Mojave Desert areas and are also referred to as the Desert Serrano, spoke either a dialect of Serrano or a closely related language (Mithun 2001: 543). Year-round habitation tended to be located on the desert floor, at the base of the mountains, and up into the foothills, with all habitation areas requiring year-round water sources (Bean and Smith 1978; Kroeber 1908).

Most Serrano lived in small villages located near water sources (Bean and Smith 1978: 571). Houses measured 3.7 to 4.3 meters (12 to 14 feet) in diameter. They were domed and constructed of willow branches and tule thatching; they were occupied by a single, extended family. Many of the villages had a ceremonial house, used both as a religious center and as the residence of the lineage leaders. Additional structures in a village might include granaries and a large circular subterranean sweathouse. The sweathouses were typically built along streams or pools. A village was usually composed of at least two lineages. The Serrano were loosely organized along patrilineal lines and associated themselves with one of two exogamous moieties or “clans”—the Wahiyam (coyote) or the Tukum (wildcat).

The subsistence economy of the Serrano was one of hunting and collecting plant goods, with occasional fishing (Bean and Smith 1978: 571). They hunted large and small animals, including mountain sheep, deer, antelope, rabbits, small rodents, and various birds, particularly quail. Plant staples consisted of seeds; acorn nuts of the black oak; piñon nuts; bulbs and tubers; and shoots, blooms, and roots of various plants, including yucca, berries, barrel cacti, and mesquite. The Serrano used fire as a management tool to increase yields of specific plants, particularly chía.

Trade and exchange were an important aspect of the Serrano economy. Those living in the lower-elevation, desert floor villages traded foodstuffs with people living in the foothill villages who had access to a different variety of edible resources. In addition to inter-village trade, ritualized communal food procurement events, such as rabbit and deer hunts and piñon, acorn, and mesquite nut-gathering events, integrated the economy and helped distribute resources available in different ecozones.

Contact between Serrano and Europeans was minimal prior to the early 1800s. As early as 1790, however, Serrano began to be drawn into mission life (Bean and Vane 2002). More Serrano were relocated to Mission San Gabriel in 1811 after a failed indigenous attack on the mission. Most of the remaining western Serrano were moved to an asistencia built near Redlands in 1819 (Bean and Smith 1978: 573).

A smallpox epidemic in the 1860s killed many indigenous southern Californians, including many Serrano (Bean and Vane 2002). Oral history accounts of a massacre in the 1860s at Twentynine Palms may have been part of a larger American military campaign lasting 32 days (Bean and Vane 2002: 10). Surviving Serrano sought shelter at Morongo with their Cahuilla neighbors; Morongo later

became a reservation (Bean and Vane 2002). Other survivors followed the Serrano leader Santos Manuel down from the mountains and toward the valley floors and eventually settled what later became the San Manuel Band of Mission Indians Reservation, formally established in 1891.

In 2003, most Serrano lived either on the Morongo or San Manuel reservations (California Indian Assistance Program 2003). The Morongo Band of Mission Indians of the Morongo Reservation, established through presidential executive orders in 1877 and 1889, includes both Cahuilla and Serrano members. Established in 1891, the San Manuel Band of Mission Indians Reservation includes Serrano. Both Morongo and San Manuel are federally recognized tribes. People of both reservations participate in cultural programs to revitalize traditional languages, knowledge, and practices.

Gabrieleño

The project site is also located at the eastern edge of an area historically occupied by the Gabrieleño. Archaeological evidence points to the Gabrieleño arriving in the Los Angeles Basin sometime around 500 BCE; however, this has been a subject of debate. Many contemporary Gabrieleño identify themselves as descendants of the indigenous people living across the plains of the Los Angeles Basin and use the native term Tongva (King 1994). This term is used in the remainder of this section to refer to the pre-contact inhabitants of the Los Angeles Basin and their descendants. Surrounding native groups included the Chumash and Tataviam to the northwest, the Serrano and Cahuilla to the northeast, and the Juaneño and Luiseño to the southeast.

Tongva lands encompassed the greater Los Angeles Basin and three Channel Islands, San Clemente, San Nicolas, and Santa Catalina. The Tongva established large, permanent villages in the fertile lowlands along rivers and streams, and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean. A total tribal population has been estimated of at least 5,000 (Bean and Smith 1978: 540), but recent ethnohistoric work suggests a number approaching 10,000 (O'Neil 2002). Houses constructed by the Tongva were large, circular, domed structures made of willow poles thatched with tule holding up to 50 people (Bean and Smith 1978). Other structures served as sweathouses, menstrual huts, ceremonial enclosures, and probably communal granaries. Cleared fields for races and games, such as lacrosse and pole throwing, were created adjacent to Tongva villages (McCawley 1996: 27). Archaeological sites composed of villages with various sized structures have been identified.

The Tongva subsistence economy was centered on gathering and hunting. The surrounding environment was rich and varied, and the tribe exploited mountains, foothills, valleys, deserts, riparian, estuarine, and open and rocky coastal eco-niches. Like most native Californians, acorns were the staple food (an established industry by the time of the early Intermediate Period). Acorns were supplemented by the roots, leaves, seeds, and fruits of a wide variety of flora (e.g., islay, cactus, yucca, sages, and agave). Fresh water and saltwater fish, shellfish, birds, reptiles, and insects, as well as large and small mammals, were also consumed (Bean and Smith 1978: 546; Kroeber 1925: 631–632; McCawley 1996: 119–123, 128–131).

A wide variety of tools and implements were used by the Tongva to gather and collect food resources. These included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Groups residing near the ocean used oceangoing plank canoes and tule balsa canoes for fishing, travel, and trade between the mainland and the Channel Islands (McCawley 1996: 7). Tongva people processed food with a variety of tools, including hammerstones and anvils, mortars and pestles, manos and metates, strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks. Food was consumed from a variety of vessels. Catalina Island steatite was

used to make ollas and cooking vessels (Blackburn 1963; Kroeber 1925: 629; McCawley 1996: 129–138).

At the time of Spanish contact, the basis of Tongva religious life was the Chinigchinich cult, centered on the last of a series of heroic mythological figures. Chinigchinich gave instruction on laws and institutions, and taught the people how to dance, the primary religious act for this society. He later withdrew into heaven, where he rewarded the faithful and punished those who disobeyed his laws (Kroeber 1925: 637–638). The Chinigchinich religion seems to have been relatively new when the Spanish arrived. It was spreading south into the Southern Takic groups even as Christian missions were being built and may represent a mixture of native and Christian belief and practices (McCawley 1996: 143–144).

Deceased Tongva were either buried or cremated, with inhumation more common on the Channel Islands and the neighboring mainland coast and cremation predominating on the remainder of the coast and in the interior (Harrington 1942; McCawley 1996: 157). At the behest of the Spanish missionaries, cremation essentially ceased during the post-Contact period (McCawley 1996: 157).

3.4 History

The post-contact history of California is generally divided into three epochs: the Spanish period (1769–1822), the Mexican period (1822–1848), and the American period (1848–present). Each of these periods is described briefly below.

Spanish Period (1769–1822)

Spanish exploration of what was then known as Alta (upper) California began when Juan Rodriguez Cabrillo led the first European expedition into the region in 1542. For more than 200 years after his initial expedition, Spanish, Portuguese, British, and Russian explorers sailed the Alta California coast and made limited inland expeditions, but they did not establish permanent settlements (Bean 1968, Rolle 2003). Spanish entry into what was to become Riverside County did not occur until 1774 when Juan Bautista de Anza led an expedition from Sonora, Mexico to Monterey in northern California (Lech 1998).

In 1769, Gaspar de Portolá and Franciscan Father Junipero Serra established the first Spanish settlement at Mission San Diego de Alcalá. This was the first of 21 missions erected by the Spanish between 1769 and 1823. The establishment of the missions marks the first sustained occupation of Alta California by the Spanish. In addition to the missions, four presidios and three pueblos (towns) were established throughout the state (State Lands Commission 1982). In 1819, an asistencia was established near present-day Redlands to serve as an outpost for cattle grazing activities carried out by Mission San Gabriel's Rancho San Bernardino (County of San Bernardino 2017). Around the same time, Native Americans living at the asistencia were directed to dig a zanja (irrigation ditch) to serve the asistencia and surrounding area.

During this period, Spain also deeded ranchos to prominent citizens and soldiers, though very few in comparison to the subsequent Mexican Period. To manage and expand their herds of cattle on these large ranchos, colonists enlisted the labor of the surrounding Native American population (Engelhardt 1927a). The missions were responsible for administering to the local indigenous people as well as converting the population to Christianity (Engelhardt 1927b). The influx of European settlers brought the local Native American population in contact with European diseases which they had no immunity against, resulting in catastrophic reduction in native populations throughout the state (McCawley 1996).

Mexican Period (1822–1848)

The Mexican Period commenced when news of the success of the Mexican War of Independence (1810-1821) reached California in 1822. This period saw the federalization of mission lands in California with the passage of the Secularization Act of 1833. This enabled Mexican governors in California to distribute former mission lands to individuals in the form of land grants. Successive Mexican governors made more than 700 land grants between 1822 and 1846, putting most of the state's lands into private ownership for the first time. About 15 land grants (ranchos) were located in Riverside County. The project area is situated in what was once Rancho San Jacinto, which included much of the San Jacinto Plains stretching from Box Springs to the San Jacinto Mountains and between the Badlands and Temecula (Shumway 2007).

American Period (1848–Present)

The American Period officially began with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico \$15 million for ceded territory, including California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming, and pay an additional \$3.25 million to settle American citizens' claims against Mexico. Settlement of southern California increased dramatically in the early American Period. Many ranchos in the county were sold or otherwise acquired by Americans, and most were subdivided into agricultural parcels or towns.

The discovery of gold in northern California in 1848 led to the California Gold Rush, despite the first California gold being previously discovered in southern California at Placerita Canyon in 1842 (Guinn 1977; Workman 1935: 26). Southern California remained dominated by cattle ranches in the early American period, though droughts and increasing population resulted in farming and more urban professions supplanting ranching through the late nineteenth century. In 1850, California was admitted into the United States and by 1853, the population of California exceeded 300,000.

Local History

Throughout the second half of the nineteenth century, migration throughout California increased, in particular following completion of the transcontinental railroad in 1869. The California Southern Railroad, which ran through Moreno Valley, was completed in 1882 and European settlers began to flock to the area. Early Europeans to the Moreno Valley area were primarily engaged in dry farming, as a reliable water source had not yet been secured. In 1893, Riverside County was created from portions of San Bernardino and San Diego Counties.

Following his success in the establishment of and provision of reliable water to the community of Redlands, Frank E. Brown progressed to similar successes in Alessandro, Perris, and Moreno. In 1890, he founded the Bear Valley and Alessandro Development Company and recorded the first subdivision of the area. "Map No. 1" divided roughly 21,440-acres into ten-acre farm plots, with the 280-acre town site of Moreno located at the intersection of Redlands and Alessandro Boulevard. This initial subdivision included the project site (Block No. 54; Lot/Parcel No. 1-8). In the same year and also with heavy involvement from Brown, the Alessandro Irrigation District was established, and construction began on an intricate series of pipelines to bring water to the valley (Lech 2004).

The arrival of water, via the Moreno Tunnel, in Moreno in 1891 led to increased investment in the area's agricultural economy. Following this development, large-scale fruit and citrus farms were established in the area. In 1899, lawsuits over water rights led to a loss of water delivery in the Moreno Valley. As a result, the valley's population in the area greatly decreased. Some moved their homes to the city of Riverside; those who remained engaged in the dry farming of hay, grain, and

grapes. Public and private wells were eventually produced and by 1912, the Moreno Mutual Water Company had identified a reliable source of water.

Originally established as Alessandro Flying Training Field in 1918, the nearby March Field was constructed in the Moreno Valley as the country anticipated entry into World War I. While March Field closed briefly in the 1920s, it reopened in 1927 and eventually expanded to encompass 7,000-acres. March Field has played a key role in providing skilled crews for many international conflicts and remains in operation as a reserve base today (*Riverside Magazine* 2019). The founding and lasting presence of March Field has contributed to the expansion of the Moreno Valley, as amenities for those stationed there have remained a necessity since its founding.

Through the 1970s Moreno Valley experienced steady growth. As residential development increased, so too did recreational amenities. The Riverside International Raceway and the Lake Perris Recreation Area were established in 1953 and 1973, respectively. The valley experienced a boom in the 1980s; the decade saw the population increase two-fold. While votes for incorporation failed in 1968 and 1983, in 1984 the City of Moreno Valley was officially incorporated. Moreno Valley has continued to expand in recent decades and today the area is largely occupied by suburban development.

4 Literature Reviews and Outreach

4.1 California Historical Resources Information System Records Search

In July 2021, a search of the CHRIS at the EIC was conducted by EIC staff at the University of California, Riverside (Appendix B) for the Perris North Groundwater Wells Project. The EIC is the official state repository for cultural resources records and reports for the county in which the project falls. The purpose of the records search was to identify previously recorded cultural resources, as well as previously conducted cultural resources studies, within the Perris North Groundwater Wells Project APE and a 0.5-mile radius. The records search area for the Perris North Groundwater Wells Project encompasses the entirety of the current project site. As such, Rincon did not conduct a new records search and instead utilized the results of the Perris North Groundwater Wells Project records search for the current proposed project. Rincon also reviewed the NRHP, the CRHR, the California Historical Landmarks list, and the Built Environment Resources Directory, as well as its predecessor the California State Historic Property Data File. Additionally, Rincon reviewed the Archaeological Determination of Eligibility list.

Previously Conducted Studies

The CHRIS records search conducted for the Perris North Groundwater Wells Project, which have been utilized for the current proposed project, identified 88 previously conducted cultural resources studies completed within 0.5-mile of that project's APE between 1953 and 2019. Six of these previous studies overlap or are immediately adjacent to portions of the proposed project APE. Additionally, Rincon recently completed a project located immediately adjacent the proposed project APE (Perris North Groundwater Wells Project). All previously conducted studies which overlap or are immediately adjacent to the proposed project APE (Table 1) are summarized below. See Appendix B for the full CHRIS records search results.

Table 1 Cultural Resources Studies Previously Conducted within the Project Area

Report Number	Author(s)	Year	Title	Relevant Resources Discussed
RI-02061	Lerch	1986	<i>Archaeological Survey of Festival at Moreno Valley, Riverside County, California</i>	None
RI-02171	McCarthy	1987	<i>Cultural Resources Inventory for the City of Moreno Valley, Riverside County, California</i>	None
RI-08802	Tang et al.	2012	<i>Phase I Archaeological Assessment: Moreno Master Drainage Plan Revision</i>	None
RI-09784	Kraft and Smith	2016	<i>Phase I Cultural Resources Survey of the Moreno Valley Festival Project</i>	None
RI-10445	Clark and Garcia	2014	<i>Cultural Resources Assessment for the Proposed Isla Verde Residential Project, City of Moreno Valley, County of Riverside, California</i>	None
RI-10784/RI-10802	Stropes et al.	2019	<i>A Class III Historic Resources Study for the Moreno Valley Festival Project for Section 106 Compliance SPL-2018-00821, City of Moreno Valley, California</i>	None
TBD	Flaherty et al.	2021	<i>Perris North Basin Groundwater Wells Project, Cultural Resources Assessment, Riverside County, California</i>	None

Source: Eastern Information Center, October 2021

RI-02061

This Phase I Cultural Resources Survey Report for the proposed Festival at Moreno Valley Project in Moreno Valley was prepared by Michael K. Learch in 1986 and included the northwestern portion of the APE. The proposed project involved the development of a 61.5-acre project site, in which 44 acres was devoted to retail commercial and office uses, 11 acres served as a flood control detention basin, and 6 acres served as interior circulation. No archaeological resources were identified in this study.

RI-02171

RI-02171 is a Cultural Resources Inventory Report for the City of Moreno Valley prepared by Daniel F. McCarthy in 1987 and included the entirety of the current proposed project APE. The field investigation included plotting previously recorded archaeological sites and previously surveyed areas onto topographic maps, followed by an intensive pedestrian survey. The study identified 62 new sites and relocated seven previously recorded sites, none of which were identified within the current proposed project APE.

RI-08802

RI-08802 is a Phase I Archaeological Assessment for the proposed Moreno Master Drainage Plan in the city of Moreno Valley prepared by Bai Tang, Deirdre Encarnacion, and Daniel Ballester in 2012 and included the entirety of the proposed project APE. The study included a historical/archaeological resources records search, historical background research, Native American outreach, and a systematic field survey. The survey identified two historical-period sites, neither of which are located within the current APE. Additionally, no archaeological resources were identified within the current APE during this study.

RI-09784

RI-09784 is a Phase I Cultural Resources Survey Report for the proposed Moreno Valley Festival Project in the city of Moreno Valley prepared by Jennifer R. Kraft and Brian F. Smith in 2016 which overlapped the northwestern portion of the current proposed project APE. The study included a records search, Sacred Lands File search, Native American outreach, and pedestrian field survey. No archaeological resources were identified within the current project APE.

RI-10445

RI-10445 is a Cultural Resources Assessment Report for the proposed Isla Verde Residential Project in the city of Moreno Valley prepared by Fatima Clark and Kyle Garcia in 2014 which overlapped the southern portion of the current proposed project APE. The study included a cultural resources records search, review of historical aerials, SLF search, Native American outreach, and pedestrian survey. No archaeological resources were identified within the current proposed project APE.

RI-10784/RI-10802

RI-10784/RI-10802 is a Phase I Cultural Resources Survey Report for the proposed Moreno Valley Festival Project in the city of Moreno Valley prepared by Tracy A. Stropes, Jennifer R.K. Stropes, and Brian F. Smith in 2019, which overlapped the northwestern portion of the APE. The study included a literature review and records search, a SLF search, Native American outreach, and pedestrian survey. No archaeological resources were identified within the current proposed project APE.

Perris North Groundwater Wells Project

This Cultural Resources Assessment Report for the proposed Perris North Basin Groundwater Wells Project was prepared by Rincon Consultants, Inc. in 2021 and includes 569 acres spread across 41 separate parcels and lies within the cities of Moreno Valley and Perris in western Riverside County, California. The study relocated one previously recorded historical resource P-33-016078, which consists of remnants of a water conveyance system and four features including a water reservoir, a concrete pad with an electric pump, a water trough, and a second larger concrete pad likely used for parking within the project APE. The site is dated to 1950 and is likely related to agricultural or ranching activities in the area. Site P-33-016078 was not evaluated as part of the study due to it not being impacted by the project. No new archaeological or built environment resources were identified. Portions of the Perris North Groundwater Wells Project are directly adjacent to the current proposed project APE.

Previously Recorded Resources

Nine previously recorded cultural resources have been identified within 0.5-mile of the APE as a result of the records search, none of which are located within the proposed project APE (Table 2). Of these, eight are historic-period built environment resources comprised of historic-period single-family properties, and one is a historic period archaeological foundation. The recorded boundary of one resource (P-33-028824) is adjacent to the proposed project APE. This resource is further summarized below.

Table 2 Previously Recorded Cultural Resources within 0.5 Mile of the Project Area

Resource Number	Resource Type	Description	Recorder(s) and Year(s)	NRHP/CRHR Status ¹	Relationship to Project Site
P-33-007280	Historic-period built environment	Single family property	Warner 1983	Unevaluated	Outside
P-33-007284	Historic-period built environment	Single family property	Warner 1983	Unevaluated	Outside
P-33-007286	Historic-period built environment	Single family property	Warner 1983	Unevaluated	Outside
P-33-007287	Historic-period built environment	Single family property	Warner 1983	Unevaluated	Outside
P-33-007288	Historic-period built environment	Single family property	Warner 1983	Unevaluated	Outside
P-33-007289	Historic-period built environment	Single family property	Warner 1983	Unevaluated	Outside
P-33-17202	Historic-period built environment	Single family property	Smallwood 2008	Recommended NRHP/CRHR ineligible	Outside
P-33-17203	Historic-period built environment	Single family property	Smallwood 2008	Recommended NRHP/CRHR ineligible	Outside
P-33-028824	Historic-period archaeological	Foundation, downed powerline pole, and refuse scatter	Goodwin 2019	Unevaluated	Adjacent

¹NRHP = National Register of Historic Places; CRHR = California Register of Historical Resources

²Adjacent resources are located within 100 feet of the project APE (Area of Potential Effects).

Source: Eastern Information Center, October 2021

P-33-028824

Resource P-33-028824 consists of a 15-foot by 6-foot foundation slab, utility pole with 1930 and 1947 inspection nails, and a single clear glass bottle fragment. Goodwin, affiliated with LSA Associates, Inc., recorded the resource in April 2019 during an intensive pedestrian survey for the Perris Boulevard and Dracaea Avenue Commercial Retail Project. The site has not been evaluated for the NRHP/CRHR. The resource is located 75 feet north of the current project APE across Dracaea Avenue and will not be affected by the current project.

4.2 Aerial Imagery and Historical Topographic Maps Review

Rincon completed a review of historical topographic maps and aerial imagery to ascertain the development history of the project area. A review of historical maps and aerial photographs of the project area from the 1960s to the 2000s show much of the surrounding area was characterized by agricultural fields intermixed with sparse areas of residential development (NETROnline 2022). Much of the project area experienced rapid development in the 1980s and 1990s. By the early twenty-first century, most of the agricultural lands were replaced by residential, commercial, and industrial development (NETROnline 2021; FrameFinder (ucsb.edu)).

4.3 Sacred Lands File Search

Rincon contacted the NAHC on July 1, 2021, to request a SLF search for the Perris North Groundwater Wells Project, as well as a contact list of Native Americans culturally affiliated with the project area. The SLF search area encompasses the entirety of the current project APE. Therefore, Rincon did not conduct a new SLF search and instead utilized the results of the Perris North Groundwater Wells Project SLF search for the current project. On July 25, 2021, the NAHC responded the SLF search results were negative. Appendix D provides documentation of communication with the NAHC and results of the SLF search.

4.4 Native American Outreach

Rincon conducted informal outreach with Native American groups and individuals culturally affiliated with the area during preparation of this study. Rincon prepared and emailed or mailed letters on July 29, 2022, to each of the NAHC contacts included on the contact list received on July 25, 2021, requesting information regarding any Native American cultural resources within or immediately adjacent to the project site.

Four responses from Native American groups were received as a result of this initial outreach effort.

- Omar Aceves, Tribal Operations Clerk for the Augustine Band of Cahuilla Mission Indians, responded on July 29, 2022, stating they are unaware of specific cultural resources that may be affected by the proposed project but asked that – should cultural resources be discovered during the development of the project – the tribe be contacted immediately for further evaluation.
- A response letter was received from the Pechanga Band of Luiseño Indians on July 29, 2022. The letter stated they are interested in participating in this project as it is in their Ancestral Territory. They would like notification once the project begins the entitlement process and would also like copies of all archaeological reports, site records, proposed grading plans, and environmental documents. The tribe requests government-to-government consultation with the lead federal agency and suggests monitoring by a Riverside County qualified archaeologist and professional Pechanga Tribal Monitor be required during earthmoving activities. They are also interested in participating in surveys within Luiseño Ancestral territory and consulting with the project proponent and lead federal agency regarding the treatment and disposition of all artifacts.
- The office of the Fort Yuma Quechan Historic Preservation Officer responded on August 1, 2022, stating they have no comments on the project and will defer to more local Tribes and support their decisions on the project.
- Arysa Gonzalez Romero, Cultural Resources Analyst for the Agua Caliente Band of Cahuilla Indians, responded on August 10, 2022, requesting the shapefiles for the project. Rincon responded on August 12, 2022, providing the requested shapefiles.

On August 12, 2022, Rincon Archaeologist Laura Maldonado called each of the NAHC contacts listed that had not yet responded to initial outreach efforts. Ten of the contacts did not answer the phone; however, Rincon was able to leave a message on their voicemail. The same 10 contacts did not answer the phone during the second round of calls, which were made on August 22, 2022. Voicemail messages were also left that day. Rincon was unable to connect with one contact via phone because both rounds of calls were unanswered, and their voice mailbox was full on both occasions. Rincon was able to get in touch with nine other tribal contacts between August 12, 2022,

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and August 25, 2022, either directly or speaking to an assistant or administrator, or receiving an email response after the call, the details of which are described below.

- On August 12, 2022, Ms. Maldonado attempted to contact Chairperson Daniel Salgado of the Cahuilla Band of Indians, but the call was forwarded to BobbyRay Esparza instead. Mr. Esparza asked to have the original letter forwarded to him, which was done immediately after the call. On August 18, 2022, Rincon received a response from Mr. Esparza stating the Cahuilla Band has an interest in this project and would like to request that a cultural monitor from Cahuilla be present for all ground disturbing activities, expressing concern cultural resources may be unearthed during construction.
- On August 12, 2022, Ms. Maldonado called and spoke to Joseph Ontiveros from the Soboba Band of Luiseño Indians Cultural Resources Department. Mr. Ontiveros stated the project location is within their tribal cultural landscape and would like to enter consultation with the lead federal agency as part of the Section 106 process.
- On August 12, 2022, Ms. Maldonado attempted to contact Bo Mazzetti, the Rincon Band of Luiseño Indians Chairperson, but Chairperson Mazzetti was unavailable. Ms. Maldonado left a voicemail and sent a follow-up email. Chairperson Mazzetti responded on August 12, 2022, stating he will check in on the status of the Tribe's response. On August 19, 2022, Rincon received an email response from Cheryl Madrigal, the THPO for the Rincon Band of Luiseño Indians, stating the Tribe would like to consult with the lead federal agency on the proposed project. Ms. Madrigal also requested additional information regarding the project such as existing GIS shapefiles/KMZ, any cultural resources assessments, record search results, overlay maps of the project and potential APE and previously recorded cultural sites. Rincon responded on August 26, 2022, providing the requested shapefiles, record search results, and project map.
- On August 22, 2022, Ms. Flaherty attempted to contact Chairperson Jeff Grubbe of the Agua Caliente Band of Cahuilla Indians but was put through to an assistant instead. The assistant stated there was a new Chairperson, Reid Milanovich, and Ms. Flaherty was subsequently able to leave a voicemail for Mr. Milanovich. No further response has been received as of the date of this report.
- On August 22, 2022, Ms. Flaherty called and spoke with Patricia Garcia, the Tribal Historic Preservation Officer (THPO) for the Agua Caliente Band of Cahuilla Indians. Ms. Garcia expressed concerns about the project and stated the Tribe is interested in consulting with the lead federal agency on impacts to resources, developing a mitigation plan, and participating in Native American monitoring. Ms. Garcia also stated the Tribe is backed up right now but will send a formal response letter soon. Rincon received a formal letter from Lacy Padilla, THPO Operations Manager on August 30, 2022. The letter stated the project area is not located within the boundaries of the ACBCI Reservation; however, it is within the Tribe's Traditional Use Area. The Tribe requests a cultural resources inventory of the project area by a qualified archaeologist prior to any development activities in this area, a copy of the records search with associated survey reports and site records from the information center, and copies of any cultural resource documentation generated in connection with this project. The documentation requested will be provided to the Tribe once it is finalized.
- On August 22, 2022, Ms. Flaherty attempted to get in touch with Chairperson Joseph Hamilton of the Ramona Band of Cahuilla, but the call was answered by an administrative person instead. The administrative person informed Ms. Flaherty that Mr. Hamilton is no longer the Chairman, and the new Chairperson is Danae Hamilton Vega. The administrative person also said she would follow-up with John Gomez, the Environmental Coordinator of the Tribe. (Note that two

voicemails were also left for Mr. Gomez on August 12 and 22, 2022 and a follow-up email had been sent on August 12, 2022.) No further response has been received as of the date of this report.

- On August 22, 2022, Ms. Flaherty attempted to get in touch with Lovina Redner, the Tribal Chair of the Santa Rosa Band of Cahuilla Indians, but the call was answered by an administrative person instead. The administrative person gave Ms. Flaherty an updated email for the Tribal Chair and stated that Ms. Redner likely did not have any concerns if she hadn't already responded. On August 25, 2022, Rincon confirmed the original letter was sent to the correct email address. No further response has been received as of the date of this report.
- On August 23, 2022, Ms. Flaherty found evidence of a new email for Chairperson Shane Chapparosa of the Los Coyotes Band of Cahuilla and Cupeño Indians. Ms. Maldonado sent a copy of the original letter to Chairperson Chapparosa's new email on September 6th, 2022. No further response has been received as of the date of this report.
- On August 25, 2022, Ryan Nordess, Cultural Resource Analyst for the Yuhaaviatam of San Manuel Nation (formerly known as the San Manuel Band of Mission Indians), emailed Rincon stating the proposed project is not located near any known cultural resources.

As of the date of this report, no other responses have been received.

As part of the current efforts, Rincon did not send formal consultation letters to the Native American contacts. As the lead CEQA agency, EMWD will conduct consultation with Native American tribes under AB 52. Rincon assumes SWRCB will conduct formal consultation with Native American tribes under Section 106 of the NHPA should funding be pursued. Appendix D provides copies of all non-confidential Native American outreach correspondence, including a summary correspondence table.

4.5 Local Historical Group Outreach

Rincon conducted informal outreach with local historical groups, including the Moreno Valley Historical Society, City of Moreno Valley Environmental and Historical Preservation Board, Perris Valley Historical Museum, Riverside African American Historical Society, and the March Field Air Museum during preparation of this study. Rincon prepared and emailed or mailed letters to each of these groups on July 29, 2022, requesting information regarding historical resources within or immediately adjacent to the proposed project APE.

On August 12, 2022, Rincon Archaeologist Laura Maldonado called the three local historical group contacts that had phone numbers listed on their websites. Two of the contacts did not answer the phone; however, Ms. Maldonado was able to leave a message on their voicemails. The same two contacts did not answer the phone during the second round of calls, which were made by Ms. Flaherty on August 22, 2022. Voicemail messages were also left that day. Follow-up emails were sent to the two contacts that did not have phone numbers listed on August 12 and 22, 2022. Ms. Maldonado was able to get in touch with one local historical group contacts, the details of which are described below.

- On August 12, 2022, Rincon called the March Field Air Museum and spoke with Museum Director Greg Kuster. Mr. Kuster had no comments or concerns on behalf of the March Field Air Museum.

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As of the date of this report, no other responses to the outreach letters or follow-up calls and emails have been received.

As part of the current efforts, Rincon did not send formal consultation letters to the historical group contacts. Rincon assumes the SWRCB will conduct consultation with historical groups under Section 106 of the NHPA. Appendix E provides copies of all non-confidential historical group outreach correspondence, including a summary correspondence table.

5 Field Survey

5.1 Methods

On July 22, 2022, Rincon archaeologist John C. Bergner IV conducted a field survey of the project area. The pipeline corridor itself is located within the Perris Blvd and Ironwood Ave rights-of way, which was surveyed from vehicle due to safety concerns. Mr. Bergner attempted to conduct a pedestrian survey of the staging area; however, the area was inaccessible as it was fenced off with no trespassing signs posted. Photographs were taken of the staging area from the street. Visual inspection of the staging area from the street indicated extensive ground disturbance with most of the area being covered in gravel. Mr. Bergner also attempted to relocate previous recorded resource P-33-028824 but was unable to access the area due to construction fencing. Visual inspection of the location suggested that extensive paving and development had likely at least partially destroyed the resource. Survey accuracy was maintained using a handheld GPS unit and a georeferenced map of the project site. Field notes of survey conditions and observations were recorded using Rincon field forms and a digital camera. Copies of the original field notes and photographs are maintained at the Rincon Redlands office.

5.2 Results

The field survey did not identify any new archaeological or built environment cultural resources within the proposed project APE. The Rincon archaeologist attempted to relocate the previously recorded site P-33-028824 located adjacent to the project APE; however, the resource is located in a private plot of land with fencing blocking access.

Modern debris, trash, pavement, and gravel were observed throughout the project area. Previous ground disturbance due to tilling and construction blading is present in the plots of land that were inaccessible due to fencing. The entire project site has been previously disturbed in some manner due to ground-clearing activities such as tilling, grading, construction, landscaping, or development. An examination of a small areas with exposed ground indicates native sediments consist of loosely consolidated tan sandy silt with small gravel inclusions. Surficial sediments throughout the project area have been extensively disturbed. For overview photos of the APE, see Photographs 1-3 below.

Photograph 1 Ground Exposure at the Staging Area on Perris Boulevard near Dracaena Avenue, Facing South



Photograph 2 Ground Exposure at the East Side of Perris Boulevard between Christopher Lane and Bay Avenue, Facing South



Photograph 3 Inaccessible Plot of Land on Ironwood Avenue between Davis Street and Nita Drive, Facing Southeast



6 Conclusions and Recommendations

The results of the CHRIS search, Native American and historical society outreach, historical imagery review, and the field survey identified no cultural resources within the proposed project APE.

Rincon archaeologists were unable to revisit resource P-33-028824 due to its location on private fenced-off property. All of the features are located outside of the proposed project APE and the construction buffer does not encroach on the resource; therefore, the proposed project will not directly or indirectly affect the resource.

No new built environment resources were identified as a result of the field survey conducted for this project. Based on the current findings, no unique archaeological resources, historical resources or historic properties exist within the current APE.

Several tribes requested additional information about the project and/or indicated they would like to be a consulting party under Section 106 of the NHPA, and two tribes requested cultural monitoring. Specifically, the Pechanga Band of Luiseño Indians suggested monitoring by a Riverside County qualified archaeologist and professional Pechanga Tribal Monitor be required during earthmoving activities related to the project. The Cahuilla Band of Indians also requested a cultural monitor from the tribe be present for all ground disturbing activities, expressing concern cultural resources may be unearthed during construction but did not mention specific resources. However, the SLF search was returned with negative results and no Native American cultural resources were identified within the APE as a result of the records search or pedestrian field survey. Given the level of previous ground disturbance within the proposed project APE (i.e., grading, paving and construction activities) the APE is considered to have low archaeological sensitivity.

Rincon recommends a finding of ***no impact to historical resources and less-than-significant impact to archaeological resources*** under CEQA, and ***no historic properties affected*** under Section 106 of NHPA. The following recommendations are offered in the case of the unanticipated discovery of cultural resources during project development. The project is also required to adhere to regulations regarding the unanticipated discovery of human remains, detailed below.

6.1 Unanticipated Discovery of Cultural Resources

In the event archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determines it to be appropriate, archaeological testing for CRHR eligibility shall be completed. If the resource proves to be eligible for the CRHR and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of CCR Guidelines Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and

document the scientifically consequential information that justifies the resource's significance. EMWD shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the California Historical Resources Information System, per CCR Guidelines Section 15126.4(b)(3)(C).

6.2 Human Remains

If human remains are found, regulations outlined in the State of California Health and Safety Code Section 7050.5 state no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine and notify the MLD. The MLD shall complete the inspection of the site within 48 hours of being granted access and provide recommendations as to the treatment of the remains to the landowner.

7 References

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Appendix A

Confidential APE Map

CONFIDENTIAL APPENDIX

**To protect sensitive information about the location and nature of cultural resources, this appendix is not included in the public draft of this document.

Appendix B

Confidential Records Search Results

CONFIDENTIAL APPENDIX

**To protect sensitive information about the location and nature of cultural resources, this appendix is not included in the public draft of this document.

Appendix C

Native American Outreach

NATIVE AMERICAN HERITAGE COMMISSION

July 25, 2021

Leanna Flaherty
Rincon Consultants, Inc.

Via Email to: lflaherty@rinconconsultants.com

Re: Eastern Municipal Water District Perris North Groundwater Wells Project, Riverside County

Dear Ms. Flaherty:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green
Cultural Resources Analyst

Attachment



CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
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Apache

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

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**Native American Heritage Commission
Native American Contact List
Riverside County
7/25/2021**

**Agua Caliente Band of Cahuilla
Indians**

Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

**Los Coyotes Band of Cahuilla
and Cupeño Indians**

Ray Chapparosa, Chairperson
P.O. Box 189 Cahuilla
Warner Springs, CA, 92086-0189
Phone: (760) 782 - 0711
Fax: (760) 782-0712

**Agua Caliente Band of Cahuilla
Indians**

Jeff Grubbe, Chairperson
5401 Dinah Shore Drive Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919

**Morongo Band of Mission
Indians**

Robert Martin, Chairperson
12700 Pumarra Road Cahuilla
Banning, CA, 92220 Serrano
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov

**Augustine Band of Cahuilla
Mission Indians**

Amanda Vance, Chairperson
P.O. Box 846 Cahuilla
Coachella, CA, 92236
Phone: (760) 398 - 4722
Fax: (760) 369-7161
hhaines@augustinetribe.com

**Morongo Band of Mission
Indians**

Ann Brierty, THPO
12700 Pumarra Road Cahuilla
Banning, CA, 92220 Serrano
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov

**Cabazon Band of Mission
Indians**

Doug Welmas, Chairperson
84-245 Indio Springs Parkway Cahuilla
Indio, CA, 92203
Phone: (760) 342 - 2593
Fax: (760) 347-7880
jstapp@cabazonindians-nsn.gov

Pala Band of Mission Indians

Shasta Gaughen, Tribal Historic
Preservation Officer
PMB 50, 35008 Pala Temecula Cupeno
Rd. Luiseno
Pala, CA, 92059
Phone: (760) 891 - 3515
Fax: (760) 742-3189
sgaughen@palatribe.com

Cahuilla Band of Indians

Daniel Salgado, Chairperson
52701 U.S. Highway 371 Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 5549
Fax: (951) 763-2808
Chairman@cahuilla.net

**Pechanga Band of Luiseno
Indians**

Mark Macarro, Chairperson
P.O. Box 1477 Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 6000
Fax: (951) 695-1778
epreston@pechanga-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Eastern Municipal Water District Perris North Groundwater Wells Project, Riverside County.

**Native American Heritage Commission
Native American Contact List
Riverside County
7/25/2021**

***Pechanga Band of Luiseno
Indians***

Paul Macarro, Cultural Resources
Coordinator
P.O. Box 1477 Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 6306
Fax: (951) 506-9491
pmacarro@pechanga-nsn.gov

***Quechan Tribe of the Fort Yuma
Reservation***

Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899 Quechan
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com

***Quechan Tribe of the Fort Yuma
Reservation***

Jill McCormick, Historic
Preservation Officer
P.O. Box 1899 Quechan
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

Ramona Band of Cahuilla

John Gomez, Environmental
Coordinator
P. O. Box 391670 Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
jgomez@ramona-nsn.gov

Ramona Band of Cahuilla

Joseph Hamilton, Chairperson
P.O. Box 391670 Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
admin@ramona-nsn.gov

Rincon Band of Luiseno Indians

Bo Mazzetti, Chairperson
One Government Center Lane Luiseno
Valley Center, CA, 92082
Phone: (760) 749 - 1051
Fax: (760) 749-5144
bomazzetti@aol.com

Rincon Band of Luiseno Indians

Cheryl Madrigal, Tribal Historic
Preservation Officer
One Government Center Lane Luiseno
Valley Center, CA, 92082
Phone: (760) 297 - 2635
crd@rincon-nsn.gov

***San Manuel Band of Mission
Indians***

Jessica Mauck, Director of
Cultural Resources
26569 Community Center Drive Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
jmauck@sanmanuel-nsn.gov

***Santa Rosa Band of Cahuilla
Indians***

Lovina Redner, Tribal Chair
P.O. Box 391820 Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
Isaul@santarosa-nsn.gov

***Serrano Nation of Mission
Indians***

Mark Cochrane, Co-Chairperson
P. O. Box 343 Serrano
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com

***Serrano Nation of Mission
Indians***

Wayne Walker, Co-Chairperson
P. O. Box 343 Serrano
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Eastern Municipal Water District Perris North Groundwater Wells Project, Riverside County.

**Native American Heritage Commission
Native American Contact List
Riverside County
7/25/2021**

***Soboba Band of Luiseno
Indians***

Joseph Ontiveros, Cultural
Resource Department
P.O. BOX 487
San Jacinto, CA, 92581
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Cahuilla
Luiseno

***Soboba Band of Luiseno
Indians***

Isaiah Vivanco, Chairperson
P. O. Box 487
San Jacinto, CA, 92581
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

Cahuilla
Luiseno

***Torres-Martinez Desert Cahuilla
Indians***

Michael Mirelez, Cultural
Resource Coordinator
P.O. Box 1160
Thermal, CA, 92274
Phone: (760) 399 - 0022
Fax: (760) 397-8146
mmirelez@tmdci.org

Cahuilla

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This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Eastern Municipal Water District Perris North Groundwater Wells Project, Riverside County.



EMWD Raw Water Conveyance Pipeline Phase III Project Section 106 Correspondence Tracking

Contact List Received from NAHC on 7/25/2021	Date Letter Sent to contact	Date of Phone Contact Round 1	Date of Phone Contact Round 2	Comments/Concerns
Agua Caliente Band of Cahuilla Indians Jeff Grubbe, Chairperson New Chairperson: Reid Milanovich 5401 Dinah Shore Drive Palm Springs, CA, 92264 Phone: (760) 699 - 6800 Fax: (760) 699-6919	July 29, 2022	Aug 12, 2022	Aug 22, 2022	8/12/22: Office redirected to new chairman's phone, Leslie Barragan. Left a voicemail for the chairman. 8.22.22 LF called and was transferred to the assistant of the new chairperson. The new chairperson's name is Reid Milanovich . Left a voicemail.



Contact List Received from NAHC on 7/25/2021	Date Letter Sent to contact	Date of Phone Contact Round 1	Date of Phone Contact Round 2	Comments/Concerns
<p>Agua Caliente Band of Cahuilla Indians Patricia Garcia-Plotkin, THPO 5401 Dinah Shore Drive Palm Springs, CA, 92264 Phone: (760) 699 - 6907 Fax: (760) 699-6924 ACBCI-THPO@aguacaliente.net</p>	<p>July 29, 2022</p>	<p>N/A</p>	<p>Aug 22, 2022</p>	<p>Email received 8/10/22 from Arysa Gonzalez Romero, Cultural Resources Analyst: "Hi Laura, We received your letter. Can you send us the shapefiles for this project? Thank you"</p> <p>Shapefiles were sent on 8.12.22 by LM.</p> <p>8.22.22: LF called and talked to Ms. Garcia (THPO) who expressed concerns about the project and stated that the Tribe is interested in consulting with SWRCB on impacts to resources, developing a mitigation plan, and participating in Native American monitoring. The Tribe is backed up right now but will send a formal response letter soon.</p> <p>8.30.33: received email from THPO Lacy Padilla. Email stated that the project area is not located within the boundaries of the ACBCI Reservation, however it is within the Tribe's traditional use area. The ACBCI THPO requests the following: *A cultural resources inventory of the project area by a qualified archaeologist prior to any development activities in this area. *A copy of the records search with associated survey reports and site records from the information center. *Copies of any cultural resource documentation (report and site records) generated in connection with this project</p>



Contact List Received from NAHC on 7/25/2021	Date Letter Sent to contact	Date of Phone Contact Round 1	Date of Phone Contact Round 2	Comments/Concerns
Augustine Band of Cahuilla Mission Indians Amanda Vance, Chairperson P.O. Box 846 Coachella, CA, 92236 Phone: (760) 398 - 4722 Fax: (760) 369-7161 hhaines@augustinetribe.com	July 29, 2022	N/A	N/A	Email received 7/29 from Victoria Martin, Tribal Vice-Chairperson: “Thank you for the opportunity to offer input concerning the development of the above identified project. We appreciate your sensitivity to the cultural resources that may be impacted by your project and the importance of these cultural resources to the Native American peoples that have occupied the land surrounding the area of your project for thousands of years. Unfortunately, increased development and lack of sensitivity to cultural resources have resulted in many significant cultural resources being destroyed or substantially altered and impacted. Your invitation to consult on this project is greatly appreciated. At this time, we are unaware of specific cultural resources that may be affected by the proposed project, however, in the event, you should discover any cultural resources during the development of this project please contact our office immediately for further evaluation.”
Cabazon Band of Mission Indians Doug Welmas, Chairperson 84-245 Indio Springs Parkway Indio, CA, 92203 Phone: (760) 342 - 2593 Fax: (760) 347-7880 jstapp@cabazonindians-nsn.gov	July 29, 2022	Aug 12, 2022	Aug 22, 2022	Aug 12: No answer, left voicemail and sent a follow up email. 8.22.22: No answer, left voicemail.



Contact List Received from NAHC on 7/25/2021	Date Letter Sent to contact	Date of Phone Contact Round 1	Date of Phone Contact Round 2	Comments/Concerns
<p>Cahuilla Band of Indians Daniel Salgado, Chairperson 52701 U.S. Highway 371 Anza, CA, 92539 Phone: (951) 763-5549 Fax: (951) 763-2808 Chairman@cahuilla.net</p> <p>BobbyRay Esparza Cultural Coordinator besparza@cahuilla.net</p>	July 29, 2022	Aug 12, 2022	N/A	<p>Aug 12: Office transferred call to Cultural Coordinator, BobbyRay Esparza. Would like letter emailed to besparza@cahuilla.net. Sent follow up email with letter attached.</p> <p>Received a response from BobbyRay Esparza, the Cultural Director, on 8.18.22. His response stated that “The Cahuilla Band has an interest in this project and would like to request that a cultural monitor from Cahuilla be present for all ground disturbing activities. We believe that cultural resources may be unearthed during construction.”</p>
<p>Los Coyotes Band of Cahuilla and Cupeño Indians Shane Chapparosa, Chairperson P.O. Box 189 Warner Springs, CA, 92086-0189 Phone: (760) 782-0711 Fax: (760) 782-0712</p> <p>Mr. Chapparosa’s personal email: raypacificalarm@yahoo.com. Sent the email and letter to that address on September 6, 2022.</p>	July 29, 2022	Aug 12, 2022	Aug 22, 2022	<p>Aug 12: Left message with office secretary and sent follow up email to the loscoyotes@gmail.com address.</p> <p>8.22.22: Left message with office secretary.</p> <p>9.6.22: Because follow up email was sent to loscoyotes@gmail.com email, LM emailed letter to Mr. Chapparosa’s personal email on September 6th.</p>
<p>Morongo Band of Mission Indians Robert Martin, Chairperson 12700 Pumarra Road Banning, CA, 92220 Phone: (951) 755-5110 Fax: (951) 755-5177 abrierty@morongo-nsn.gov</p>	July 29, 2022	Aug 12, 2022	Aug 22, 2022	<p>Aug 12: No answer, left voicemail and sent follow up email.</p> <p>8.22.22: No answer, left voicemail.</p>



Contact List Received from NAHC on 7/25/2021	Date Letter Sent to contact	Date of Phone Contact Round 1	Date of Phone Contact Round 2	Comments/Concerns
Morongo Band of Mission Indians Ann Brierty, THPO 12700 Pumarra Road Banning, CA, 92220 Phone: (951) 755-5259 Fax: (951) 572-6004 abrierty@morongo-nsn.gov	July 29, 2022	Aug 12, 2022	Aug 22, 2022	Aug 12: No answer, left voicemail and sent follow up email. 8.22.22: No answer, left voicemail.
Pala Band of Mission Indians Shasta Gaughen, THPO PMB 50, 35008 Pala Temecula Road Pala, CA. 92059 Phone: (760) 891 – 3515 Fax: (760) 742 – 3189 sgaughen@palatribe.com	July 29, 2022	Aug 12, 2022	Aug 22, 2022	Aug 12: No answer, left voicemail and sent follow up email. 8.22.22: No answer, left voicemail.
Pechanga Band of Luiseño Indians Mark Macarro, Chairperson P.O. Box 1477 Temecula, CA, 92593 Phone: (951) 770 - 6000 Fax: (951) 695-1778 epreston@pechanga-nsn.gov	July 29, 2022	N/A	N/A	Did not call since received a letter w/official tribe information from Paul Macarro (see below).



Contact List Received from NAHC on 7/25/2021	Date Letter Sent to contact	Date of Phone Contact Round 1	Date of Phone Contact Round 2	Comments/Concerns
<p>Pechanga Band of Luiseño Indians Paul Macarro, Cultural Resources Coordinator P.O. Box 1477 Temecula, CA, 92593 Phone: (951) 770 - 6306 Fax: (951) 506-9491 pmacarro@pechanga-nsn.gov</p>	<p>July 29, 2022</p>	<p>N/A</p>	<p>N/A</p>	<p>Email Received on 7/29 from Paul Macarro. Excerpt: “At this time, we are interested in participating in this Project based upon our 'Ayelkwish/Traditional Knowledge of the area and its placement 1.37 miles from an 'Ataaxum/Luiseno Traditional Cultural Property. This Project's has a close regional-adjacency to five distinct Ancestral Placename locations, between 3.67-8.82 miles from this Project's APE. This proposed Project has four nearby (non-historic era) archaeological-cultural sites between 1.16-1.33 miles away from this APE. Further, because of multiple nearby Ancestral human-remains, ceremonial features, and through extensive previously recorded sites, and project-experience within this Project's vicinity the Tribe therefore, is interested in participating in this Project. The Pechanga Tribe believes the possibility for recovering sensitive subsurface resources, during ground disturbing activities for the Project is extremely high” “The Tribe requests the following so we may continue the consultation process and to provide adequate and appropriate recommendations for the Project: 1) Notification once the Project begins the entitlement process, if it has not already; 2) Copies of all applicable archaeological reports, site records, proposed grading plans and environmental documents (EA/IS/MND/EIR, etc); 3) Government-to-government consultation with the Lead Agency; and 4) The Tribe believes that monitoring by a Riverside County qualified archaeologist and a professional Pechanga Tribal Monitor may be required during earthmoving activities. Therefore, the Tribe reserves its right to make additional comments and recommendations once the environmental documents have been received and fully reviewed. Further, in the event that subsurface cultural resources are identified, the Tribe requests consultation with the Project proponent and Lead Agency regarding the treatment and disposition of all artifacts.</p>



Contact List Received from NAHC on 7/25/2021	Date Letter Sent to contact	Date of Phone Contact Round 1	Date of Phone Contact Round 2	Comments/Concerns
<p>Quechan Tribe of the Fort Yuma Reservation Jill McCormick, Historic Preservation Officer P.O. Box 1899 Yuma, AZ. 85366 Phone: (760) 572 – 2423 historicpreservation@quechantribe.com</p>	July 29, 2022	N/A	N/A	<p>Via email on 8/1/2022: “This email is to inform you that we have no comments on this project. We defer to the more local Tribes and support their decisions on the projects.”</p>
<p>Quechan Tribe of the Fort Yuma Reservation Manfred Scott, Acting Chairman, Kw’ts’an Cultural Committee P.O. Box 1899 Yuma, AZ. 85366 Phone: (928) 750 – 2516 scottmanfred@yahoo.com</p>	July 29, 2022	Aug 12, 2022	N/A	<p>Aug 12: Confirmed that they received the letter and had sent a response letter (see above). He confirmed no questions or concerns.</p>
<p>Ramona Band of Cahuilla John Gomez, Environmental Coordinator P. O. Box 391670 Anza, CA, 92539 Phone: (951) 763 - 4105 Fax: (951) 763-4325 jgomez@ramona-nsn.gov</p>	July 29, 2022	Aug 12, 2022	Aug 22, 2022	<p>Aug 12: No answer, left voicemail and sent follow up email. 8.22.22: No answer, left voicemail.</p>
<p>Ramona Band of Cahuilla Joseph Hamilton, Chairperson, New Chairperson: Danae Hamilton Vega P.O. Box 391670 Anza, CA, 92539 Phone: (951) 763 - 4105 Fax: (951) 763-4325 admin@ramona-nsn.gov</p>	July 29, 2022	Aug 12, 2022	Aug 22, 2022	<p>Aug 12: Phone is same as John Gomez’s, no answer, sent follow up email. 8.22.22: LF spoke with Admin person for the Chairperson who sent a message to John Gomez. Admin person also confirmed that Mr. Hamilton had passed away. New Chairperson is Danae Hamilton Vega.</p>



Contact List Received from NAHC on 7/25/2021	Date Letter Sent to contact	Date of Phone Contact Round 1	Date of Phone Contact Round 2	Comments/Concerns
Rincon Band of Luiseno Indians Cheryl Madrigal, THPO One Government Center Lane Valley Center, CA. 92082 Phone: (760) 297 – 2635 crd@rincon-nsn.gov	July 29, 2022	Aug 12, 2022	N/A	Aug 12: Left voicemail, sent follow up email Received response from Cheryl Madrigal on 8.19.22 stating that the Rincon Band of Luiseno Indians would like to consult with the lead agency on the proposed project. Ms. Madrigal also requested additional information regarding the project such as existing GIS shapefiles/KMZ, any cultural resources assessments, record search results, overly maps of the project and potential APE and previously recorded cultural sites. Rincon responded on August 26 th , 2022, providing the requested shapefiles, record search results, and project map. Notified Ms. Madrigal that Rincon will send her a copy of this cultural resource assessment once complete.
Rincon Band of Luiseno Indians Bo Mazzetti, Chairperson One Government Center Lane Valley Center, CA. 92082 Phone: (760) 749 – 1051 Fax: (760) 749 – 5144 bomazzetti@aol.com	July 29, 2022	Aug 12, 2022	N/A	Aug 12: Transferred to liaison, left voicemail, sent a follow up email. Mazzetti responded via email “Thanks I will check as to status of reply”. See above for the response from the Tribe.



Contact List Received from NAHC on 7/25/2021	Date Letter Sent to contact	Date of Phone Contact Round 1	Date of Phone Contact Round 2	Comments/Concerns
<p>San Manuel Band of Mission Indians Jessica Mauck, Director of Cultural Resources 26569 Community Center Drive Highland, CA, 92346 Phone: (909) 864 - 8933 jmauck@sanmanuel-nsn.gov</p>	July 29, 2022	Aug 12, 2022	Aug 22, 2022	<p>Aug 12: Left a voicemail, sent follow up email.</p> <p>8.22.22: No answer, left voicemail.</p> <p>8.25.22: Email received from Ryan Nordess, Cultural Resource Analyst: Thank you for reaching out to the Yuhaaviatam of San Manuel Nation (formerly known as the San Manuel Band of Mission Indians) concerning the proposed project area. YSMN appreciates the opportunity to review the project documentation received by the Cultural Resources Management Department on July 30th 2022. The proposed project is not located near any known cultural resources. Thank you again for your correspondence, if you have any additional questions or comments please reach out to me at your earliest convenience.</p>
<p>Santa Rosa Band of Cahuilla Indians Lovina Redner, Tribal Chair P.O. Box 391820 Anza, CA, 92539 Phone: (951) 659 - 2700 Fax: (951) 659-2228 lsaul@santarosacahuillansn.gov lsaul@santarosa-nsn.gov</p>	July 29, 2022	Aug 12, 2022	Aug 22, 2022	<p>Aug 12: No answer, left voicemail with receptionist. Sent follow up email.</p> <p>8.22.22: LF spoke with Admin person. Admin person passed on correct email address for Lovina which is: lsaul@santarosa-nsn.gov</p> <p>*Rincon emailed letter to correct email address.</p>
<p>Serrano Nation of Mission Indians Mark Cochrane, Co-Chairperson P. O. Box 343 Patton, CA, 92369 Phone: (909) 528 – 9032 serranonation1@gmail.com</p>	July 29, 2022	Aug 12, 2022	Aug 22, 2022	<p>Aug 12: No answer, left voicemail. Sent follow up email.</p> <p>8.22.22: No answer, left voicemail.</p>



Contact List Received from NAHC on 7/25/2021	Date Letter Sent to contact	Date of Phone Contact Round 1	Date of Phone Contact Round 2	Comments/Concerns
Serrano Nation of Mission Indians Wayne Walker, Co-Chairperson P. O. Box 343 Patton, CA, 92369 Phone: (253) 370 – 0167 serranonation1@gmail.com	July 29, 2022	Aug 12, 2022	Aug 22, 2022	Aug 12: No answer, left voicemail. Sent follow up email. 8.22.22: No answer, left voicemail.
Soboba Band of Luiseno Indians Joseph Ontiveros, Cultural Resource Department P.O. BOX 487 San Jacinto, CA, 92581 Phone: (951) 663-5279 Fax: (951) 654-4198 jontiveros@soboba-nsn.gov	July 29, 2022	Aug 12, 2022	N/A	Aug 12: Stated that the project location is within their tribal cultural landscape and would like to enter consultation with the SWRCB as part of the Section 106 process.
Soboba Band of Luiseno Indians Isaiah Vivanco, Chairperson P. O. Box 487 San Jacinto, CA, 92583 Phone: (951) 654-5544 Fax: (951) 654-4198 ivivanco@soboba-nsn.gov	July 29, 2022	Aug 12, 2022	Aug 22, 2022	Aug 12: Unable to connect to operator to leave a message. Sent a follow up email. 8.22.22: Called, but voicemail option was unavailable.
Torres-Martinez Desert Cahuilla Indians Michael Mirelez, Cultural Resource Coordinator P.O. Box 1160 Thermal, CA, 92274 Phone: (760) 399 - 0022 Fax: (760) 397-8146 mmirelez@tmdci.org	July 29, 2022	Aug 12, 2022	Aug 22, 2022	Aug 12: No answer, mailbox is full, unable to leave a voicemail. Sent follow up email. 8.22.22: Called but mailbox is full, unable to leave a voicemail.



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Redlands, California 92374

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July 29, 2022

Ann Brierty, THPO
Morongo Band of Mission Indians
abrierty@morongo-nsn.gov

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Ms. Brierty,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

The Project involves funding from the State Water Resources Control Board (State Water Board) Proposition 1 Groundwater Grant Program and potentially other sources which may be considered equivalent to a federal action, thereby necessitating compliance with Section 106 of the National Historic Preservation Act (Section 106).

As part of the environmental compliance for the Project, your tribe has been identified as one that might attach religious and cultural significance to historic properties in the APE. Your assistance is requested with the identification of cultural resources of significance (a previous letter of inquiry was sent in January 2020 for the original groundwater extraction, conveyance, and treatment facilities



project). Your participation in the early identification of cultural resources will ensure their consideration during the Project planning phase. We welcome your recommendations regarding appropriate management or treatment of cultural resources that occur within the APE.

This letter is not intended to constitute formal consultation under Section 106; formal Section 106 consultation will be completed by the lead federal agency. If you have questions, need additional information, or wish to comment, please contact me by email at lflaherty@rinconconsultants.com or by telephone at (805) 201-9621. Please respond within 30 days of receipt of this letter.

Sincerely,

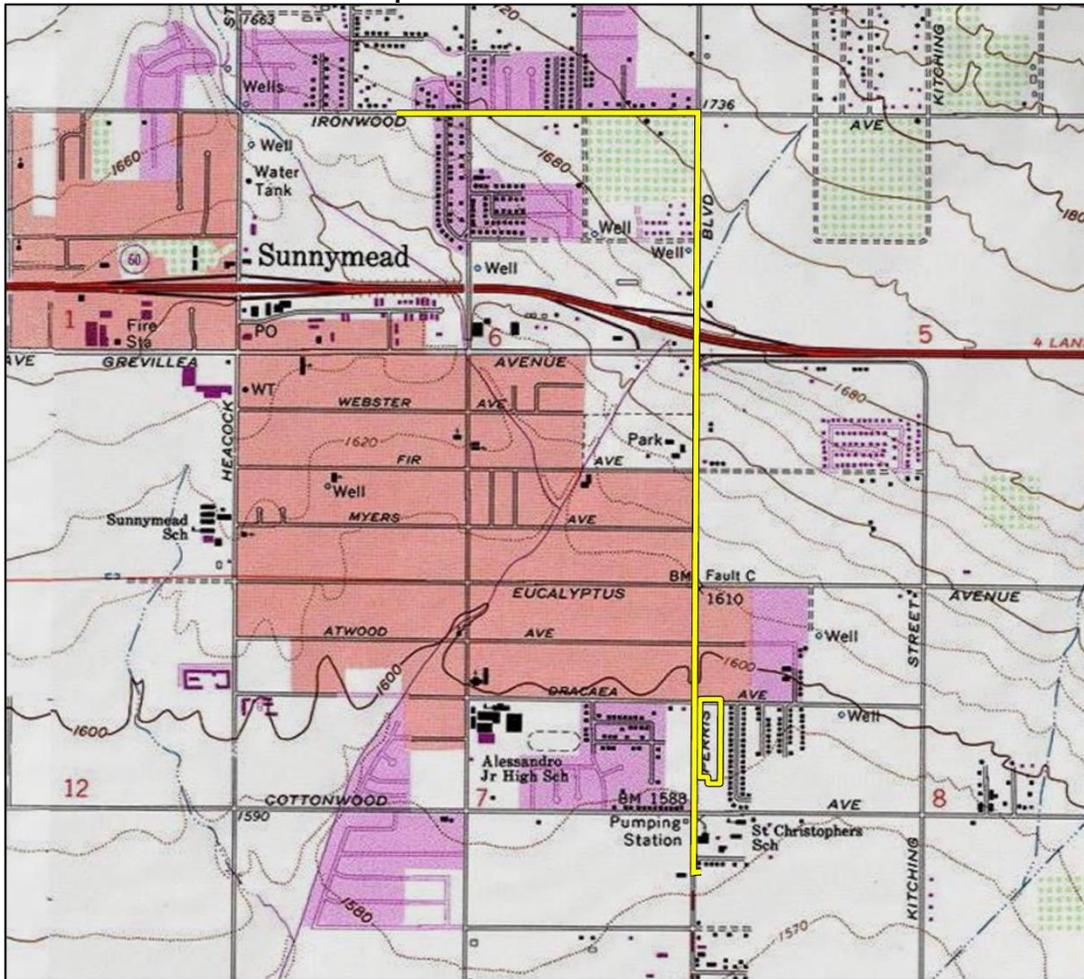
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map

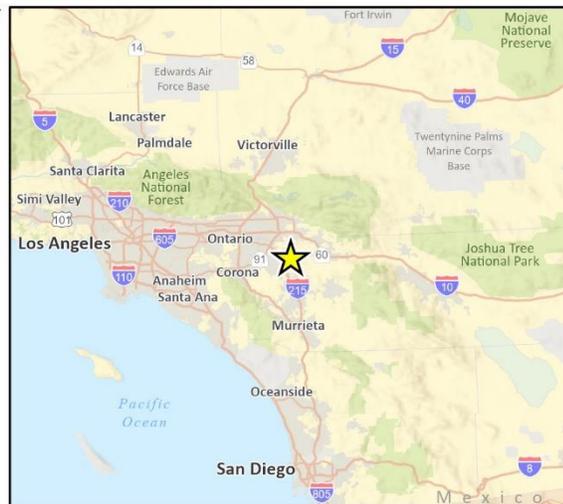
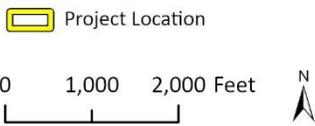


Figure 1: Area of Potential Effects Map



Basemap provided by National Geographic Society, Esri and their licensors © 2022. Sunnymead Quadrangle. T02S R03W S31,32 & T03S R03W S05-08. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

CRFig1 Proj Loch Map





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July 29, 2022

Shane Chapparosa, Chairperson
Los Coyotes Band of Cahuilla and Cupeño Indians
P.O. Box 189
Warner Springs, CA. 92086-0189

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Chairperson Chapparosa,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

The Project involves funding from the State Water Resources Control Board (State Water Board) Proposition 1 Groundwater Grant Program and potentially other sources which may be considered equivalent to a federal action, thereby necessitating compliance with Section 106 of the National Historic Preservation Act (Section 106).

As part of the environmental compliance for the Project, your tribe has been identified as one that might attach religious and cultural significance to historic properties in the APE. Your assistance is requested with the identification of cultural resources of significance (a previous letter of inquiry was



sent in January 2020 for the original groundwater extraction, conveyance, and treatment facilities project). Your participation in the early identification of cultural resources will ensure their consideration during the Project planning phase. We welcome your recommendations regarding appropriate management or treatment of cultural resources that occur within the APE.

This letter is not intended to constitute formal consultation under Section 106; formal Section 106 consultation will be completed by the lead federal agency. If you have questions, need additional information, or wish to comment, please contact me by email at lflaherty@rinconconsultants.com or by telephone at (805) 201-9621. Please respond within 30 days of receipt of this letter.

Sincerely,

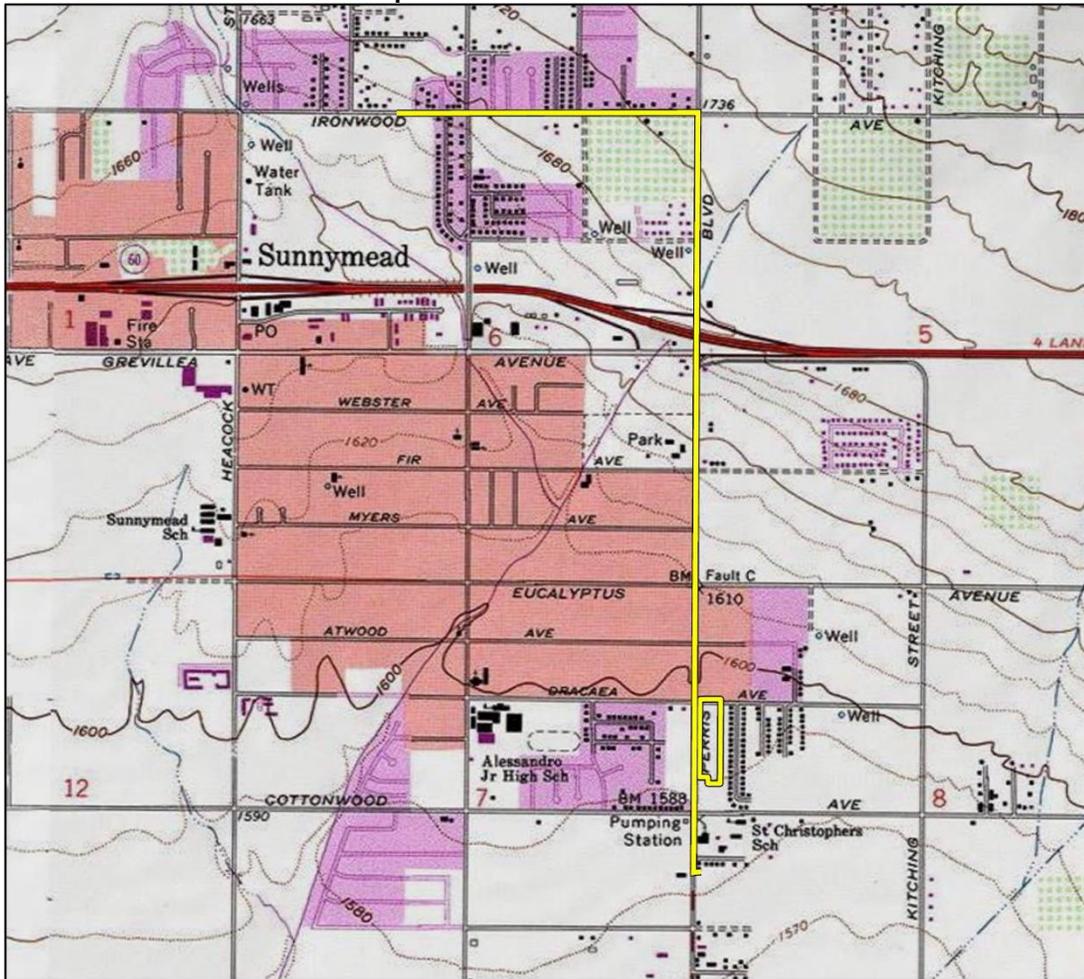
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map



Figure 1: Area of Potential Effects Map



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CRFig1 Proj Loch Map

 Project Location





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www.rinconconsultants.com

July 29, 2022

Mark Cochrane, Co-Chairperson
Serrano Nation of Mission Indians
serranonation1@gmail.com

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Mr. Cochrane,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

The Project involves funding from the State Water Resources Control Board (State Water Board) Proposition 1 Groundwater Grant Program and potentially other sources which may be considered equivalent to a federal action, thereby necessitating compliance with Section 106 of the National Historic Preservation Act (Section 106).

As part of the environmental compliance for the Project, your tribe has been identified as one that might attach religious and cultural significance to historic properties in the APE. Your assistance is requested with the identification of cultural resources of significance (a previous letter of inquiry was sent in January 2020 for the original groundwater extraction, conveyance, and treatment facilities



project). Your participation in the early identification of cultural resources will ensure their consideration during the Project planning phase. We welcome your recommendations regarding appropriate management or treatment of cultural resources that occur within the APE.

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Sincerely,

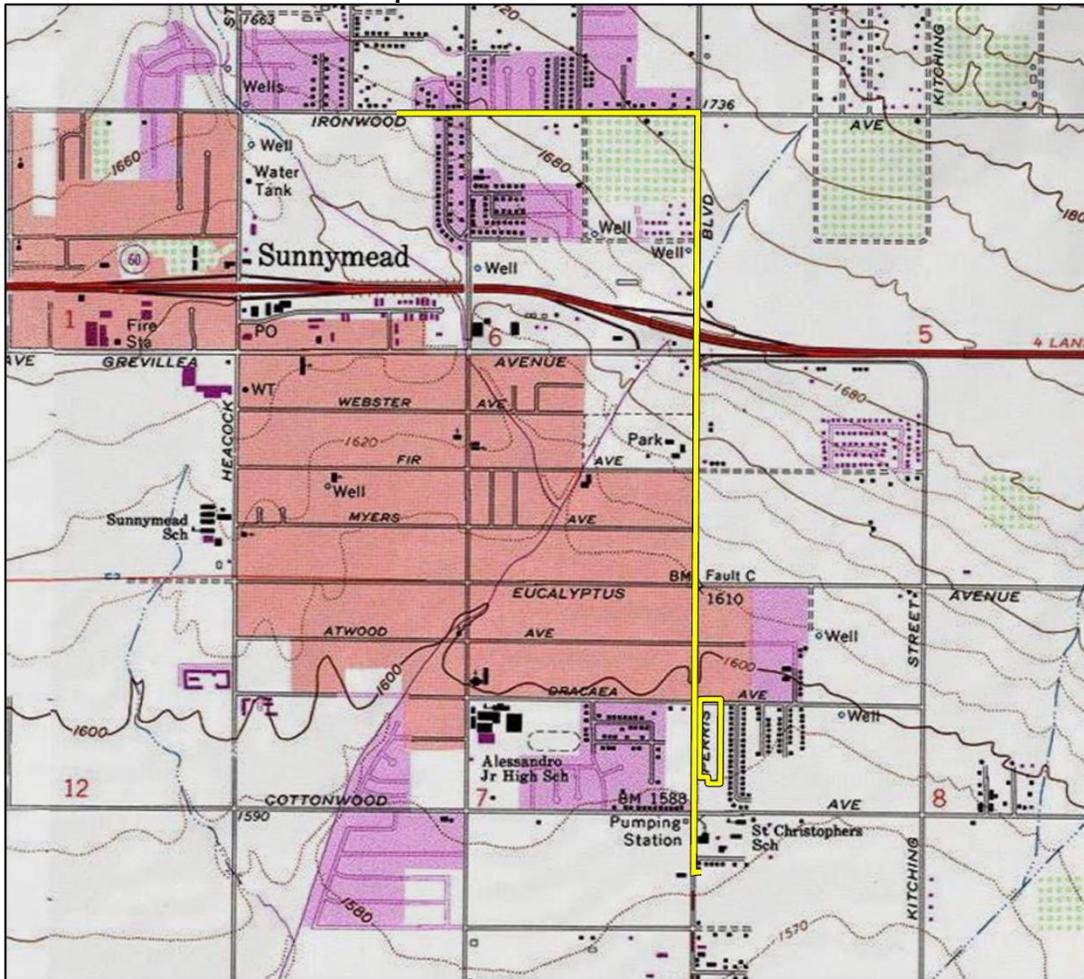
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map

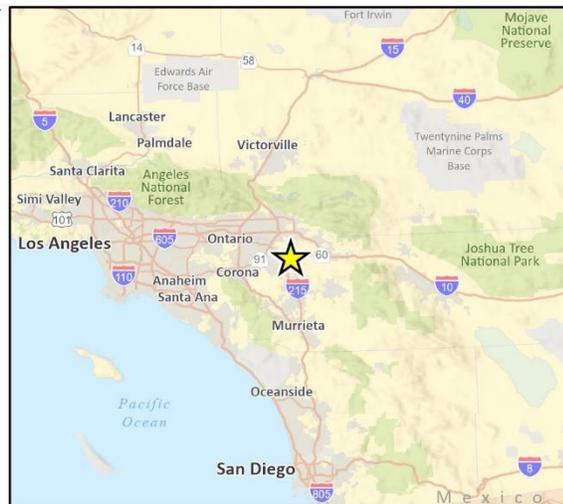
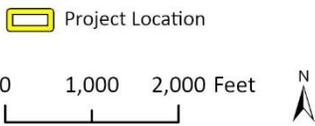


Figure 1: Area of Potential Effects Map



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July 29, 2022

Patricia Garcia-Plotkin, Director
Agua Caliente Band of Cahuilla Indians
ACBCI-THPO@aguacaliente.net

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Director Garcia-Plotkin,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

The Project involves funding from the State Water Resources Control Board (State Water Board) Proposition 1 Groundwater Grant Program and potentially other sources which may be considered equivalent to a federal action, thereby necessitating compliance with Section 106 of the National Historic Preservation Act (Section 106).

As part of the environmental compliance for the Project, your tribe has been identified as one that might attach religious and cultural significance to historic properties in the APE. Your assistance is requested with the identification of cultural resources of significance (a previous letter of inquiry was sent in January 2020 for the original groundwater extraction, conveyance, and treatment facilities



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Sincerely,

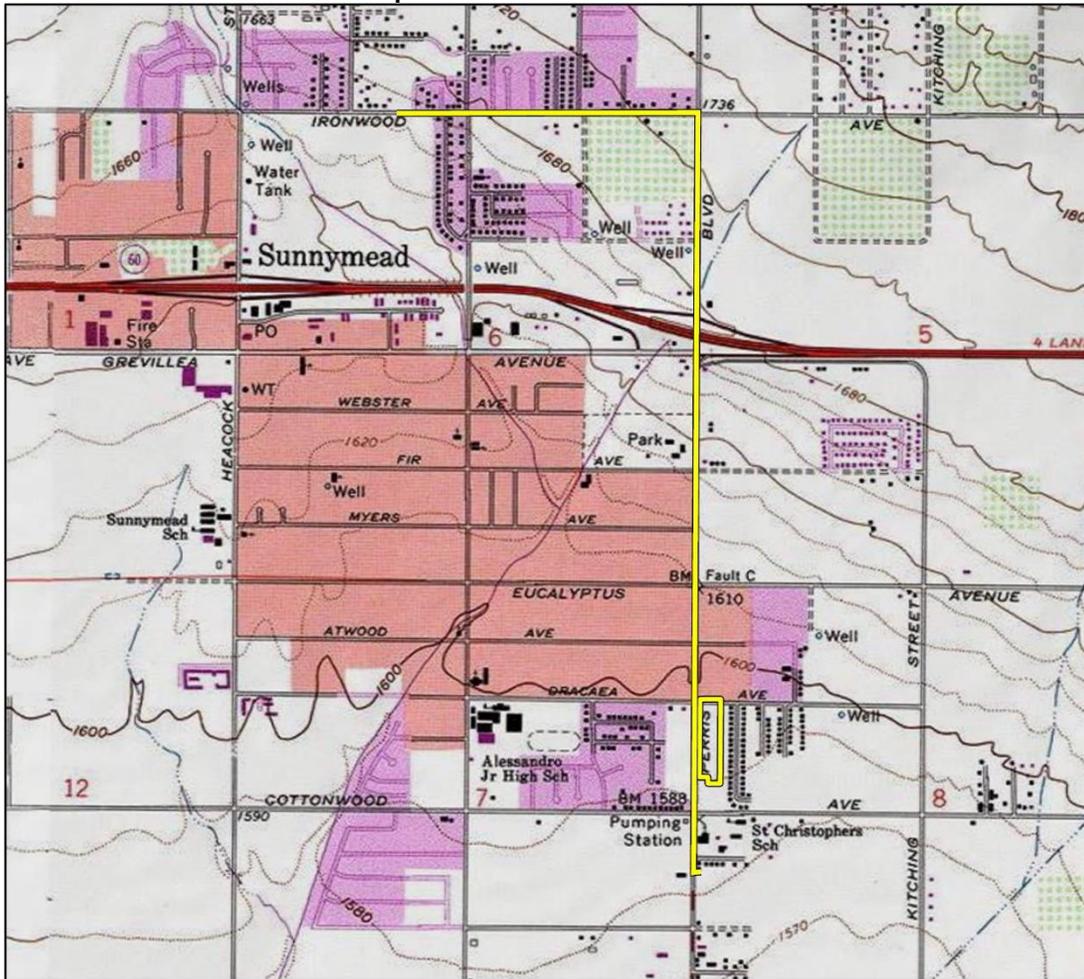
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map



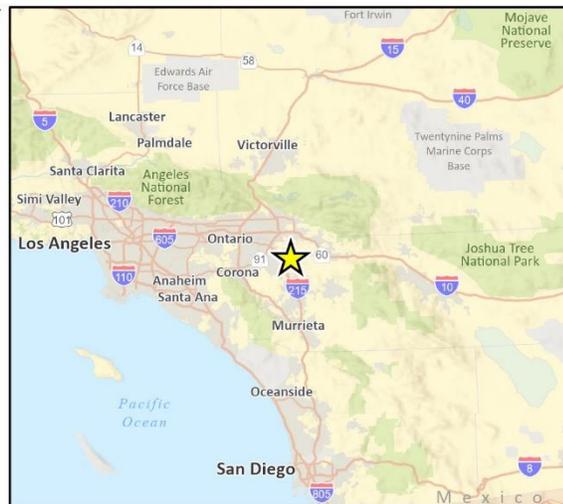
Figure 1: Area of Potential Effects Map



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CRFig1 Proj Loch Map

 Project Location





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July 29, 2022

Shasta Gaughen, THPO
Pala Band of Mission Indians
sgaughen@palatribe.com

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Ms. Gaughen,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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Sincerely,

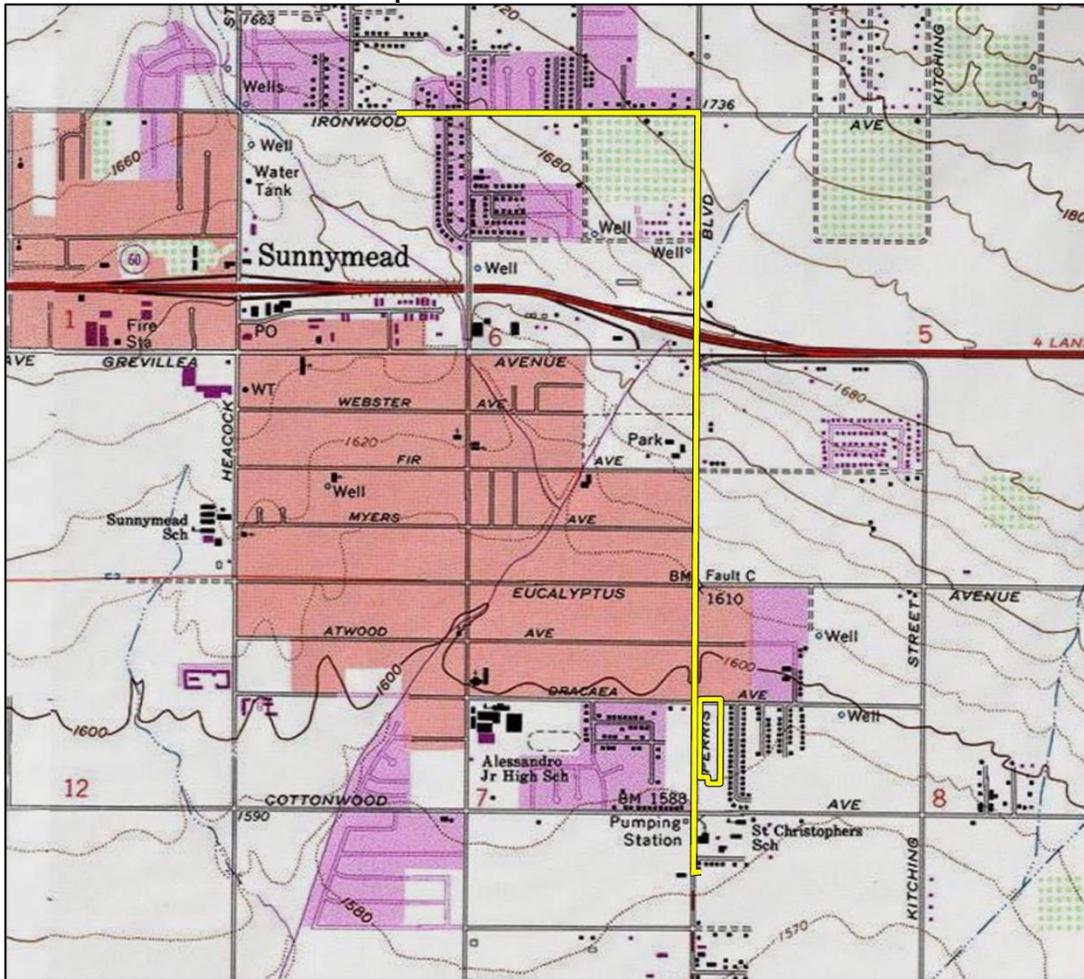
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map

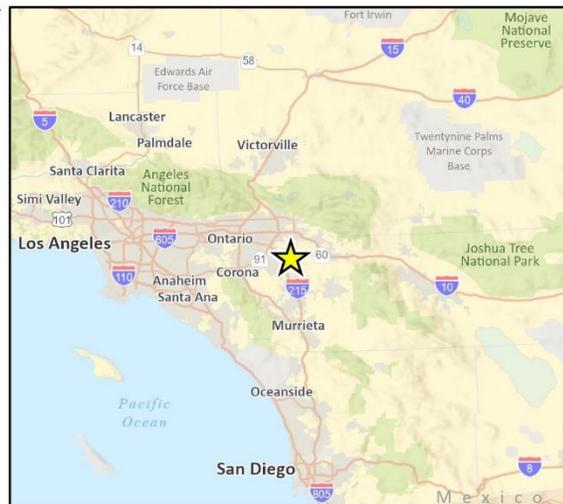
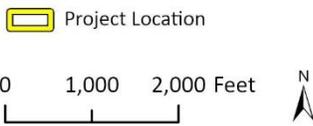


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CRFig1 Proj Loch Map





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July 29, 2022

John Gomez, Environmental Coordinator
Ramona Band of Cahuilla
jgomez@ramona-nsn.gov

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Mr. Gomez,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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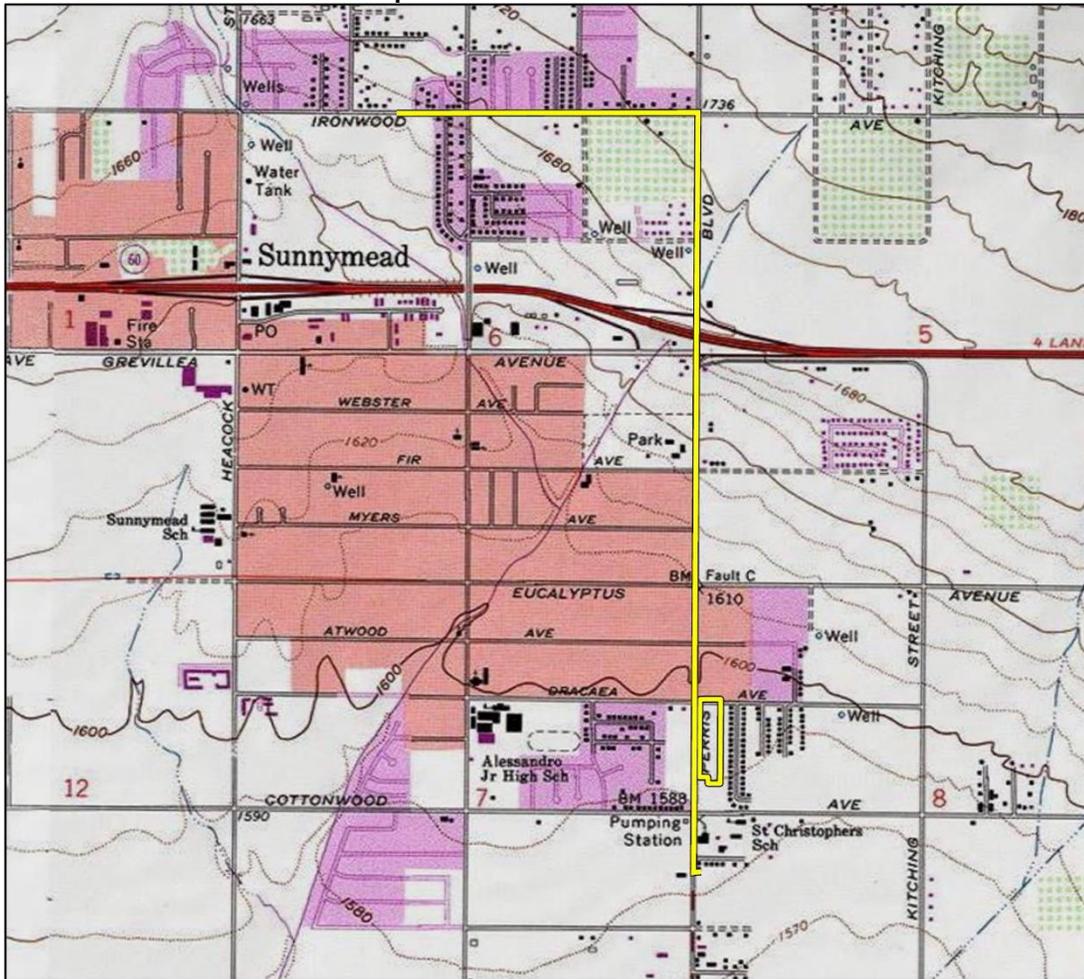
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Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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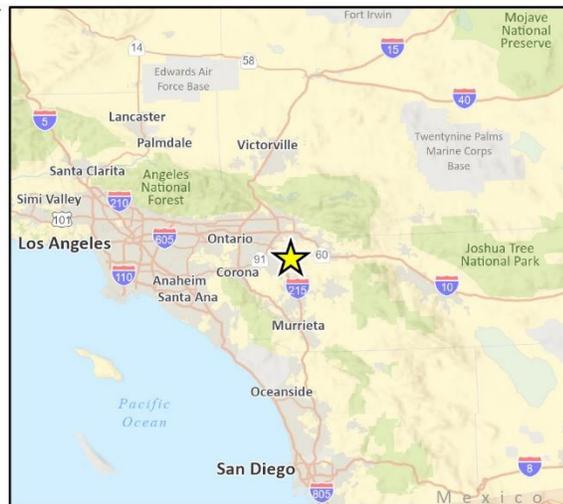
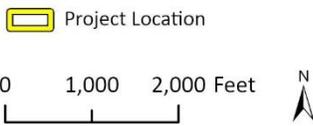


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July 29, 2022

Jeff Grubbe, Chairperson
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive
Palm Springs, CA. 92264

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Mr. Grubbe,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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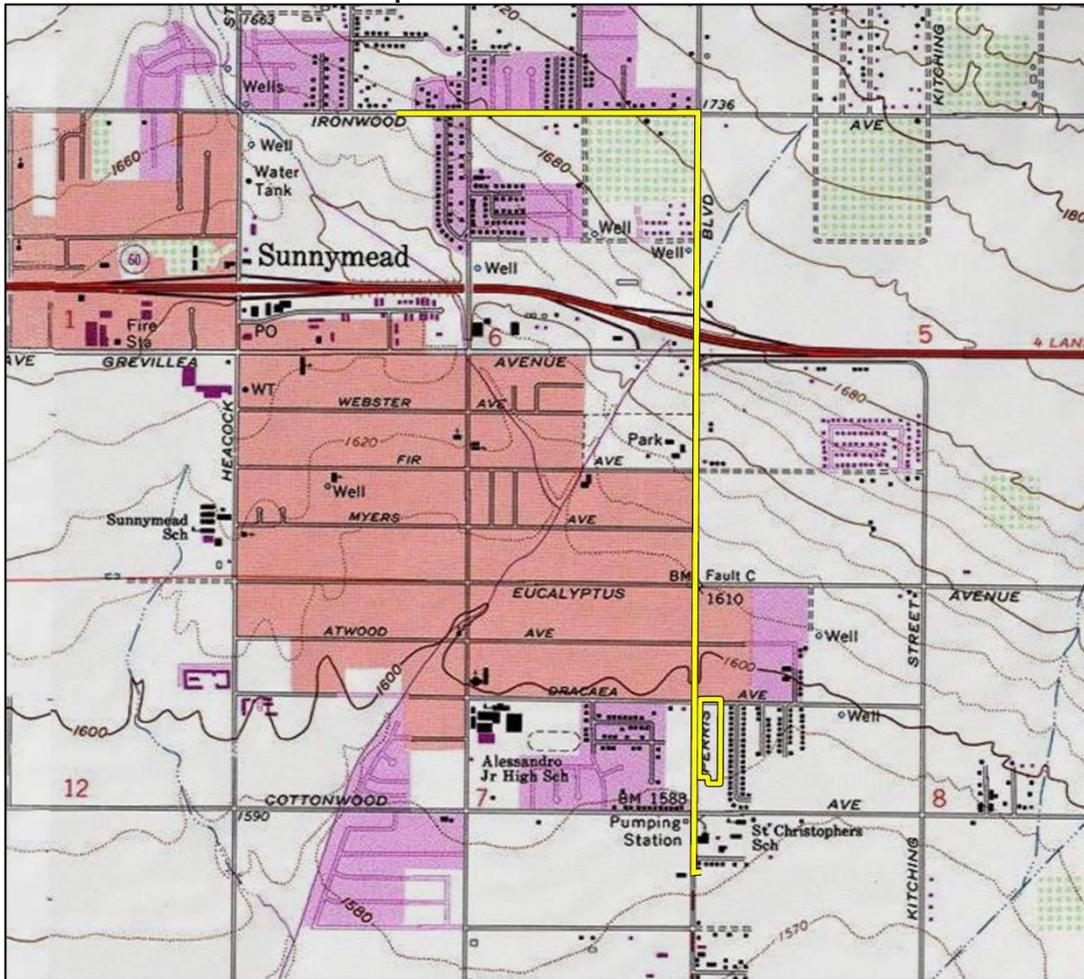
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Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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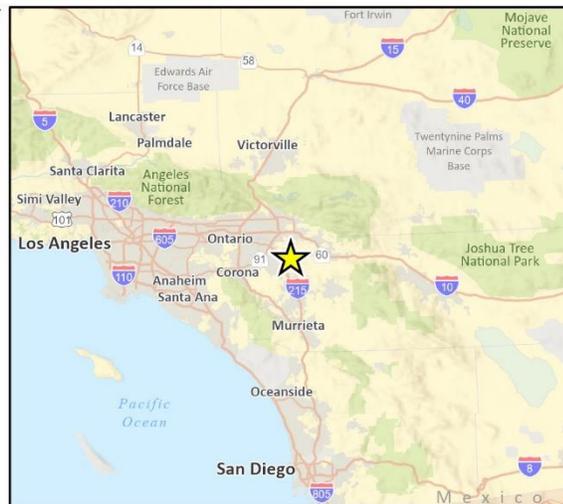
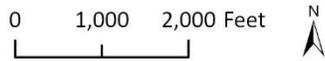
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 Project Location





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July 29, 2022

Joseph Hamilton, Chairperson
Ramona Band of Cahuilla
admin@ramona-nsn.gov

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Chairperson Hamilton,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

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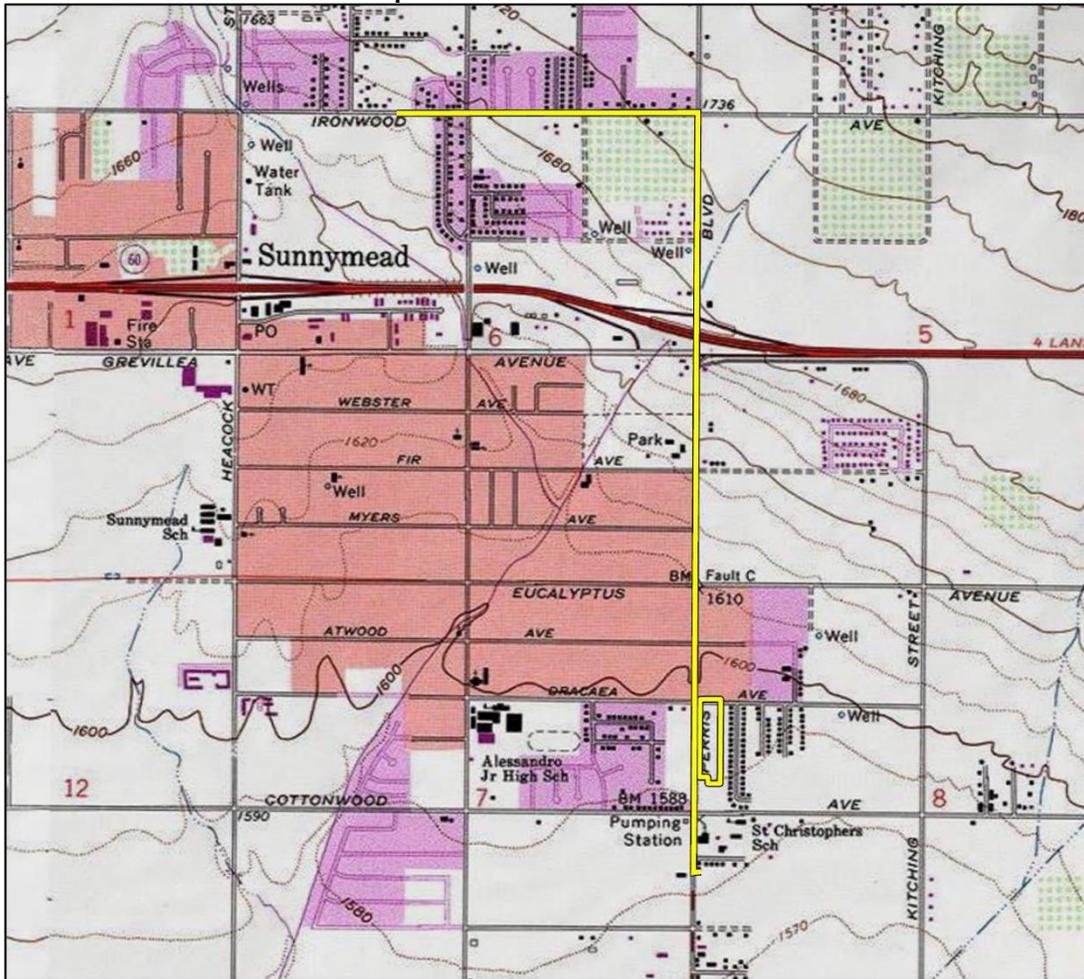
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Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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Figure 1: Area of Potential Effects Map



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CRFig1 Proj Loch Map

 Project Location





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July 29, 2022

Mark Macarro, Chairperson
Pechanga Band of Luiseno Indians
epreston@pechanga-nsn.gov

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Mr. Macarro,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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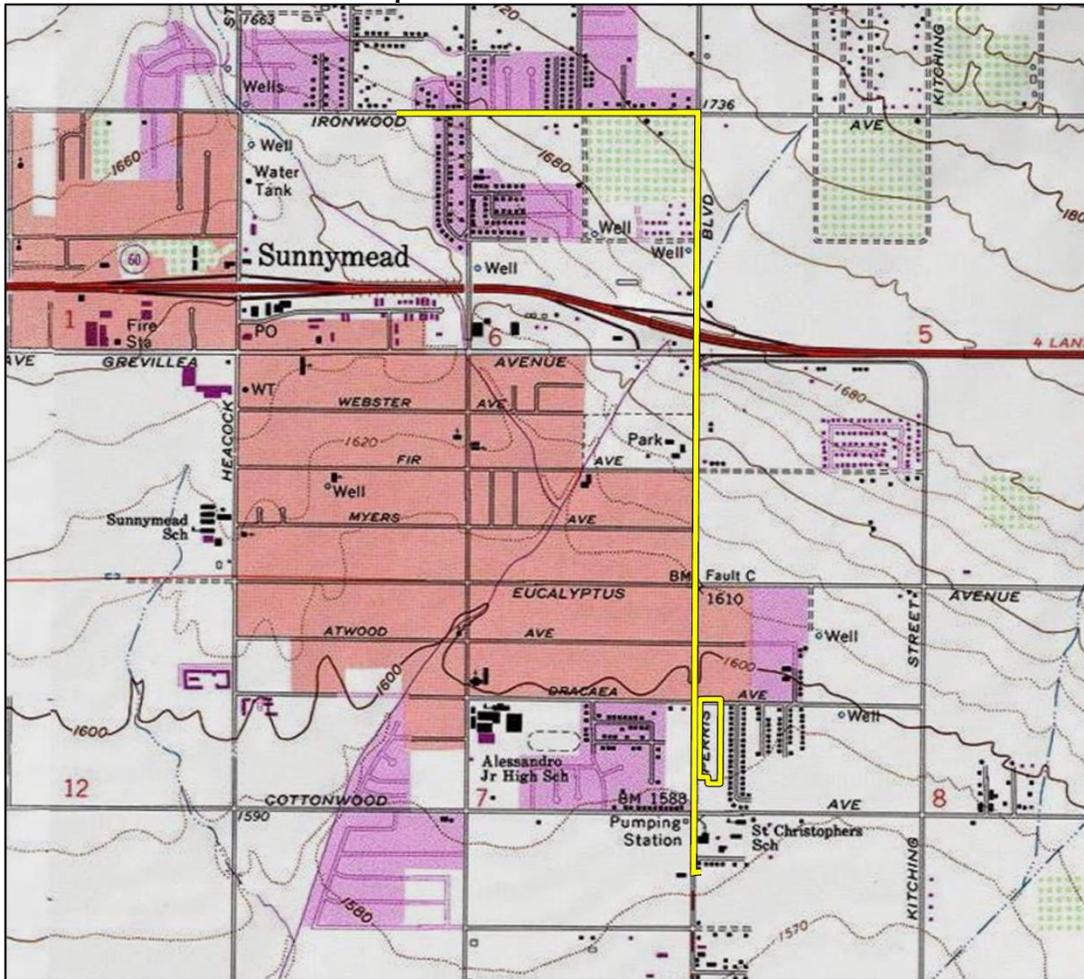
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Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map

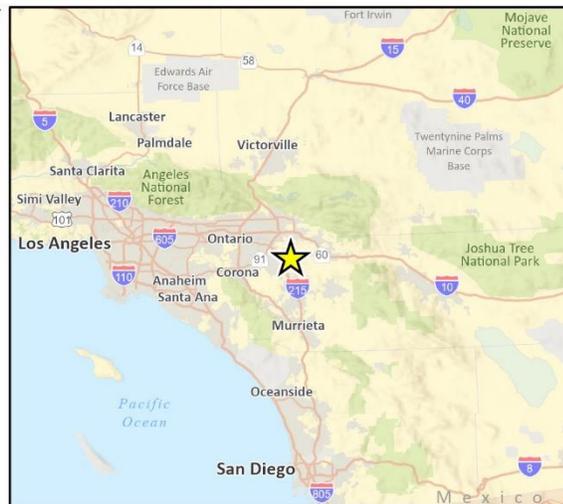
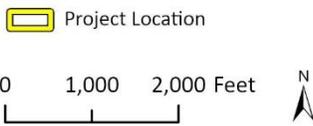


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July 29, 2022

Paul Macarro, Cultural Resources Coordinator
Pechanga Band of Luiseno Indians
pmacarro@pechanga-nsn.gov

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

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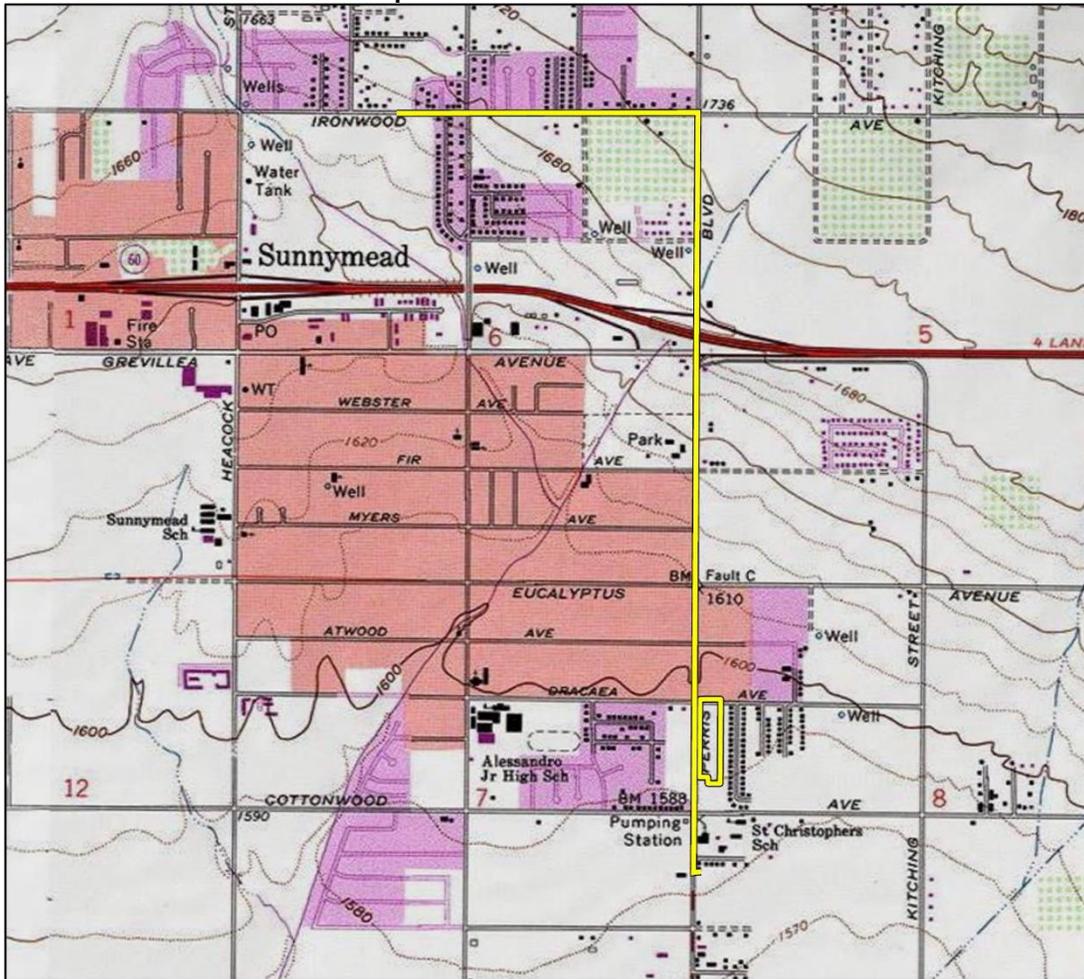
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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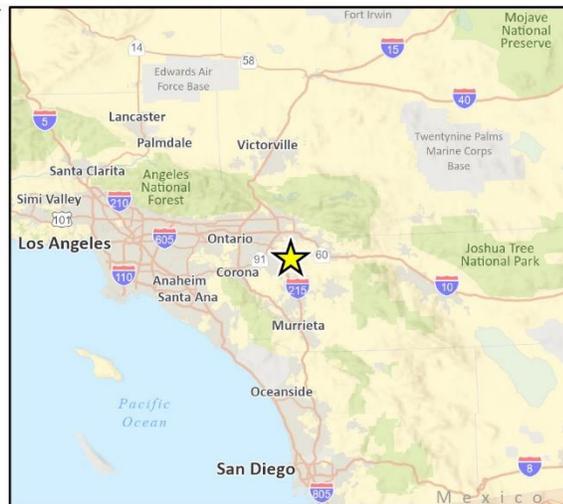
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July 29, 2022

Cheryl Madrigal, THPO
Rincon Band of Luiseno Indians
crd@rincon-nsn.gov

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Ms. Madrigal,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

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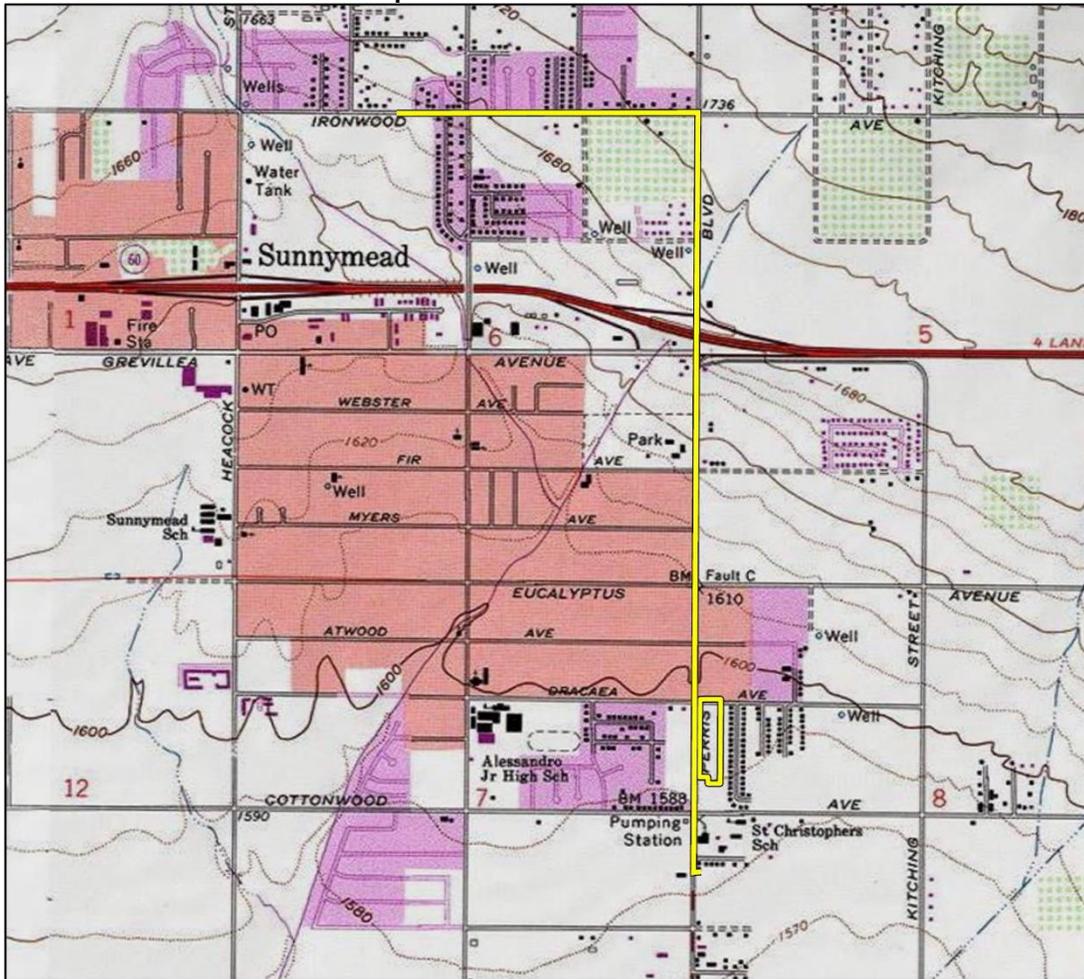
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map

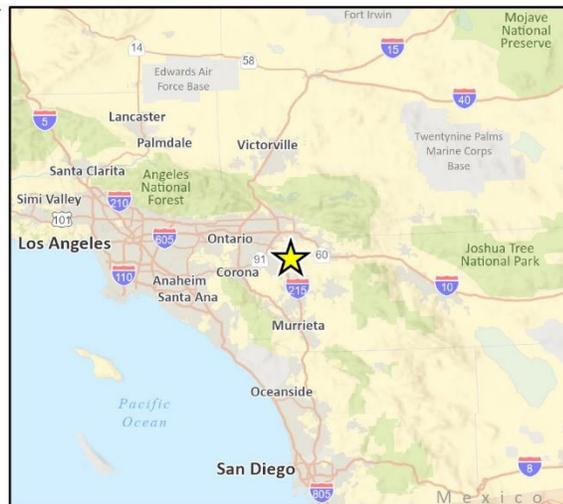
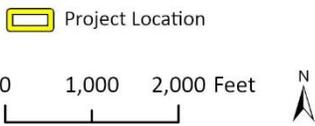


Figure 1: Area of Potential Effects Map



Basemap provided by National Geographic Society, Esri and their licensors © 2022. Sunnymead Quadrangle. T02S R03W S31,32 & T03S R03W S05-08. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

CRFig1 Proj Loch Map





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July 29, 2022

Robert Martin, Chairperson
Morongo Band of Mission Indians
abrierty@morongo-nsn.gov

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Mr. Martin,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

The Project involves funding from the State Water Resources Control Board (State Water Board) Proposition 1 Groundwater Grant Program and potentially other sources which may be considered equivalent to a federal action, thereby necessitating compliance with Section 106 of the National Historic Preservation Act (Section 106).

As part of the environmental compliance for the Project, your tribe has been identified as one that might attach religious and cultural significance to historic properties in the APE. Your assistance is requested with the identification of cultural resources of significance (a previous letter of inquiry was



sent in January 2020 for the original groundwater extraction, conveyance, and treatment facilities project). Your participation in the early identification of cultural resources will ensure their consideration during the Project planning phase. We welcome your recommendations regarding appropriate management or treatment of cultural resources that occur within the APE.

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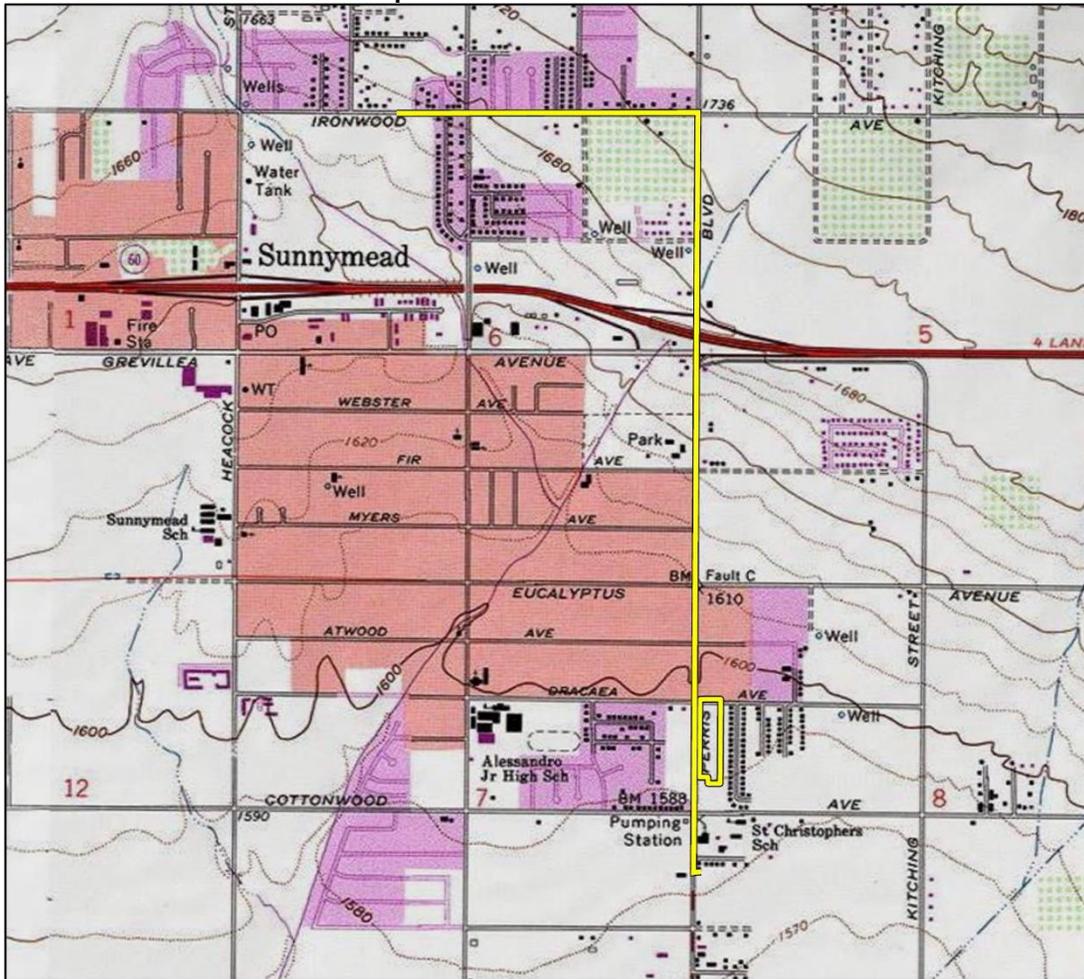
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Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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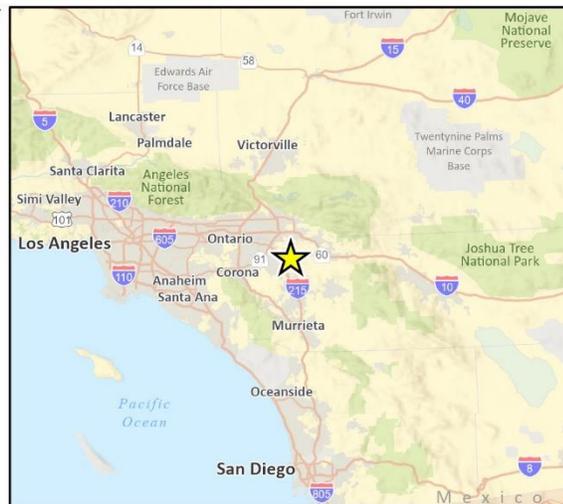
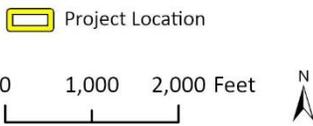


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CRFig1 Proj Loch Map





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July 29, 2022

Jessica Mauck, Director of Cultural Resources
San Manuel Band of Mission Indians
jmauck@sanmanuel-nsn.gov

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Ms. Mauck,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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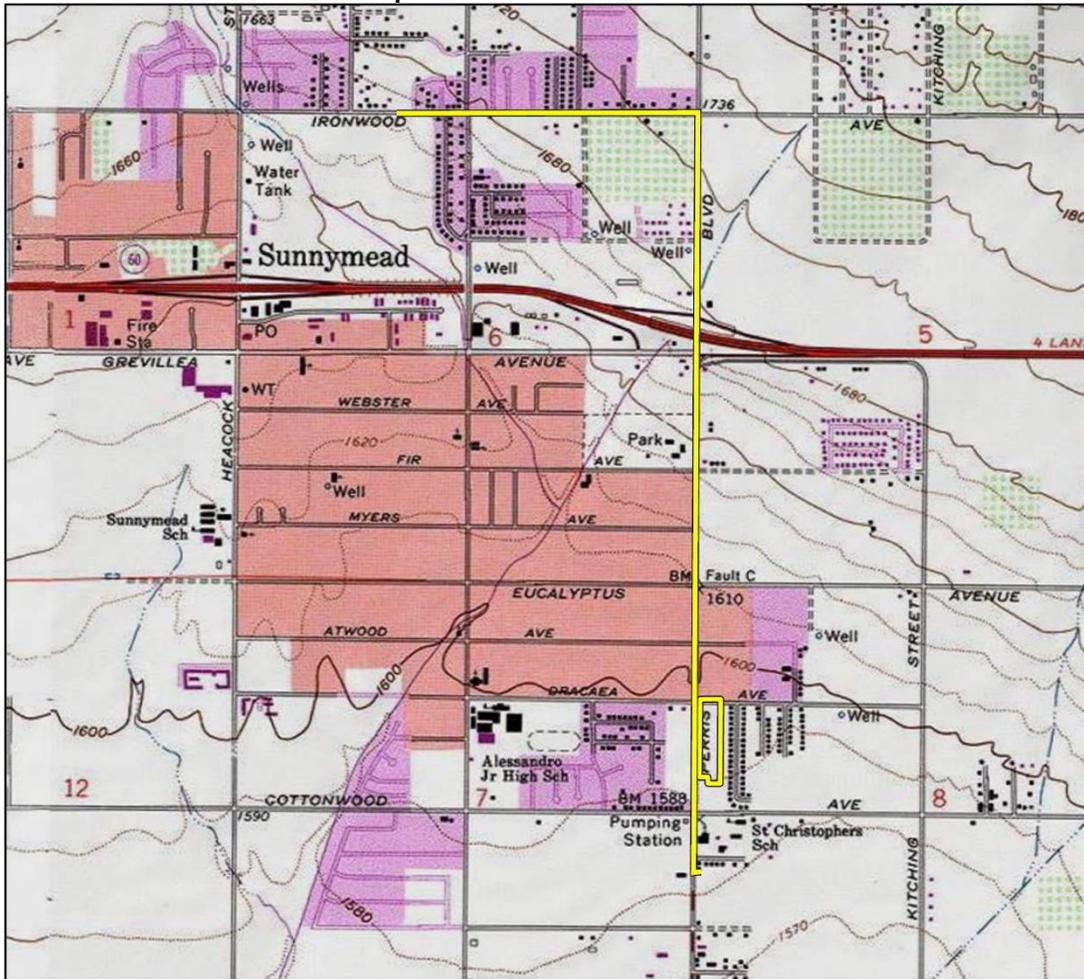
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map



Figure 1: Area of Potential Effects Map



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CRFig1 Proj Loch Map

 Project Location

0 1,000 2,000 Feet





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July 29, 2022

Bo Mazzetti, Chairperson
Rincon Band of Luiseno Indians
bomazzetti@aol.com

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Chairperson Mazzetti,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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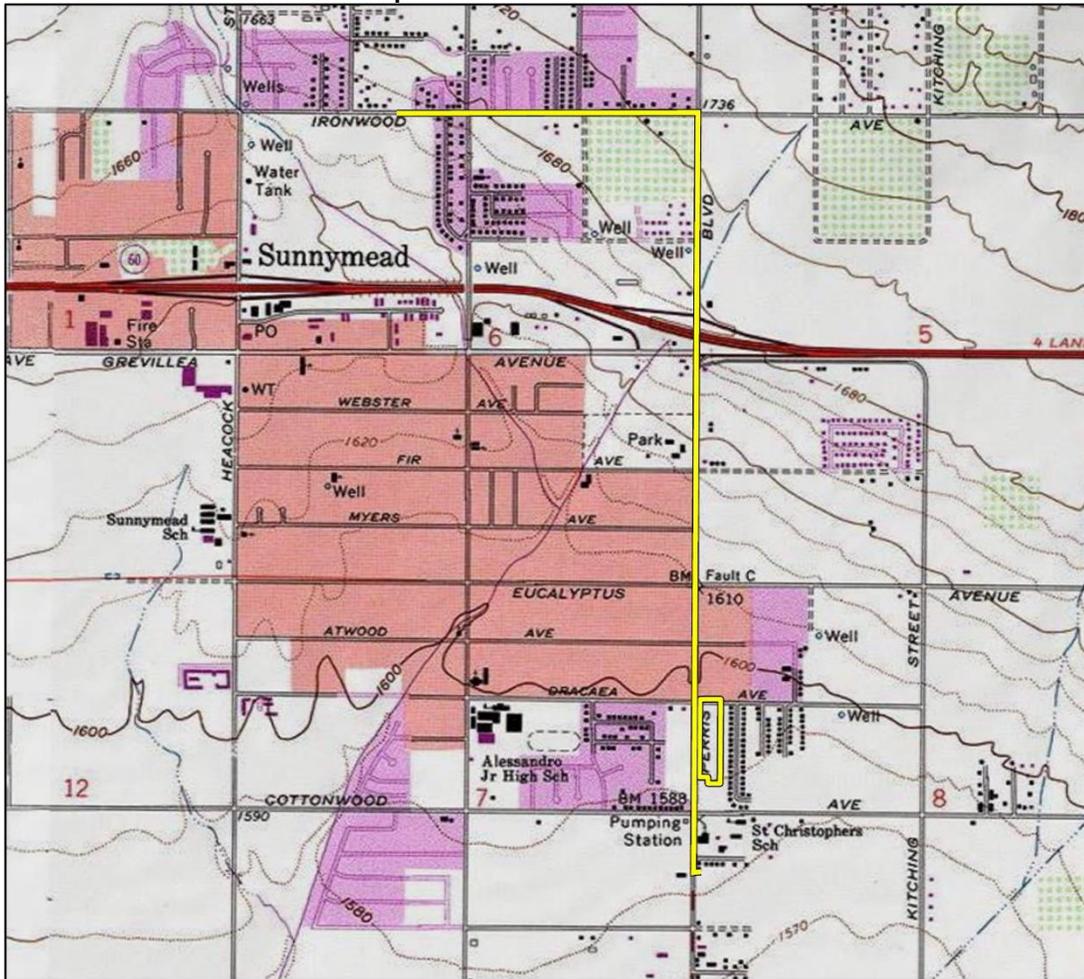
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Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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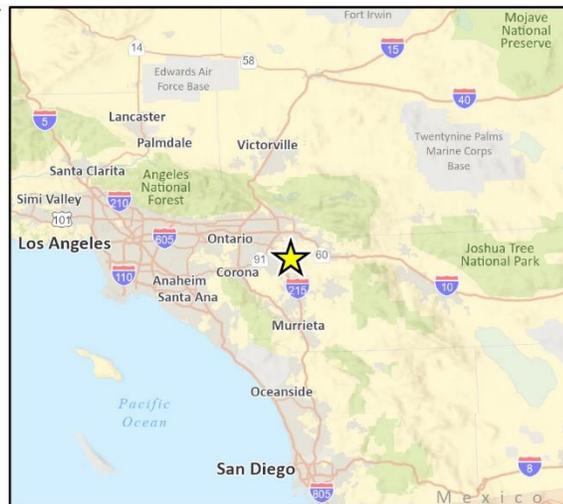
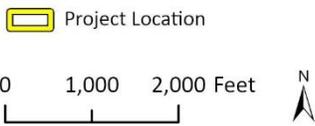


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July 29, 2022

Jill McCormick, Historic Preservation Officer
Quechan Tribe of the Fort Yuma Reservation
historicpreservation@quechantribe.com

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Mrs. McCormick,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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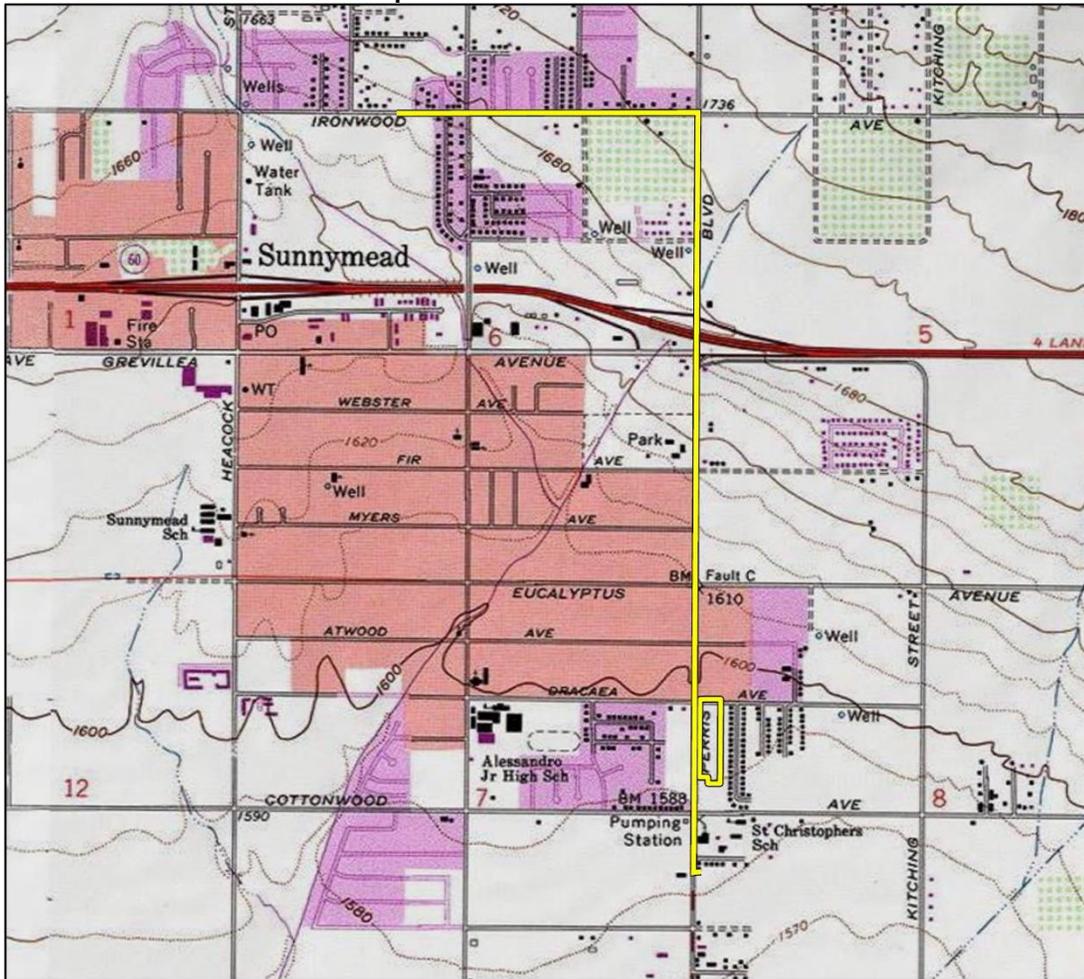
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map



Figure 1: Area of Potential Effects Map



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CRFig1 Proj Loch Map

 Project Location

0 1,000 2,000 Feet





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July 29, 2022

Torres-Martinez Desert Cahuilla Indians
Michael Mirelez, Cultural Resource Coordinator
P.O. Box 1160
Thermal, CA, 92274

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Mr. Mirelez,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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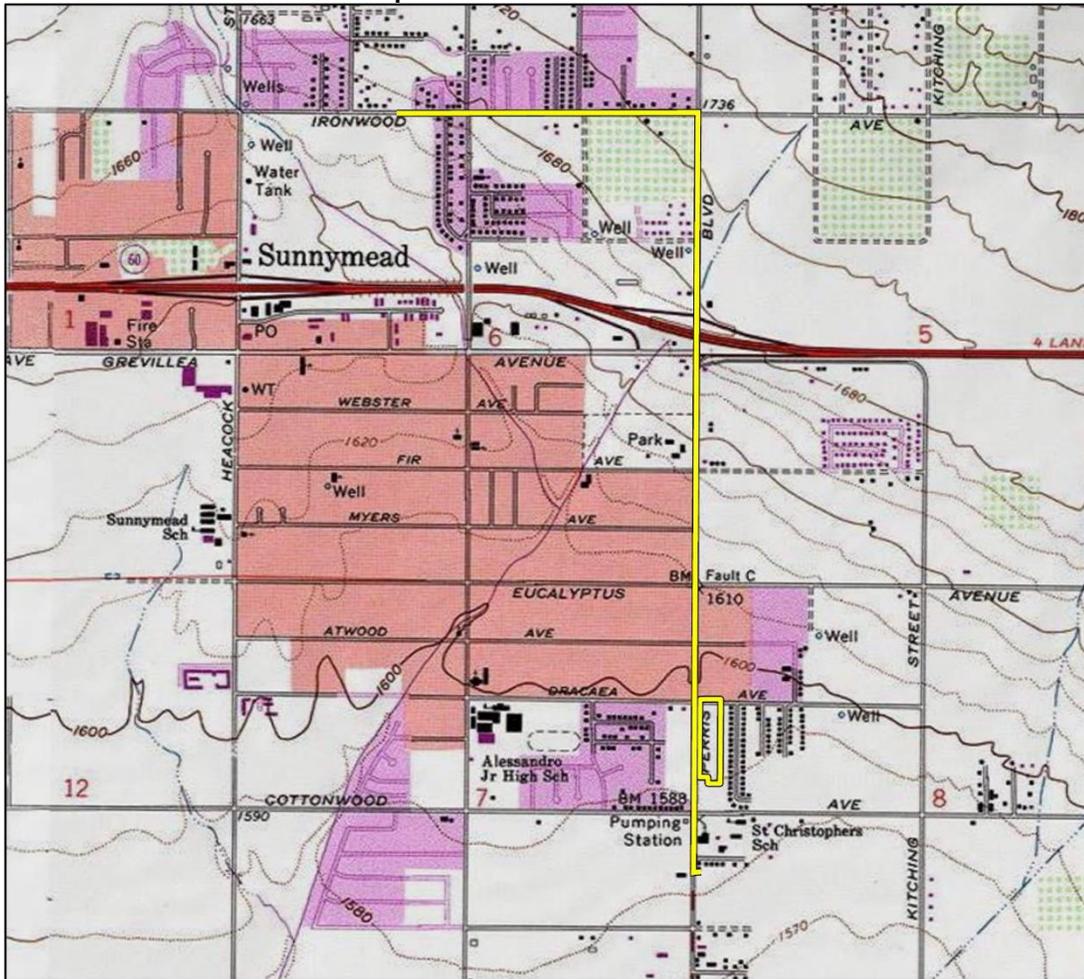
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Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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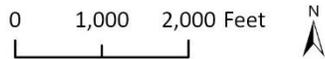
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CRFig1 Proj Loch Map

 Project Location





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July 29, 2022

Joseph Ontiveros, Cultural Resource Department
Soboba Band of Luiseno Indians
jontiveros@soboba-nsn.gov

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Mr. Ontiveros,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

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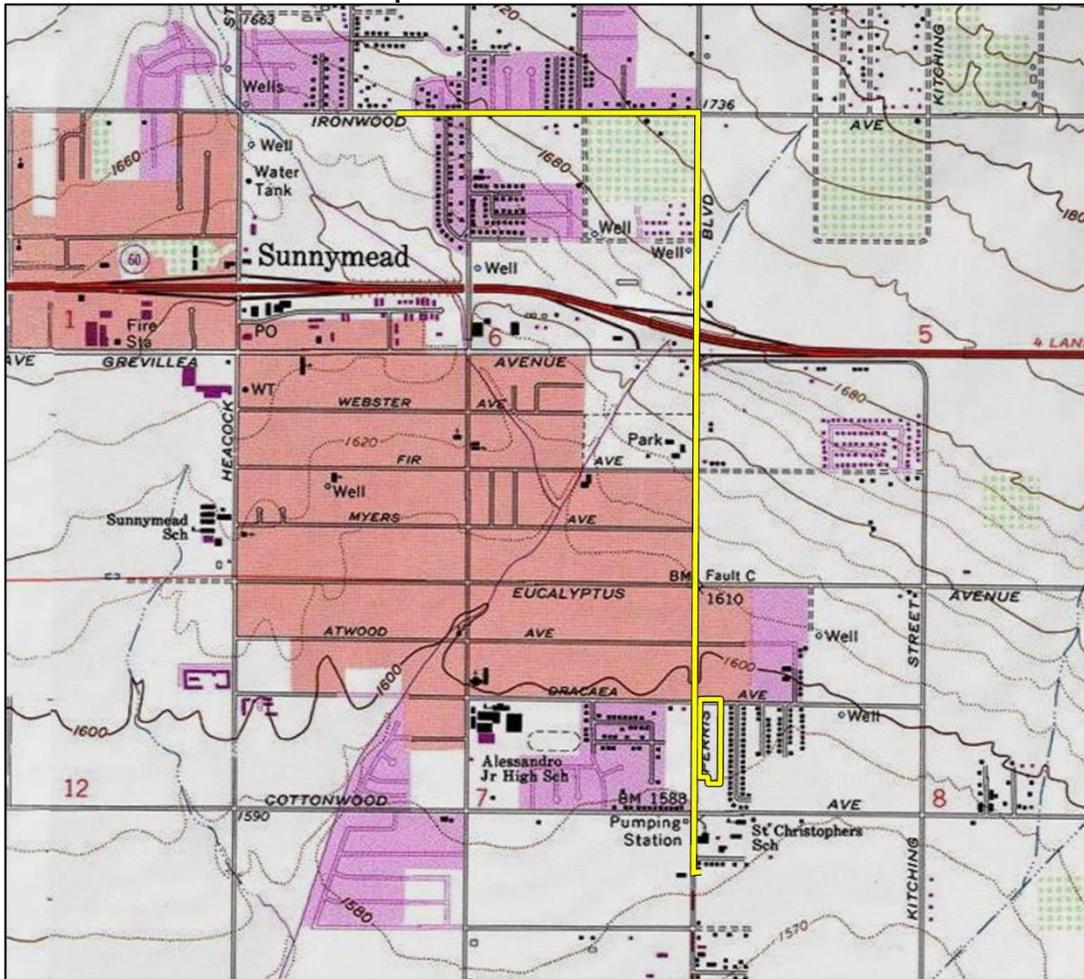
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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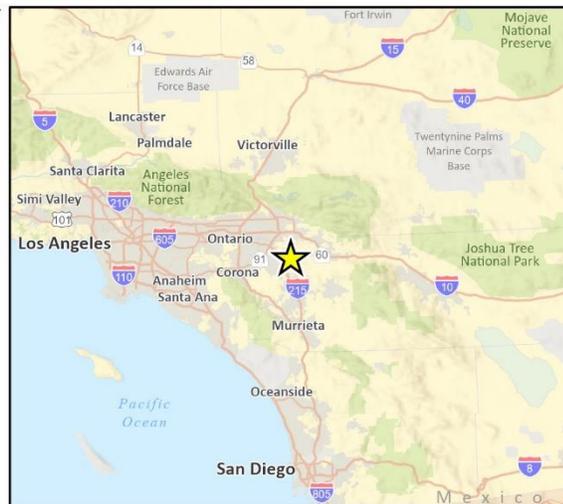
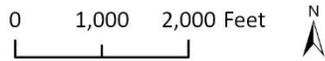
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CRFig1 Proj Loch Map

 Project Location





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July 29, 2022

Lovina Redner, Tribal Chair
Santa Rosa Band of Cahuilla Indians
lsaul@santarosa-nsn.gov

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Chairperson Redner,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

The Project involves funding from the State Water Resources Control Board (State Water Board) Proposition 1 Groundwater Grant Program and potentially other sources which may be considered equivalent to a federal action, thereby necessitating compliance with Section 106 of the National Historic Preservation Act (Section 106).

As part of the environmental compliance for the Project, your tribe has been identified as one that might attach religious and cultural significance to historic properties in the APE. Your assistance is requested with the identification of cultural resources of significance (a previous letter of inquiry was sent in January 2020 for the original groundwater extraction, conveyance, and treatment facilities



project). Your participation in the early identification of cultural resources will ensure their consideration during the Project planning phase. We welcome your recommendations regarding appropriate management or treatment of cultural resources that occur within the APE.

This letter is not intended to constitute formal consultation under Section 106; formal Section 106 consultation will be completed by the lead federal agency. If you have questions, need additional information, or wish to comment, please contact me by email at lflaherty@rinconconsultants.com or by telephone at (805) 201-9621. Please respond within 30 days of receipt of this letter.

Sincerely,

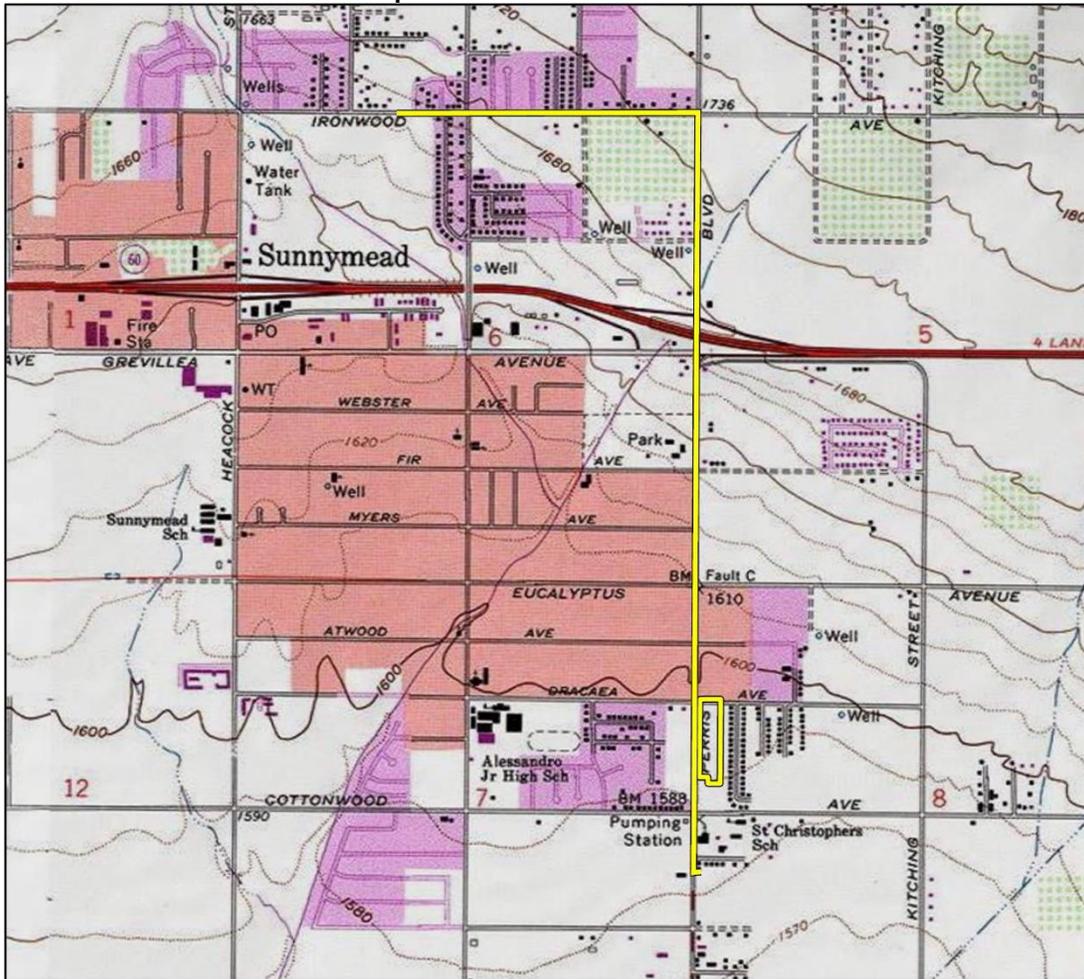
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map

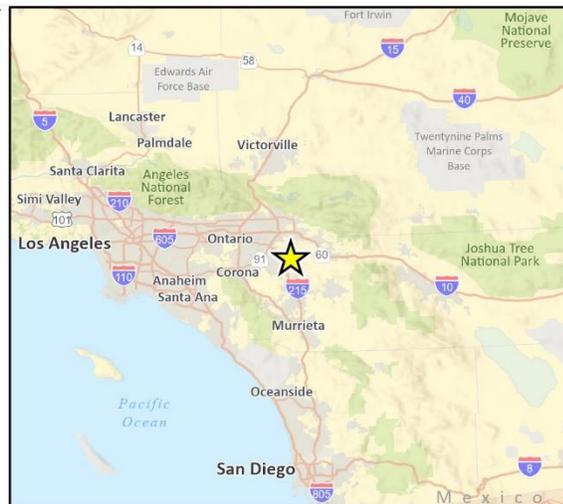
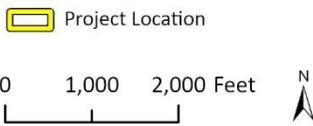


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Basemap provided by National Geographic Society, Esri and their licensors © 2022. Sunnymead Quadrangle. T02S R03W S31,32 & T03S R03W S05-08. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

CRFig1 Proj Loch Map





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July 29, 2022

Daniel Salgado, Chairperson
Cahuilla Band of Indians
Chairman@cahuilla.net

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Chairman Salgado,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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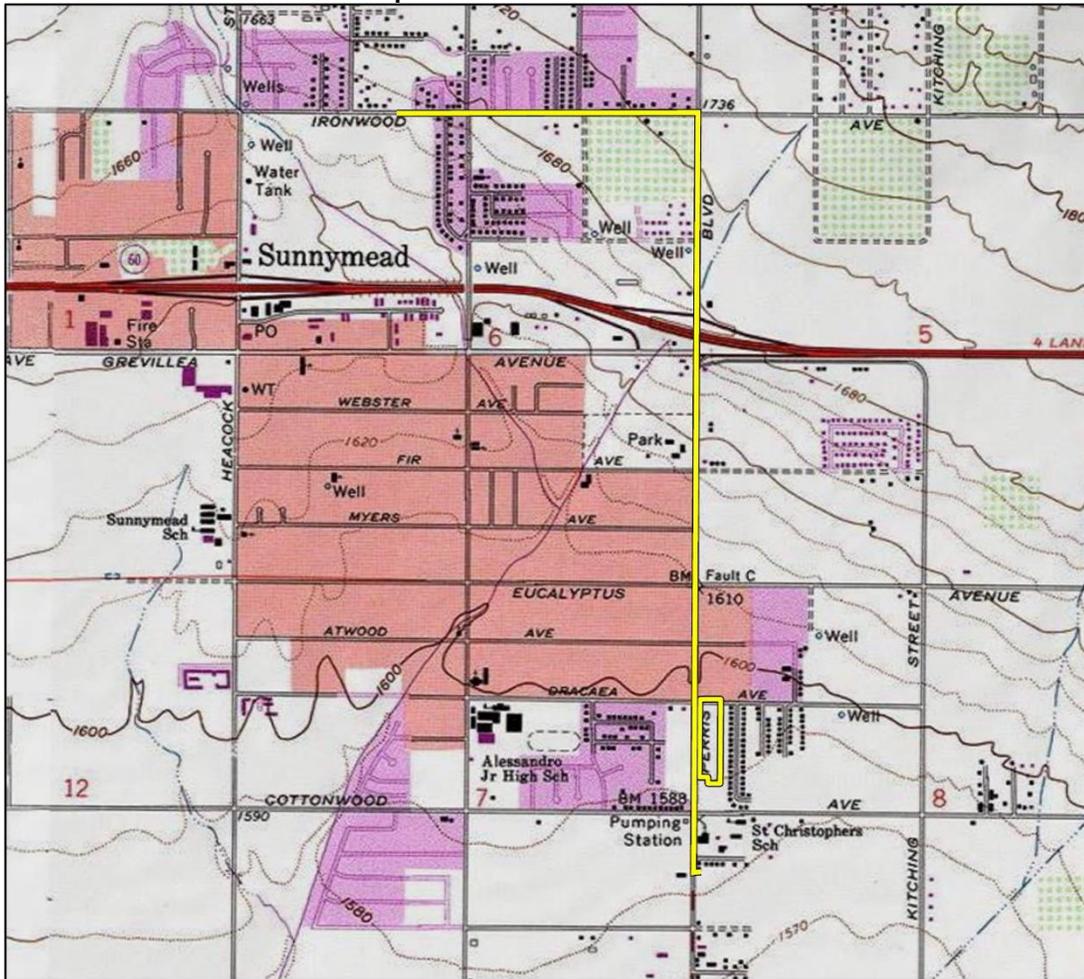
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Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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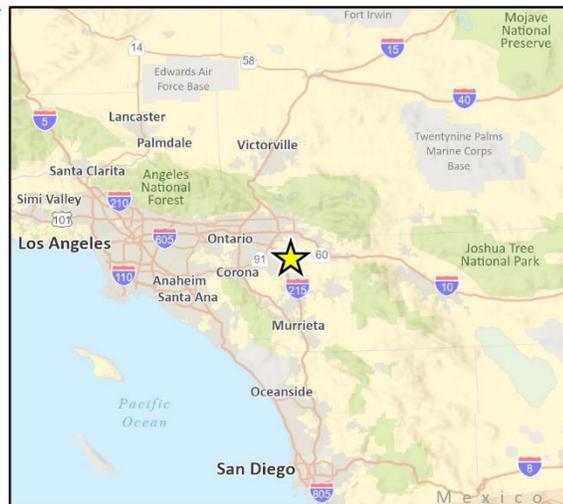
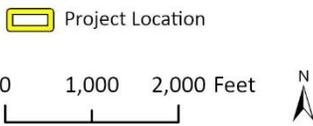


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July 29, 2022

Manfred Scott, Acting Chairman
Quechan Tribe of the Fort Yuma Reservation
Kw'ts'an Culutral Committee
scottmanfred@yahoo.com

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Acting Chairman Scott,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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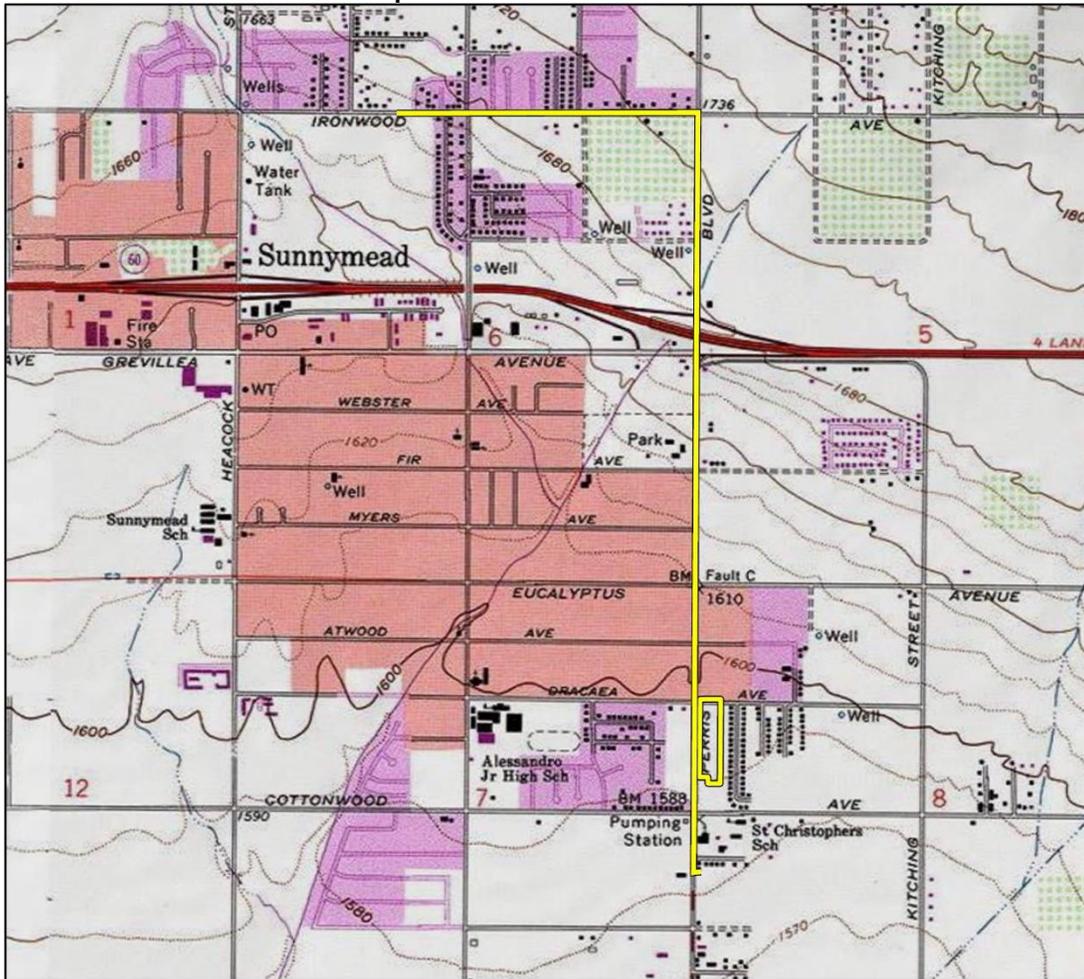
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Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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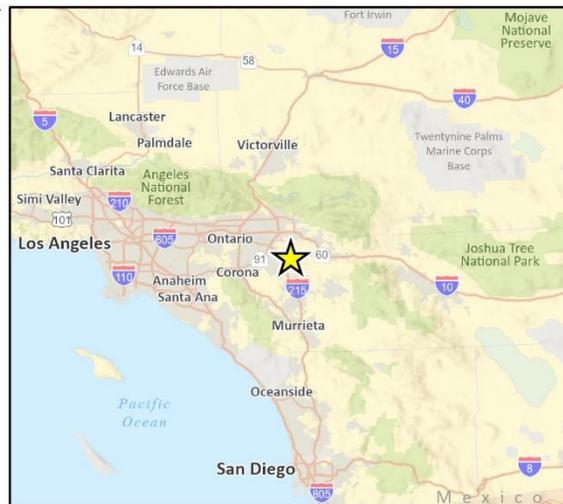
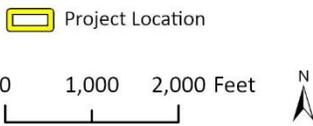


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July 29, 2022

Amanda Vance, Chairperson
Augustine Band of Cahuilla Mission Indians
hhaines@augustinetribe.com

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Chairperson Vance,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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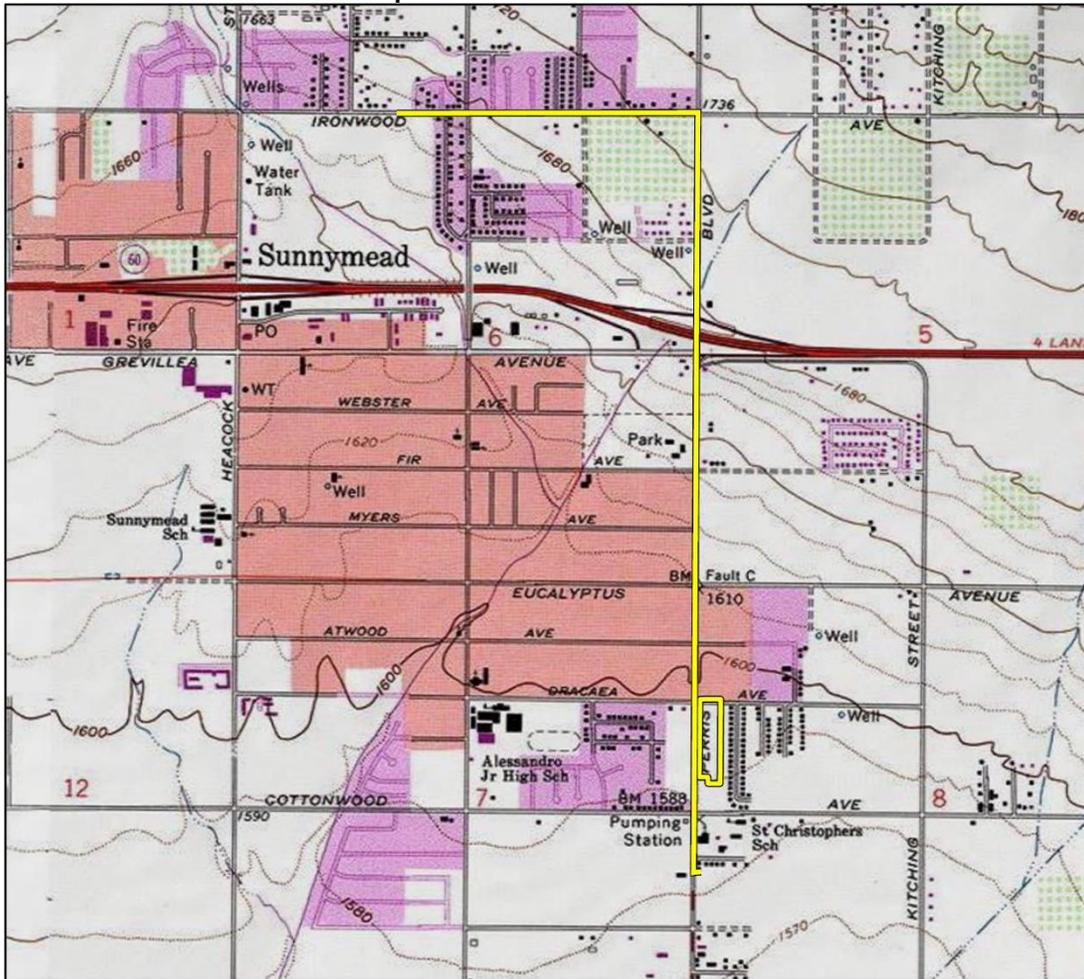
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Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map



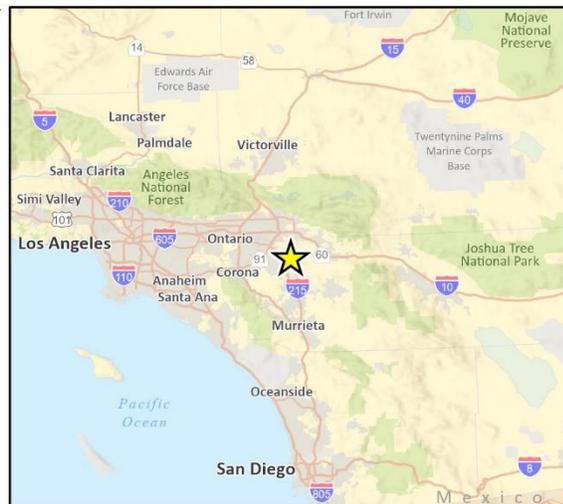
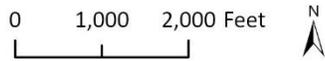
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CRFig1 Proj Loch Map

 Project Location





Rincon Consultants, Inc.

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Redlands, California 92374

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www.rinconconsultants.com

July 29, 2022

Isaiah Vivanco, Chairperson
Soboba Band of Luiseno Indians
ivivanco@soboba-nsn.gov

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Mr. Vivanco,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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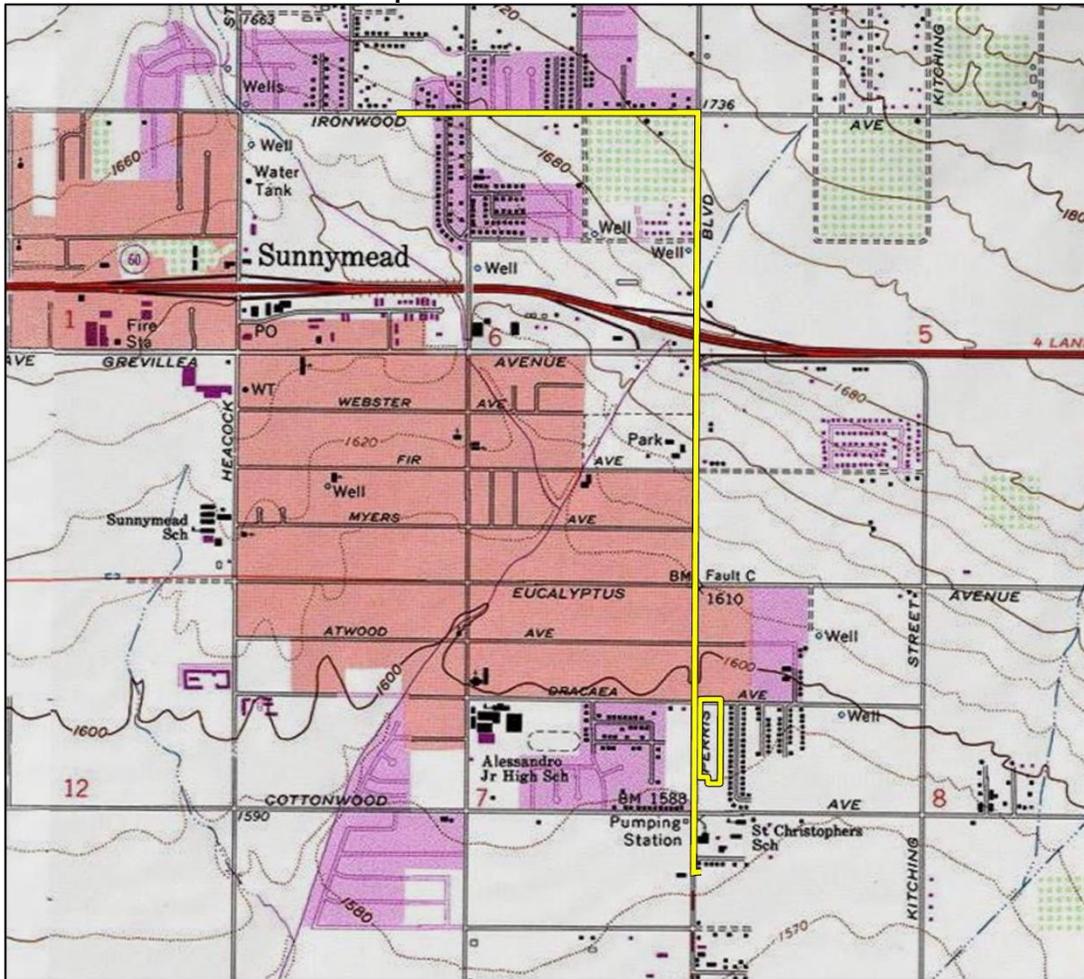
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Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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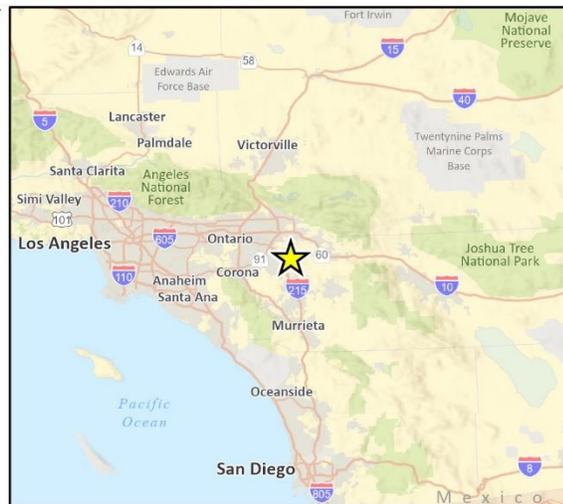
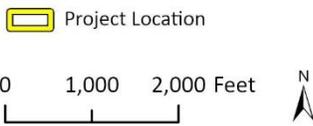


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July 29, 2022

Wayne Walker, Co-Chairperson
Serrano Nation of Mission Indians
serranonation1@gmail.com

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Mr. Walker,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

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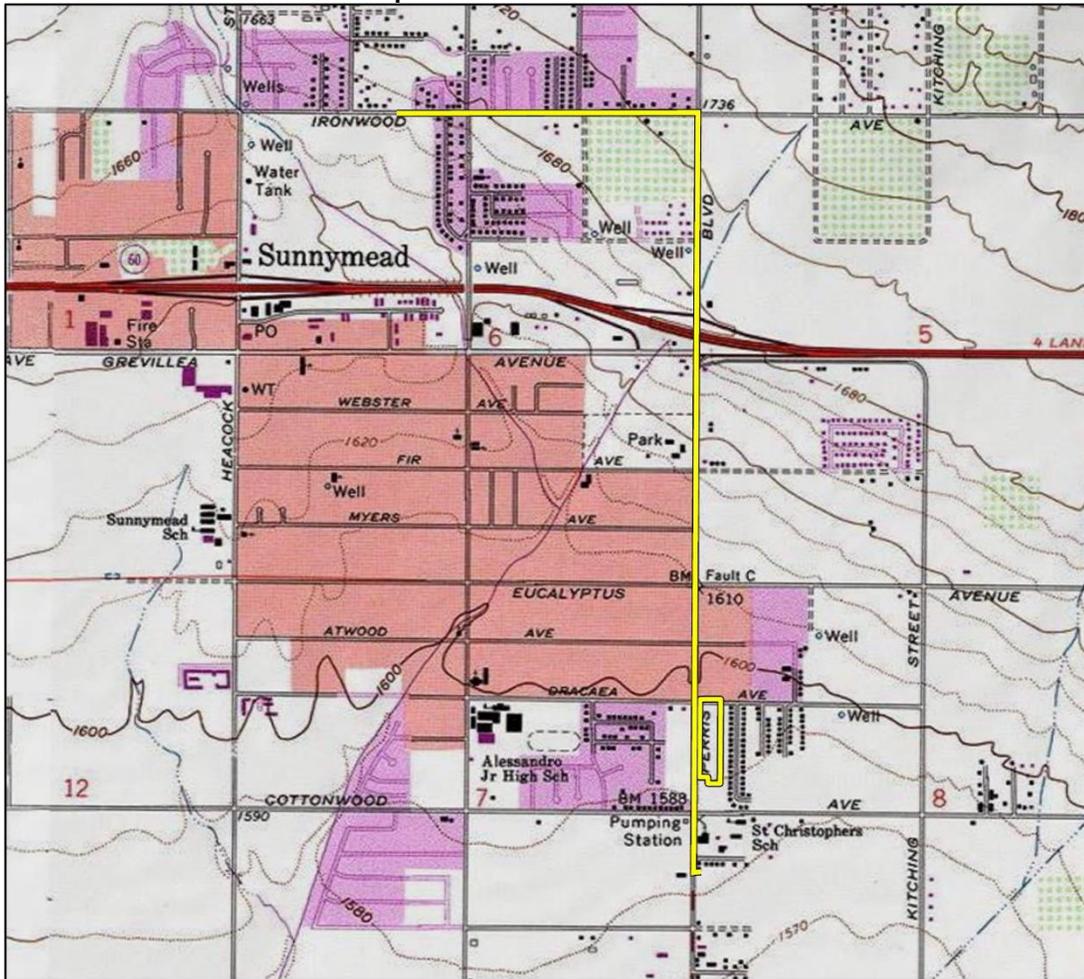
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Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map



Figure 1: Area of Potential Effects Map



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CRFig1 Proj Loch Map

 Project Location

0 1,000 2,000 Feet





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July 29, 2022

Doug Welmas, Chairperson
Cabazon Band of Mission Indians
jstapp@cabazonindians-nsn.gov

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Dear Chairperson Welmas,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

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As part of the environmental compliance for the Project, your tribe has been identified as one that might attach religious and cultural significance to historic properties in the APE. Your assistance is requested with the identification of cultural resources of significance (a previous letter of inquiry was sent in January 2020 for the original groundwater extraction, conveyance, and treatment facilities



project). Your participation in the early identification of cultural resources will ensure their consideration during the Project planning phase. We welcome your recommendations regarding appropriate management or treatment of cultural resources that occur within the APE.

This letter is not intended to constitute formal consultation under Section 106; formal Section 106 consultation will be completed by the lead federal agency. If you have questions, need additional information, or wish to comment, please contact me by email at lflaherty@rinconconsultants.com or by telephone at (805) 201-9621. Please respond within 30 days of receipt of this letter.

Sincerely,

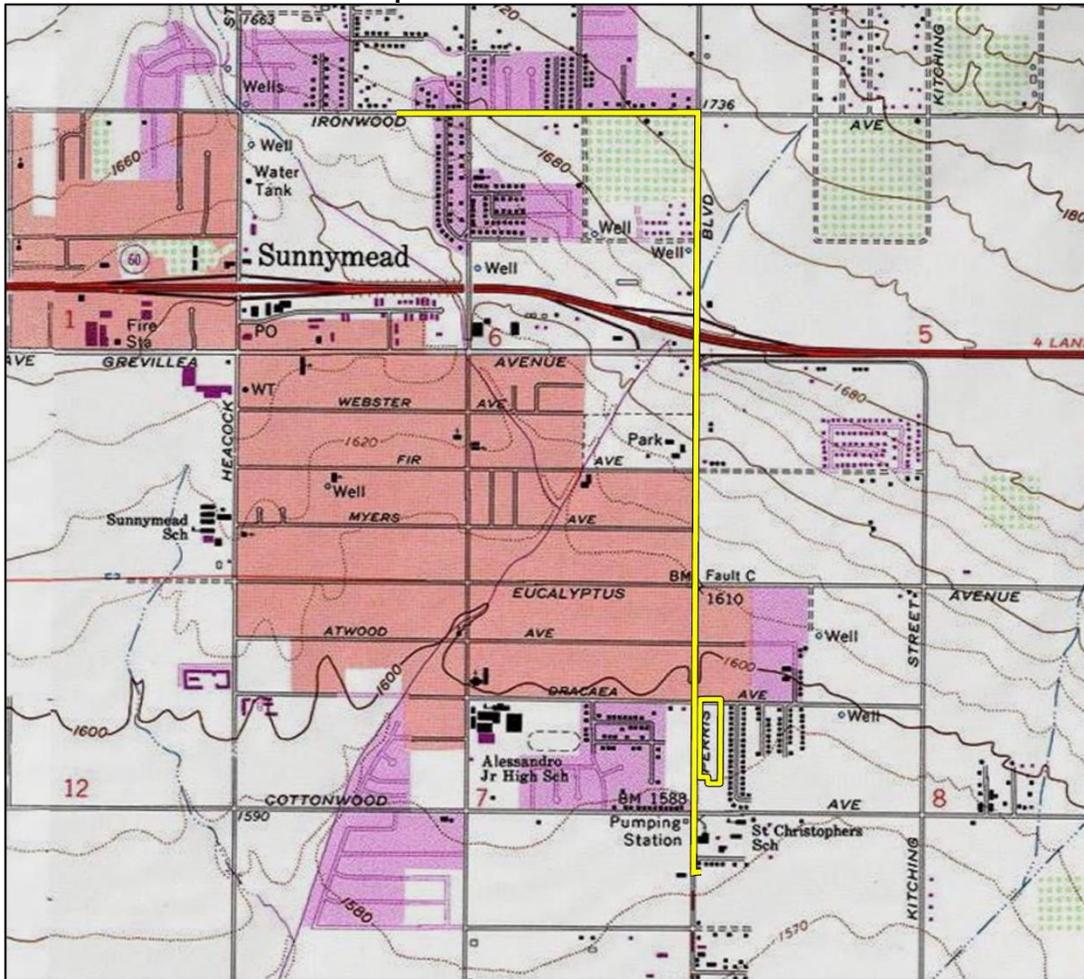
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map



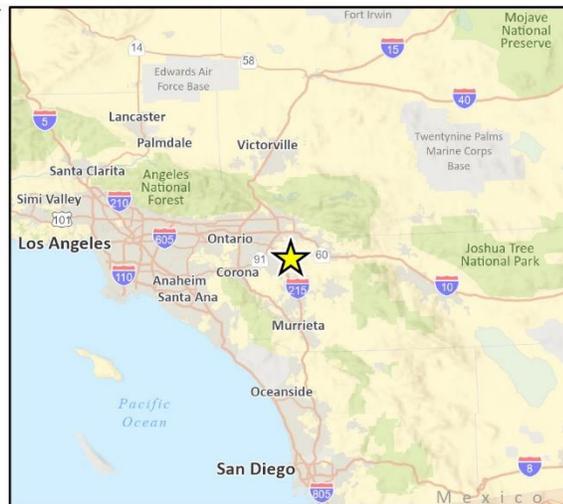
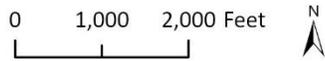
Figure 1: Area of Potential Effects Map



Basemap provided by National Geographic Society, Esri and their licensors © 2022. Sunnymead Quadrangle. T02S R03W S31,32 & T03S R03W S05-08. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

CRFig1 Proj Loch Map

 Project Location



From: [Laura Maldonado](#)
Sent: Tuesday, July 26, 2022 1:12 PM
To: ACBCI-THPO@aguacaliente.net
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Garcia-Plotkin.pdf](#)

Good afternoon Ms. Garcia-Plotkin,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:08 AM
To: ACBCI-THPO@aguacaliente.net
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Garcia-Plotkin.pdf](#)

Good morning Ms. Garcia-Plotkin,

Please see the attached updated letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Tuesday, July 26, 2022 1:12 PM
To: ACBCI-THPO@aguacaliente.net
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Ms. Garcia-Plotkin,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 3:03 PM
To: ['THPO Consulting'](#)
Cc: [Leanna Flaherty](#)
Subject: RE: [EXT] RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [Raw_Water_Conveyance_Pipeline.zip](#)
[Additional Staging Area.zip](#)

Good afternoon Ms. Gonzalez,

Thank you for your email. I am attaching the shapefiles for this project. Please let me know if you have any additional questions or concerns regarding the EMWD Raw Water Conveyance Pipeline Phase III Project.

If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: THPO Consulting <ACBCI-THPO@aguacaliente.net>
Sent: Wednesday, August 10, 2022 11:20 AM
To: Laura Maldonado <lmaldonado@rinconconsultants.com>
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: [EXT] RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

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Hi Laura,

We received your letter. Can you send us the shapefiles for this project?

Thank you,

Arysa Gonzalez Romero, M.S., RPA.

Cultural Resources Analyst

Agua Caliente Band of Cahuilla Indians

Tribal Historic Preservation Office

Cellphone: (760)-831-2484

Office: (760)-883-1327

Email: aromero@aguacaliente.net



From: Laura Maldonado <lmaldonado@rinconconsultants.com>

Sent: Friday, July 29, 2022 7:08 AM

To: THPO Consulting <ACBCI-THPO@aguacaliente.net>

Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>

Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

**** This Email came from an External Source ****

Good morning Ms. Garcia-Plotkin,

Please see the attached updated letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado

Sent: Tuesday, July 26, 2022 1:12 PM

To: ACBCI-THPO@aguacaliente.net

Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>

Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Ms. Garcia-Plotkin,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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03-058-2022-001

August 30, 2022

[VIA EMAIL TO:lflaherty@rinconconsultants.com]
Rincon Consultants, Inc.
Ms. Leanna Flaherty
1980 Orange Tree Ln., Ste. 105
Redlands, California 92374

Re: EMWD Raw Water Conveyance Pipeline Phase III Project

Dear Ms. Leanna Flaherty,

The Agua Caliente Band of Cahuilla Indians (ACBCI) appreciates your efforts to include the Tribal Historic Preservation Office (THPO) in the Raw Water Conveyance Pipeline Phase III project. The project area is not located within the boundaries of the ACBCI Reservation. However, it is within the Tribe's Traditional Use Area. For this reason, the ACBCI THPO requests the following:

- *A cultural resources inventory of the project area by a qualified archaeologist prior to any development activities in this area.
- *A copy of the records search with associated survey reports and site records from the information center.
- *Copies of any cultural resource documentation (report and site records) generated in connection with this project.

Again, the Agua Caliente appreciates your interest in our cultural heritage. If you have questions or require additional information, please call me at (760)699-6956. You may also email me at ACBCI-THPO@aguacaliente.net.

Cordially,

Lacy Padilla
Operations Manager
Tribal Historic Preservation Office
AGUA CALIENTE BAND
OF CAHUILLA INDIANS

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:13 AM
To: hhaines@augustinetribe.com
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Vance.pdf](#)

Good morning Chairperson Vance,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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AUGUSTINE BAND OF CAHUILLA INDIANS
PO Box 846 84-481 Avenue 54 Coachella CA 92236
Telephone: (760) 398-4722
Fax (760) 369-7161
Tribal Chairperson: Amanda Vance
Tribal Vice-Chairperson: Victoria Martin
Tribal Secretary: Geramy Martin

Date: July 29, 2022

**RE: Notification of the Proposed Eastern Municipal Water District Raw Water
Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California**

Dear: Leanna Flaherty
Cultural Resources Project Manager

Thank you for the opportunity to offer input concerning the development of the above-identified project. We appreciate your sensitivity to the cultural resources that may be impacted by your project and the importance of these cultural resources to the Native American peoples that have occupied the land surrounding the area of your project for thousands of years. Unfortunately, increased development and lack of sensitivity to cultural resources have resulted in many significant cultural resources being destroyed or substantially altered and impacted. Your invitation to consult on this project is greatly appreciated.

At this time, we are unaware of specific cultural resources that may be affected by the proposed project, however, in the event, you should discover any cultural resources during the development of this project please contact our office immediately for further evaluation.

Very truly yours,

Victoria Martin

Victoria Martin, Tribal Vice-Chairperson
Augustine Band of Cahuilla Indians

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:18 AM
To: jstapp@cabazonindians-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Welmas.pdf](#)

Good morning Chairperson Welmas,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 8:49 AM
To: 'jstapp@cabazonindians-nsn.gov'
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Welmas,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 8:36am today, and I left a voicemail. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, July 29, 2022 7:18 AM
To: jstapp@cabazonindians-nsn.gov
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Welmas,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:12 AM
To: chairman@cahuilla.net
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Salgado.pdf](#)

Good morning Chairperson Salgado,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 8:54 AM
To: 'besparza@cahuilla.net'
Cc: [Leanna Flaherty](#); chairman@cahuilla.net
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Salgado.pdf](#)

Good morning Director Bobby Ray Esparza,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to Chairman Salgado on July 29, 2022 with further information. I appreciate you speaking with me this morning, and I am attaching a copy of the letter as we discussed. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond to this email, or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Friday, July 29, 2022 7:12 AM
To: chairman@cahuilla.net
Cc: [Leanna Flaherty <lflaherty@rinconconsultants.com>](mailto:lflaherty@rinconconsultants.com)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Salgado,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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From: [BobbyRay Esparza](#)
Sent: Thursday, August 18, 2022 9:59 AM
To: [Laura Maldonado](#)
Cc: [Leanna Flaherty](#); [Daniel Salgado](#)
Subject: [EXT] Re: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

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Good morning,

The Cahuilla Band has received and reviewed the project notification letter for the above project located in Riverside County, Ca. The Cahuilla Band has an interest in this project and would like to request that a cultural monitor from Cahuilla be present for all ground disturbing activities. We believe that cultural resources may be unearthed during construction. The Cahuilla Band appreciates your assistance in preserving Tribal Cultural Resources in your project.

Respectfully,

BobbyRay Esparza
Cultural Director
Cahuilla Band of Indians
Cell: (760) 423-2773
Office: (951) 763-5549
Fax: (951) 763-2808

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From: Laura Maldonado <lmaldonado@rinconconsultants.com>
Sent: Friday, August 12, 2022 8:54 AM
To: BobbyRay Esparza <Besparza@cahuilla.net>
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>; Daniel Salgado <CHAIRMAN@CAHUILLA.NET>
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Director Bobby Ray Esparza,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to Chairman Salgado on July 29, 2022 with further information. I appreciate you speaking with me this morning, and I am attaching a copy of the letter as we discussed. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond to this email, or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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From: Laura Maldonado

Sent: Friday, July 29, 2022 7:12 AM

To: chairman@cahuilla.net

Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>

Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Salgado,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:23 AM
To: loscoyotes@gmail.com
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Chapparosa.pdf](#)

Good morning Chairperson Chapparosa,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 9:01 AM
To: 'loscoyotes@gmail.com'
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Chapparosa,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I called at 8:56am this morning and left a message with office personnel. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Friday, July 29, 2022 7:23 AM
To: loscoyotes@gmail.com
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Chapparosa,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Tuesday, September 6, 2022 5:13 PM
To: raypacificalarm@yahoo.com
Cc: [Leanna Flaherty](#); loscoyotes@gmail.com
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Chairperson Chapparosa,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 to your loscoyotes@gmail.com email with further information. We left a phone message with the office secretary on August 12th and August 22nd. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900. Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, August 12, 2022 9:01 AM
To: 'loscoyotes@gmail.com' <loscoyotes@gmail.com>
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Chapparosa,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I called at 8:56am this morning and left a message with office personnel. If you or your organization has any knowledge or concerns

regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado

Sent: Friday, July 29, 2022 7:23 AM

To: loscoyotes@gmail.com

Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>

Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Chapparosa,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Tuesday, September 6, 2022 5:29 PM
To: 'raypacificalarm@yahoo.com'
Cc: [Leanna Flaherty](#); 'loscoyotes@gmail.com'
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Chapparosa.pdf](#)

Good afternoon,
In case you need reference to the letter, I am attaching it to this email.
Best,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Tuesday, September 6, 2022 5:13 PM
To: raypacificalarm@yahoo.com
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>; loscoyotes@gmail.com
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Chairperson Chapparosa,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 to your loscoyotes@gmail.com email with further information. We left a phone message with the office secretary on August 12th and August 22nd. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.
Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Friday, August 12, 2022 9:01 AM
To: 'loscoyotes@gmail.com' <loscoyotes@gmail.com>
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Chapparosa,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I called at 8:56am this morning and left a message with office personnel. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Friday, July 29, 2022 7:23 AM
To: loscoyotes@gmail.com
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Chapparosa,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:18 AM
To: abrierty@morongo-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Martin.pdf](#)

Good morning Chairperson Martin,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 9:06 AM
To: abrierty@morongo-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Martin,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 9:02am today, and I left a voicemail. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Friday, July 29, 2022 7:18 AM
To: abrierty@morongo-nsn.gov
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Martin,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:07 AM
To: abrierty@morongo-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Brierty .pdf](#)

Good morning Ms. Brierty,

Please see the attached updated letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County. Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Tuesday, July 26, 2022 12:54 PM
To: abrierty@morongo-nsn.gov
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Ms. Brierty,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County. Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 9:14 AM
To: 'abrierty@morongo-nsn.gov'
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Ms. Brierty,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 9:06am today, and I left a voicemail. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, July 29, 2022 7:07 AM
To: abrierty@morongo-nsn.gov
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Ms. Brierty,

Please see the attached updated letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado

Sent: Tuesday, July 26, 2022 12:54 PM

To: abrierty@morongo-nsn.gov

Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>

Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Ms. Brierty,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

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lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Tuesday, July 26, 2022 1:14 PM
To: sgaughen@palatribe.com
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Gaughen.pdf](#)

Good afternoon Ms. Gaughen,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County. Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:10 AM
To: [Shasta Gaughen](#)
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Gaughen.pdf](#)

Good morning Ms. Gaughen,

Please see the attached updated letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Tuesday, July 26, 2022 1:14 PM
To: sgaughen@palatribe.com
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Ms. Gaughen,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 9:17 AM
To: [Shasta Gaughen](#)
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Ms. Gaughen,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

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Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Friday, July 29, 2022 7:10 AM
To: Shasta Gaughen <sgaughen@palatribe.com>
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Ms. Gaughen,

Please see the attached updated letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado

Sent: Tuesday, July 26, 2022 1:14 PM

To: sgaughen@palatribe.com

Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>

Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Ms. Gaughen,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:18 AM
To: epreston@pechanga-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_MacarroM.pdf](#)

Good morning Chairperson Macarro,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:18 AM
To: pmacarro@pechanga-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_MacarroP.pdf](#)

Good morning Mr. Macarro,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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PECHANGA CULTURAL RESOURCES
Temecula Band of Luiseño Mission Indians

Post Office, Box 2183 • Temecula, CA 92593
Telephone (951) 770-6300 • Fax (951) 506-9491

July 29, 2022

VIA E-Mail and USPS

Laura Flaherty, MA, RPA
Cultural Resources Project Manager
Rincon Consultants, Inc.
1980 Orange Tree Ln., Ste. 105
Redlands, California 92374

RE: Request for Information for the EMWD Raw Water Conveyance Pipeline Phase III Project (in the City of Moreno Valley), Riverside County, California

Dear Ms. Flaherty,

The Pechanga Band of Indians ("the Tribe") appreciates your request for information regarding the above referenced Project. After reviewing the provided maps and our internal documents, we have determined that the Project area is not within Reservation land's, although it is located within Our Ancestral Territory. At this time, we are interested in participating in this Project based upon our 'Ayélkwish/Traditional Knowledge of the area and its placement 1.37 miles from an 'Atáaxum/Luiseño Traditional Cultural Property. This Project's has a close regional-adjacency to five distinct Ancestral Placename locations, between 3.67-8.82 miles from this Project's APE. This proposed Project has four nearby (non-historic era) archaeological-cultural sites between 1.16-1.33 miles away from this APE. Further, because of multiple nearby Ancestral human-remains, ceremonial features, and through extensive previously recorded sites, and project-experience within this Project's vicinity the Tribe therefore, is interested in participating in this Project. The Pechanga Tribe believes the possibility for recovering sensitive subsurface resources, during ground-disturbing activities for the Project is extremely high.

The Tribe is dedicated to providing comprehensive cultural information to you and your firm for inclusion in the archaeological study as well as to the Lead Agency for CEQA review. At this time, the Tribe requests the following so we may continue the consultation process and to provide adequate and appropriate recommendations for the Project:

- 1) Notification once the Project begins the entitlement process, if it has not already;
- 2) Copies of all applicable archaeological reports, site records, proposed grading plans and environmental documents (EA/IS/MND/EIR, etc);
- 3) Government-to-government consultation with the Lead Agency; and

Chairperson:
Neal Ibanez

Vice Chairperson:
Bridgett Barcello

Committee Members:
Darlene Miranda
Richard B. Scearce, III
Robert Villalobos
Shevon Torres
Juan Rodriguez

Director:
Gary DuBois

Coordinator:
Paul Macarro

Cultural Analyst:
Tuba Ebru Ozdil

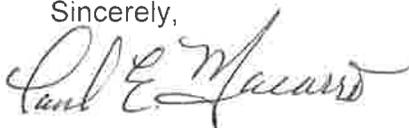
Planning Specialist:
Molly Escobar

- 4) The Tribe believes that monitoring by a Riverside County qualified archaeologist and a professional Pechanga Tribal Monitor may be required during earthmoving activities. Therefore, the Tribe reserves its right to make additional comments and recommendations once the environmental documents have been received and fully reviewed. Further, in the event that subsurface cultural resources are identified, the Tribe requests consultation with the Project proponent and Lead Agency regarding the treatment and disposition of all artifacts.

As a Sovereign governmental entity, the Pechanga Tribe is entitled to appropriate and adequate government-to-government consultation regarding the proposed Project. We would like you and your client to know, that the Tribe does not consider initial inquiry letters from project consultants to constitute appropriate government-to-government consultation, but rather tools to obtain further information about the Project area. Therefore, the Tribe reserves its rights to participate in the formal environmental review process, including government-to-government consultation with the Lead Agency, and requests to be included in all correspondence regarding this Project.

Please note that we are interested in participating in surveys within 'Atáaxum/Luiseño Ancestral Territory. Prior to conducting any surveys, please contact the Cultural Department to schedule specifics. If you have any additional questions or comments, please contact me at pmacarro@pechanga-nsn.gov or 951-770-6306.

Sincerely,



Paul E. Macarro
Cultural Coordinator
Pechanga Reservation

*Pechanga Cultural Resources • Temecula Band of Luiseño Mission Indians
Post Office Box 2183 • Temecula, CA 92592*

Sacred Is The Duty Trusted Unto Our Care And With Honor We Rise To The Need

From: Laura Maldonado
Sent: Friday, July 29, 2022 11:17 AM
To: Paul Macarro; Leanna Flaherty
Cc: Ebru Ozdil; Molly Earp; Juan Ochoa
Subject: RE: [EXT] Pechanga Tribe Scoping Response to the EMWD Raw Water Conveyance Pipeline Phase III Project

Good morning Mr. Macarro,

We have received your response and will document your concerns and request for consultation in our report and will forward your concerns and request to the lead agency. We understand that you have identified the APE within a culturally sensitive area, recommending Native American and archaeological monitoring, as well as notification once the project begins the entitlement process, and participating in surveys within your ancestral territory in which the APE is located.

Thank you for your response regarding the EMWD Raw Water Conveyance Pipeline Phase III Project. Should you have any other concerns you would like to voice to be included in our report, please let us know.

Best,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct | lmaldonado@rinconconsultants.com

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Time Off Alert: 10/05 – 10/07

-----Original Message-----

From: Paul Macarro <pmacarro@pechanga-nsn.gov>
Sent: Friday, July 29, 2022 10:34 AM
To: Leanna Flaherty <lflaherty@rinconconsultants.com>; Laura Maldonado <lmaldonado@rinconconsultants.com>
Cc: Ebru Ozdil <eozdil@pechanga-nsn.gov>; Molly Earp <mearp@pechanga-nsn.gov>; Juan Ochoa <jochoa@pechanga-nsn.gov>
Subject: [EXT] Pechanga Tribe Scoping Response to the EMWD Raw Water Conveyance Pipeline Phase III Project

CAUTION: This email originated from outside of Rincon Consultants. Be cautious before clicking on any links, or opening any attachments, until you are confident that the content is safe .

Miiyuyam/Hello Rincon Consultants-Folks,

Pechanga Cultural Resources appreciates your diligence, outreach, and the opportunity to respond to your Scoping Notice. Have a great weekend!

Lóoviqap/Thanks,
Paul E. Macarro
Cultural Coordinator
Pechanga Reservation
951-770-6306

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:12 AM
To: historicpreservation@quechantribe.com
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_McCormick.pdf](#)

Good morning Mrs. McCormick,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Quechan Historic Preservation Officer](#)
Sent: Monday, August 1, 2022 7:52 AM
To: [Laura Maldonado](#)
Subject: [EXT] RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

CAUTION: This email originated from outside of Rincon Consultants. Be cautious before clicking on any links, or opening any attachments, until you are confident that the content is safe .

This email is to inform you that we have no comments on this project. We defer to the more local Tribes and support their decisions on the projects.

From: Quechan Historic Preservation [mailto:historicpreservation@quechantribe.com]
Sent: Monday, August 01, 2022 7:51 AM
To: historicpreservation@quechantribe.com
Subject: FW: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

From: Laura Maldonado [mailto:lmaldonado@rinconconsultants.com]
Sent: Friday, July 29, 2022 7:12 AM
To: historicpreservation@quechantribe.com
Cc: Leanna Flaherty
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Mrs. McCormick,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County. Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Virus-free. www.avast.com

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:13 AM
To: scottmanfred@yahoo.com
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Scott.pdf](#)

Good morning Acting Chairman Scott,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Tuesday, July 26, 2022 1:16 PM
To: jgomez@ramona-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Gomez.pdf](#)

Good afternoon Mr. Gomez,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:10 AM
To: jgomez@ramona-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Gomez.pdf](#)

Good morning Mr. Gomez,

Please see the attached updated letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Tuesday, July 26, 2022 1:16 PM
To: jgomez@ramona-nsn.gov
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Mr. Gomez,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)

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lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 9:27 AM
To: jgomez@ramona-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Mr. Gomez,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 9:23am today, and I left a voicemail. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, July 29, 2022 7:10 AM
To: jgomez@ramona-nsn.gov
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Mr. Gomez,

Please see the attached updated letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado

Sent: Tuesday, July 26, 2022 1:16 PM

To: jgomez@ramona-nsn.gov

Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>

Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Mr. Gomez,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:18 AM
To: admin@ramona-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Hamilton.pdf](#)

Good morning Chairperson Hamilton,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 9:29 AM
To: admin@ramona-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Hamilton,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 9:23am today, and I left a voicemail. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, July 29, 2022 7:18 AM
To: admin@ramona-nsn.gov
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Hamilton,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:18 AM
To: 'crd@rincon-nsn.gov'
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Madrigal.pdf](#)

Good morning Ms. Madrigal,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 9:34 AM
To: crd@rincon-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Ms. Madrigal,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 9:31am today, and I left a voicemail. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, July 29, 2022 7:18 AM
To: 'crd@rincon-nsn.gov' <crd@rincon-nsn.gov>
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Ms. Madrigal,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

Laura Maldonado

From: Laura Maldonado
Sent: Friday, August 26, 2022 10:30 AM
To: Cheryl Madrigal
Cc: Deneen Pelton; Leanna Flaherty
Subject: RE: [EXT] Request for Consultation on the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: APE_Shapefiles_20210628.zip; CRFig 1 Proj Locn Map 20220720.jpg; Fig X Project Location.jpg

Good morning Ms. Madrigal,

Thank you for your email. I am attaching the shapefiles and project location maps to this email. The records search results for a previous project, the Perris North Basin Groundwater Wells Project, was utilized for this project and can be found in the links below. These results cover the entirety of the current project APE and more, and some files may not be relevant to this specific project. Additionally, we can send you the cultural resource assessment for this project once it is complete. I have also noted that you would like to enter consultation with the State Water Resources Control Board as part of the Section 106 process.

Resources: <https://rinconconsultants.exavault.com/share/view/351ft-amvcyb72>

Reports:

<https://rinconconsultants.exavault.com/share/view/351g0-eu5k4aih>

If you have any additional comments or concerns, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Cheryl Madrigal <CMadrigal@rincon-nsn.gov>
Sent: Friday, August 19, 2022 5:36 PM
To: Laura Maldonado <lmaldonado@rinconconsultants.com>
Cc: Deneen Pelton <DPelton@rincon-nsn.gov>
Subject: [EXT] Request for Consultation on the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

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Hi Laura,

Thank you so much for reaching out to the Tribe.

We would like to consult with the lead agency on the proposed project. Please provide additional information regarding the project such as existing GIS shapefiles/KMZ, any cultural resources assessments, record search results, overly maps of the project and potential APE and previously recorded cultural sites.

Thank you so much.

Sincerely,

Cheryl

Cheryl Madrigal

Cultural Resources Manager

Tribal Historic Preservation Officer

Cultural Resources Department

Rincon Band of Luiseño Indians

1 West Tribal Road | Valley Center, CA 92082

Office: (760) 749 1092 ext. 323 | Cell: 760-648-3000

Fax: 760-749-8901

Email: cmadrigal@rincon-nsn.gov



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Begin forwarded message:

From: Laura Maldonado <lmaldonado@rinconconsultants.com>

Date: August 12, 2022 at 9:38:16 AM PDT

To: bomazzetti@aol.com

Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>

Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Mazzetti,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 9:35am today, and I left a voicemail with your liaison. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Friday, July 29, 2022 7:10 AM
To: bomazzetti@aol.com
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Mazzetti,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:10 AM
To: bomazzetti@aol.com
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Mazzetti.pdf](#)

Good morning Chairperson Mazzetti,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 9:38 AM
To: bomazzetti@aol.com
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Mazzetti,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 9:35am today, and I left a voicemail with your liaison. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Friday, July 29, 2022 7:10 AM
To: bomazzetti@aol.com
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Mazzetti,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [BO MAZZETTI](#)
Sent: Friday, August 12, 2022 9:41 AM
To: [Laura Maldonado](#)
Subject: [EXT] Re: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Follow Up Flag: Follow up
Flag Status: Flagged

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Thanks I will check as to status of reply!

Sent from my iPhone

On Aug 12, 2022, at 9:38 AM, Laura Maldonado <lmaldonado@rinconconsultants.com> wrote:

Good morning Chairperson Mazzetti,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 9:35am today, and I left a voicemail with your liaison. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, July 29, 2022 7:10 AM
To: bomazzetti@aol.com
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Mazzetti,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County. Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:20 AM
To: jmauck@sanmanuel-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Mauck.pdf](#)

Good morning Ms. Mauck,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County. Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 9:42 AM
To: jmauck@sanmanuel-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Ms. Mauck,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 9:38am today, and I left a voicemail. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, July 29, 2022 7:20 AM
To: jmauck@sanmanuel-nsn.gov
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Ms. Mauck,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Ryan Nordness](#)
Sent: Thursday, August 25, 2022 2:01 PM
To: [Laura Maldonado](#)
Cc: [Leanna Flaherty](#)
Subject: [EXT] Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

CAUTION: This email originated from outside of Rincon Consultants. Be cautious before clicking on any links, or opening any attachments, until you are confident that the content is safe .

Hello Laura,
Thank you for reaching out to the Yuhaaviatam of San Manuel Nation (formerly known as the San Manuel Band of Mission Indians) concerning the proposed project area. YSMN appreciates the opportunity to review the project documentation received by the Cultural Resources Management Department on July 30th 2022. The proposed project is not located near any known cultural resources. Thank you again for your correspondence, if you have any additional questions or comments please reach out to me at your earliest convenience.
Respectfully,
Ryan Nordness

Ryan Nordness

Cultural Resource Analyst
Ryan.Nordness@sanmanuel-nsn.gov
O:(909) 864-8933 Ext 50-2022
M:(909) 838-4053
26569 Community Center Dr Highland, California 92346



From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:12 AM
To: lsaul@santarosa-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Redner.pdf](#)

Good morning Tribal Chair Redner,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 12:52 PM
To: Isaul@santarosa-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Tribal Chair Redner,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 12:36pm today, and I left a voicemail with the receptionist. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, July 29, 2022 7:12 AM
To: Isaul@santarosa-nsn.gov
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Tribal Chair Redner,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Tuesday, July 26, 2022 1:00 PM
To: serranation1@gmail.com
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Cochrane.pdf](#)

Good afternoon Co-Chairperson Cochrane,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:08 AM
To: serranonation1@gmail.com
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Cochrane.pdf](#)

Good morning Co-Chairperson Cochrane,

Please see the attached updated letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Tuesday, July 26, 2022 1:00 PM
To: serranonation1@gmail.com
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Co-Chairperson Cochrane,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 1:16 PM
To: serranonation1@gmail.com
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Co-Chairperson Cochrane,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 1:12pm today, and I left a voicemail. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, July 29, 2022 7:08 AM
To: serranonation1@gmail.com
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Co-Chairperson Cochrane,

Please see the attached updated letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado

Sent: Tuesday, July 26, 2022 1:00 PM

To: serranonation1@gmail.com

Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>

Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Co-Chairperson Cochrane,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:16 AM
To: serranonation1@gmail.com
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Walker.pdf](#)

Good morning Co-Chairperson Walker

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 1:19 PM
To: serranonation1@gmail.com
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Co-Chairperson Walker,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 1:16pm today, and I left a voicemail. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Friday, July 29, 2022 7:16 AM
To: serranonation1@gmail.com
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Co-Chairperson Walker

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:11 AM
To: 'jontiveros@soboba-nsn.gov'
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Ontiveros.pdf](#)

Good morning Mr. Ontiveros,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 1:27 PM
To: jontiveros@soboba-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Mr. Ontiveros,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I appreciate you taking the time to speak with me via telephone today. I have noted your comment that the project area is within your tribal cultural landscape, and you would like to enter consultation with State Water Resources Control Board as part of the Section 106 process.

If you have any additional comments or concerns, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, July 29, 2022 7:11 AM
To: 'jontiveros@soboba-nsn.gov' <jontiveros@soboba-nsn.gov>
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Mr. Ontiveros,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:15 AM
To: ivivanco@soboba-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Vivanco.pdf](#)

Good morning Chairperson Vivanco,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 1:33 PM
To: ivivanco@soboba-nsn.gov
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon Chairperson Vivanco,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. I attempted to call your phone at 1:30pm today, and I was unable to leave a voicemail. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, July 29, 2022 7:15 AM
To: ivivanco@soboba-nsn.gov
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Chairperson Vivanco,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:30 AM
To: mmirelez@tmdci.org
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Section 106 Letter_Mirelez.pdf](#)

Good morning Mr. Mirelez,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 1:37 PM
To: mmirelez@tmdci.org
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Mr. Mirelez,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed and physically mailed to you on July 29, 2022 with further information. I attempted to call your phone at 1:33pm today, and I was unable to leave a voicemail. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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From: Laura Maldonado
Sent: Friday, July 29, 2022 7:11 AM
To: mmirelez@tmdci.org
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning Mr. Mirelez,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Appendix D

Historical Group Outreach



EMWD Raw Water Conveyance Pipeline Phase III Project Section 106 Historical Group Correspondence Tracking

Historical Group Contact	Date Letter Sent to contact	Date of Phone Contact Round 1	Date of Phone Contact Round 2	Comments/Concerns
City of Moreno Valley Environmental and Historical Preservation Board c/o Claudia Manrique Moreno Valley Community Development Department 14177 Frederick Street Moreno Valley, CA. 92553 Phone: (951) 413-3000	July 29, 2022	Aug 12, 2022	Aug 22, 2022	Aug 12: Receptionist transferred call, phone beeped for 5 minutes, unable to leave voicemail. 8.22.22: Receptionist transferred call; LF left msg on voicemail.
Moreno Valley Historical Society morenovalleyhistoricalsociety@gmail.com	July 29, 2022	Aug 12, 2022	Aug 22, 2022	Aug 12: No associated phone number. Sent follow up email. 8.22.22: LF sent follow-up email.
Perris Valley Historical Museum 120 W 4th Street Perris, CA. 92570 Via email: pvhandma@gmail.com	July 29, 2022	Aug 12, 2022	Aug 22, 2022	Aug 12: No associated phone number. Sent follow up email. 8.22.22: LF sent follow-up email.
Riverside African American Historical Society P.O. Box 209 Riverside, CA. 92502 Phone: (951) 384-1866	July 29, 2022	Aug 12, 2022	Aug 22, 2022	Aug 12: No answer, left voicemail 8.22.22: No answer; LF left message on voicemail.
March Field Air Museum Greg Kuster, Director of Operations 22550 Van Buren Boulevard Riverside, CA. 92518 MFAM Phone: (951) 902-5949 Greg Kuster's Phone: (951) 902-9936	July 29, 2022	Aug 12, 2022	N/A	Aug 12: Staff referred to Greg Kuster at (951) 902-9936. Greg answered and stated that he has no questions or concerns regarding the project.



Rincon Consultants, Inc.

1980 Orange Tree Ln., Ste. 105
Redlands, California 92374

909 253 07051 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

July 29, 2022

City of Moreno Valley Environmental and Historical Preservation Board
c/o Claudia Manrique
Moreno Valley Community Development Department
14177 Frederick Street
Moreno Valley, CA. 92553

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

Ms. Manrique,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

The Project involves funding from the State Water Resources Control Board (State Water Board) Proposition 1 Groundwater Grant Program and potentially other sources which may be considered equivalent to a federal action, thereby necessitating compliance with Section 106 of the National Historic Preservation Act (Section 106).

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Sincerely,

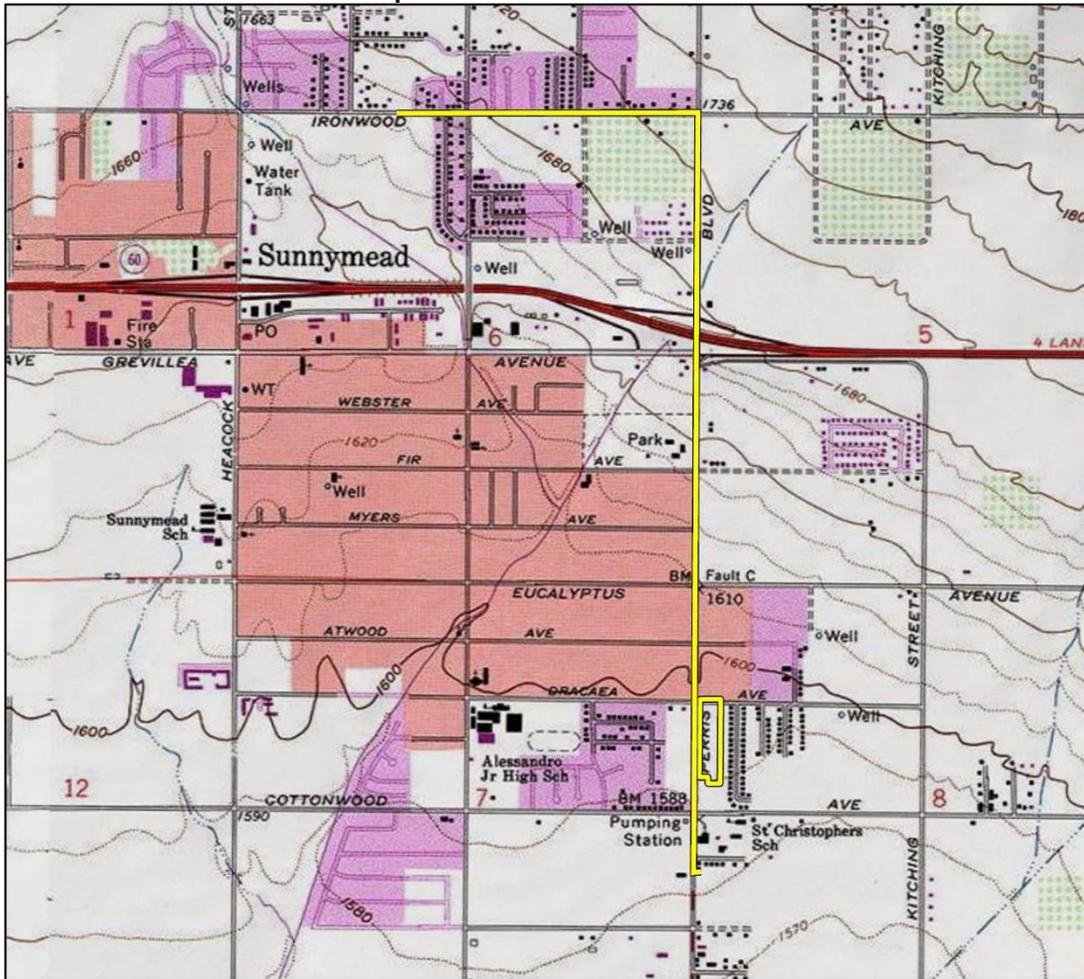
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map

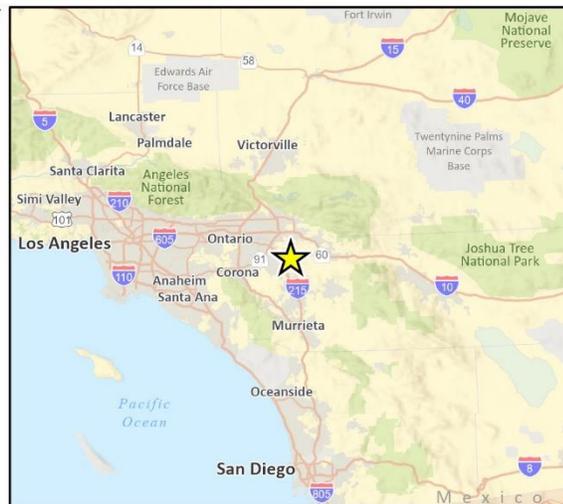
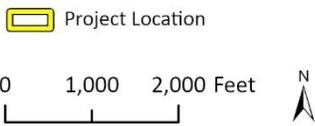


Figure 1: Area of Potential Effects Map



Basemap provided by National Geographic Society, Esri and their licensors © 2022. Sunnymead Quadrangle. T02S R03W S31,32 & T03S R03W S05-08. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

CRFig1 Proj Loch Map





Rincon Consultants, Inc.

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info@rinconconsultants.com
www.rinconconsultants.com

July 29, 2022

Moreno Valley Historical Society
morenovalleyhistoricalsociety@gmail.com

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

To Whom It May Concern,

The Eastern Municipal Water District (EMWD) is proposing to construct a transmission pipeline along Ironwood Avenue and Perris Boulevard for the purposes of conveying water from its Well 66 site to its future centralized treatment facility for treatment with other extracted well water associated with the Perris North Program as part of the Raw Water Conveyance Pipeline Phase III Project (Project). Rincon Consultants, Inc. has been retained to conduct a cultural resources assessment for the Project. The Project is located in Moreno Valley, California in Riverside County. The area of potential effects (APE) is within the *Sunnymead 7.5'* United States Geographical Survey (USGS) topographic quadrangle within Sections 31 and 32 of Township 02S, Range 03W and Sections 05-08 of Township 03S, Range 03W (Figure 1). The proposed Project is part of the Cactus Avenue Corridor Groundwater Wells Project, which was evaluated in 2020 and 2021 (State Clearinghouse # 2020030267). The original proposed project consisted of groundwater extraction, conveyance, and treatment facilities.

The Project consists of an 18-inch transmission pipeline which would be approximately 12,500 linear feet in total length. The pipeline would be located along Ironwood Avenue from the intersection with Kevin Street east to the intersection with Perris Boulevard, then south along Perris Boulevard from the intersection with Ironwood Avenue to the site of the future centralized treatment plant, which will be located on the east side of Perris Boulevard between Bay Avenue and St. Christopher Lane. All open-trench construction for the pipeline will occur entirely within the City of Moreno Valley and Caltrans rights-of-way in Ironwood Avenue and Perris Boulevard. The maximum trench width is expected to be 5.5 feet, while the depth is expected to range from 6 to 10 feet. The pipeline alignment would be designed to avoid conflicts with existing utilities. Trenchless pipeline construction techniques may be required where the pipeline crosses under storm drains. Where trenchless techniques are required, pipelines would be constructed using "bore and jack" methods. One approximately 5-acre temporary construction staging area will be located at a vacant site at the southeast corner of Perris Boulevard and Dracaea Avenue is also proposed.

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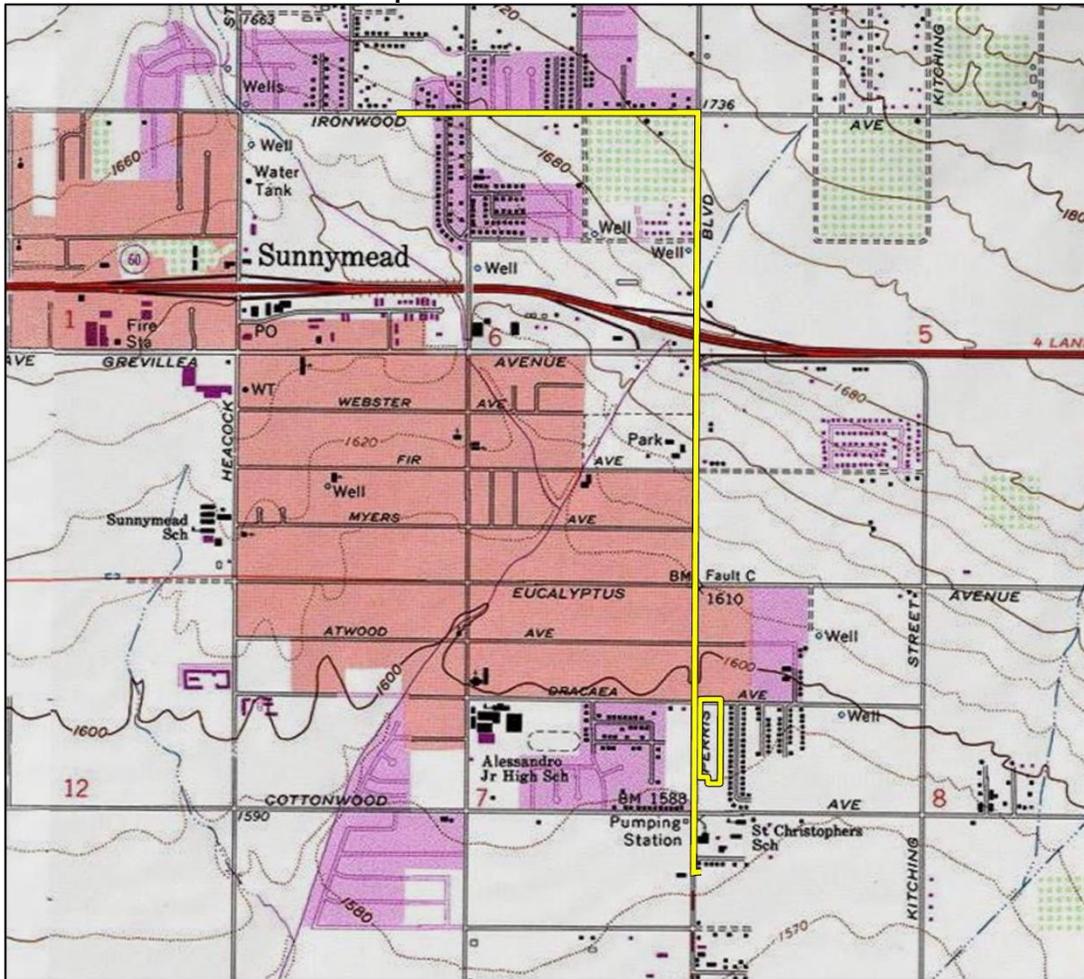
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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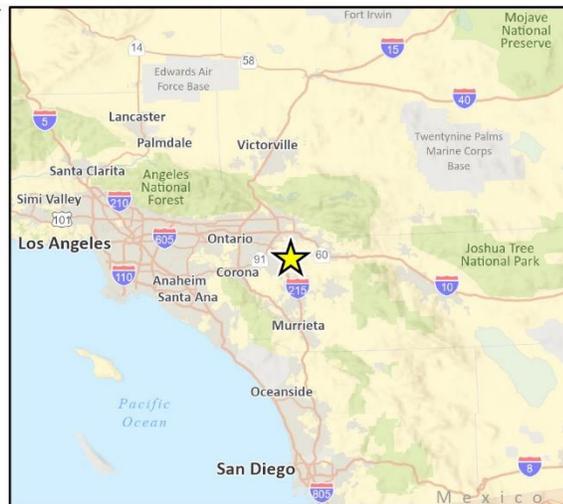
Figure 1: Area of Potential Effects Map



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CRFig1 Proj Loch Map

 Project Location





Rincon Consultants, Inc.

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Redlands, California 92374

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info@rinconconsultants.com
www.rinconconsultants.com

July 29, 2022

Perris Valley Historical Museum
120 W 4th Street
Perris, CA. 92570

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

To Whom It May Concern,

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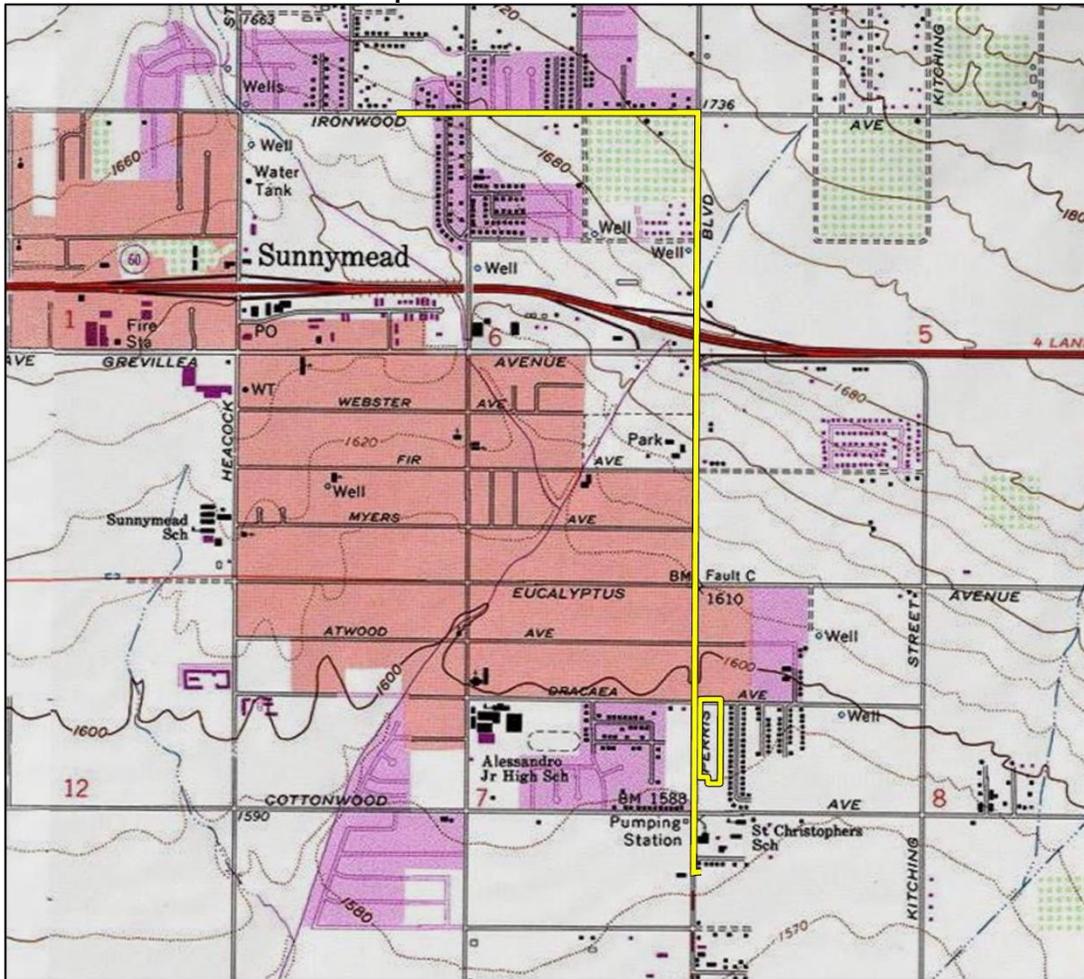
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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CRFig1 Proj Loch Map

 Project Location

0 1,000 2,000 Feet





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Redlands, California 92374

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info@rinconconsultants.com
www.rinconconsultants.com

July 29, 2022

Riverside African American Historical Society
P.O. Box 209
Riverside, CA. 92502

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

To Whom It May Concern,

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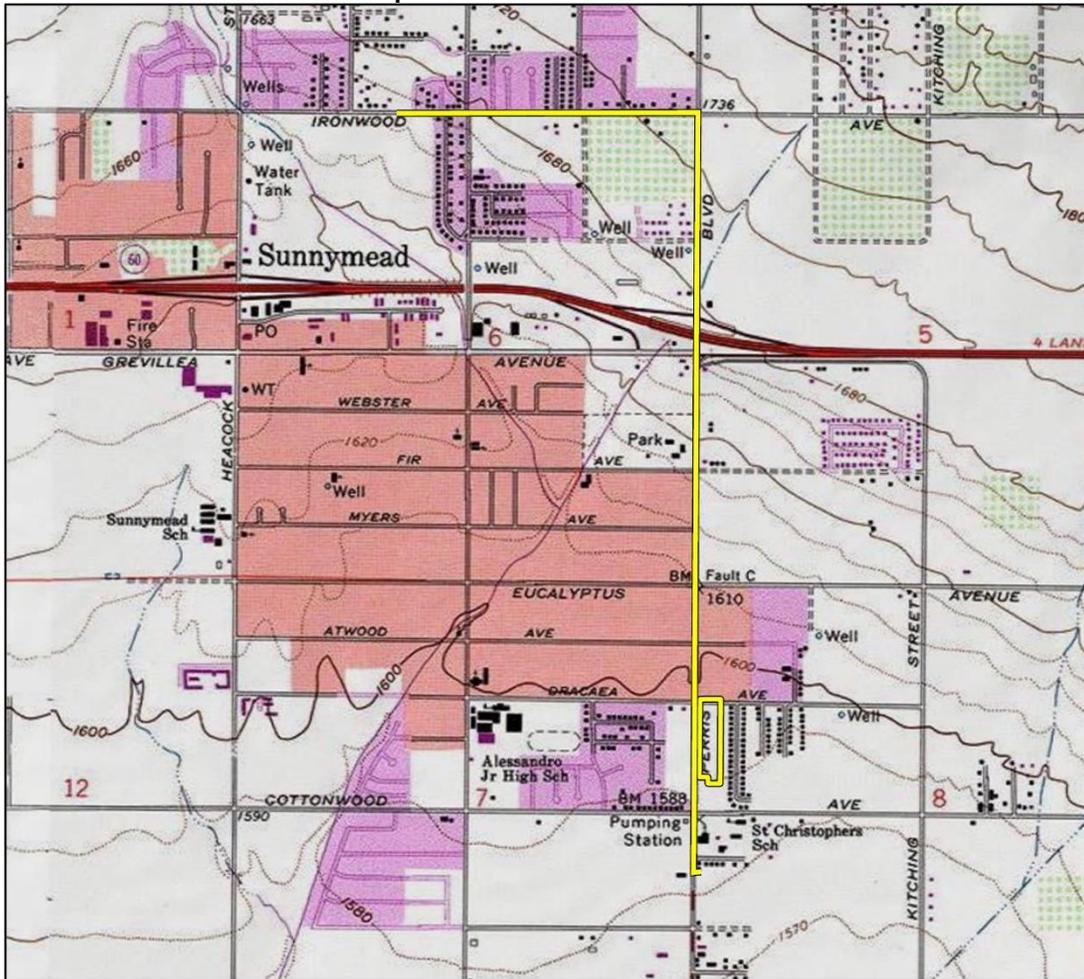
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

Enclosed: Figure 1 Area of Potential Effects Map

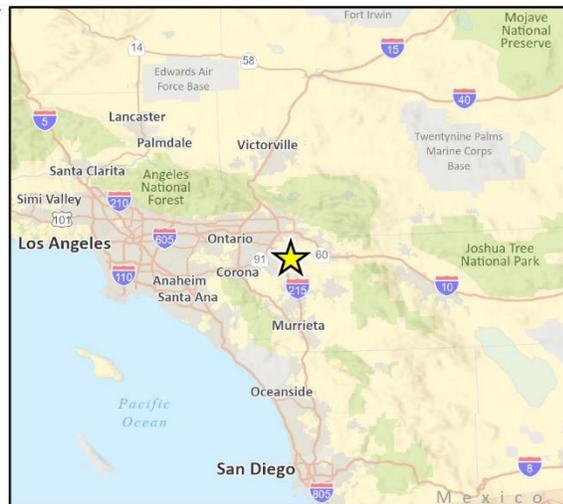
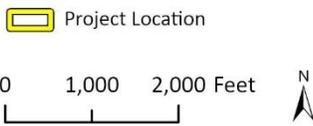


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CRFig1 Proj Loch Map





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info@rinconconsultants.com
www.rinconconsultants.com

July 29, 2022

March Field Air Museum
22550 Van Buren Boulevard
Riverside, CA. 92518

Subject: Notification of the Proposed Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County, California

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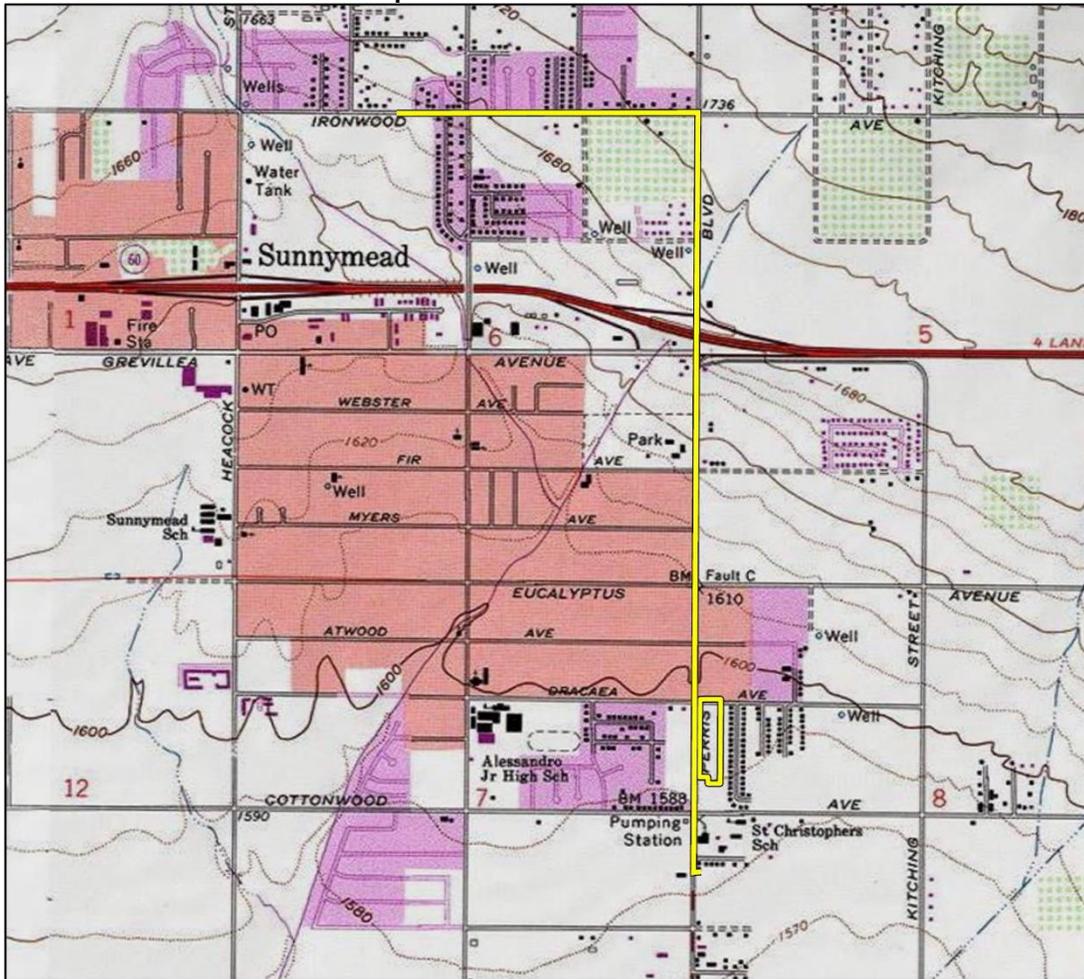
Rincon Consultants, Inc.

Leanna Flaherty, MA, RPA
Cultural Resources Project Manager

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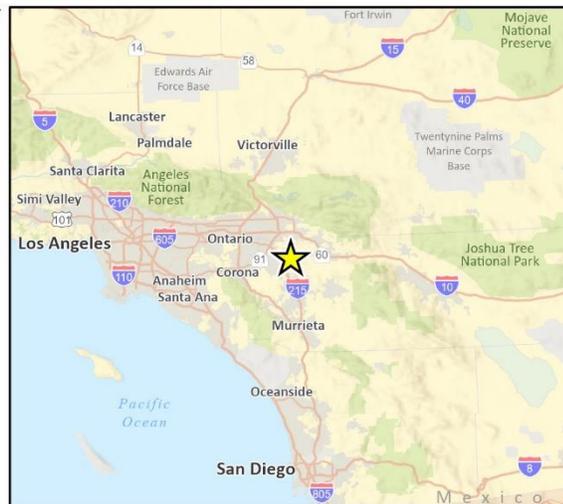
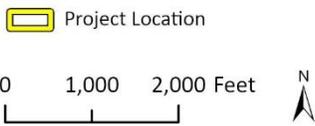


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CRFig1 Proj Loch Map



From: [Laura Maldonado](#)
Sent: Friday, July 29, 2022 7:18 AM
To: moreovalleyhistoricalsociety@gmail.com
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA
Attachments: [21-12325 EMWD MVGDP Add 2 Historic Group Section 106 Letter - MVHS.pdf](#)

Good morning,

Please see the attached letter regarding the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.
Please let me know if you have any questions or concerns.

Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



Rincon Consultants, Inc.
Environmental Scientists | Planners | Engineers

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Ranked 2021 "Best Environmental Services Firm to Work For" by Zweig Group

Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 1:44 PM
To: morenovalleyhistoricalsociety@gmail.com
Cc: [Leanna Flaherty](#)
Subject: RE: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good afternoon,

I am following up in regards to the Eastern Municipal Water District Raw Water Conveyance Pipeline Phase III Project in Moreno Valley, Riverside County.

A letter was emailed to you on July 29, 2022 with further information. If you or your organization has any knowledge or concerns regarding cultural resources in the project area or would like to consult with the State Water Resources Control Board as part of the Section 106 process, please respond by email to lmaldonado@rinconconsultants.com or by telephone at (805) 547-0900.

Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Ranked 2021 "Best Environmental Services Firm to Work For" by Zweig Group
Time Off Alert: 10/05 – 10/07

From: Laura Maldonado
Sent: Friday, July 29, 2022 7:18 AM
To: morenovalleyhistoricalsociety@gmail.com
Cc: Leanna Flaherty <lflaherty@rinconconsultants.com>
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

Good morning,

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Respectfully,

Laura Maldonado, MA, Archaeologist

(She/Her/Hers)

831-214-0195 Mobile | 805-547-0900 Direct

lmaldonado@rinconconsultants.com



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Environmental Scientists & Engineers

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Ranked 2021 “Best Environmental Services Firm to Work For” by Zweig Group

Time Off Alert: 10/05 – 10/07

From: [Laura Maldonado](#)
Sent: Friday, August 12, 2022 1:47 PM
To: pvhandma@gmail.com
Cc: [Leanna Flaherty](#)
Subject: Outreach Letter for the EMWD Raw Water Conveyance Pipeline Phase III Project, Riverside County, CA

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Thank you,

Laura Maldonado, MA, Archaeologist
(She/Her/Hers)
831-214-0195 Mobile | 805-547-0900 Direct
lmaldonado@rinconconsultants.com



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Ranked 2021 "Best Environmental Services Firm to Work For" by Zweig Group
Time Off Alert: 10/05 – 10/07

**APPENDIX D: PALEONTOLOGICAL RESOURCE ASSESSMENT FOR THE
PERRIS NORTH BASIN GROUNDWATER
CONTAMINATION MONITORING PROJECTS**



Rincon Consultants, Inc.

301 9th Street, Suite 109
Redlands, California 92374

909 253 0705

info@rinconconsultants.com
www.rinconconsultants.com

November 24, 2020
Project No: 19-09026

Rosalyn Prickett
Senior Water Resources Planner
Woodard & Curran
9665 Chesapeake Drive, Suite 320
San Diego, California 92123

Subject: Paleontological Resource Assessment for the Perris North Basin Groundwater Contamination Monitoring Project, cities of Moreno Valley and Perris, Riverside County, California

Dear Ms. Prickett,

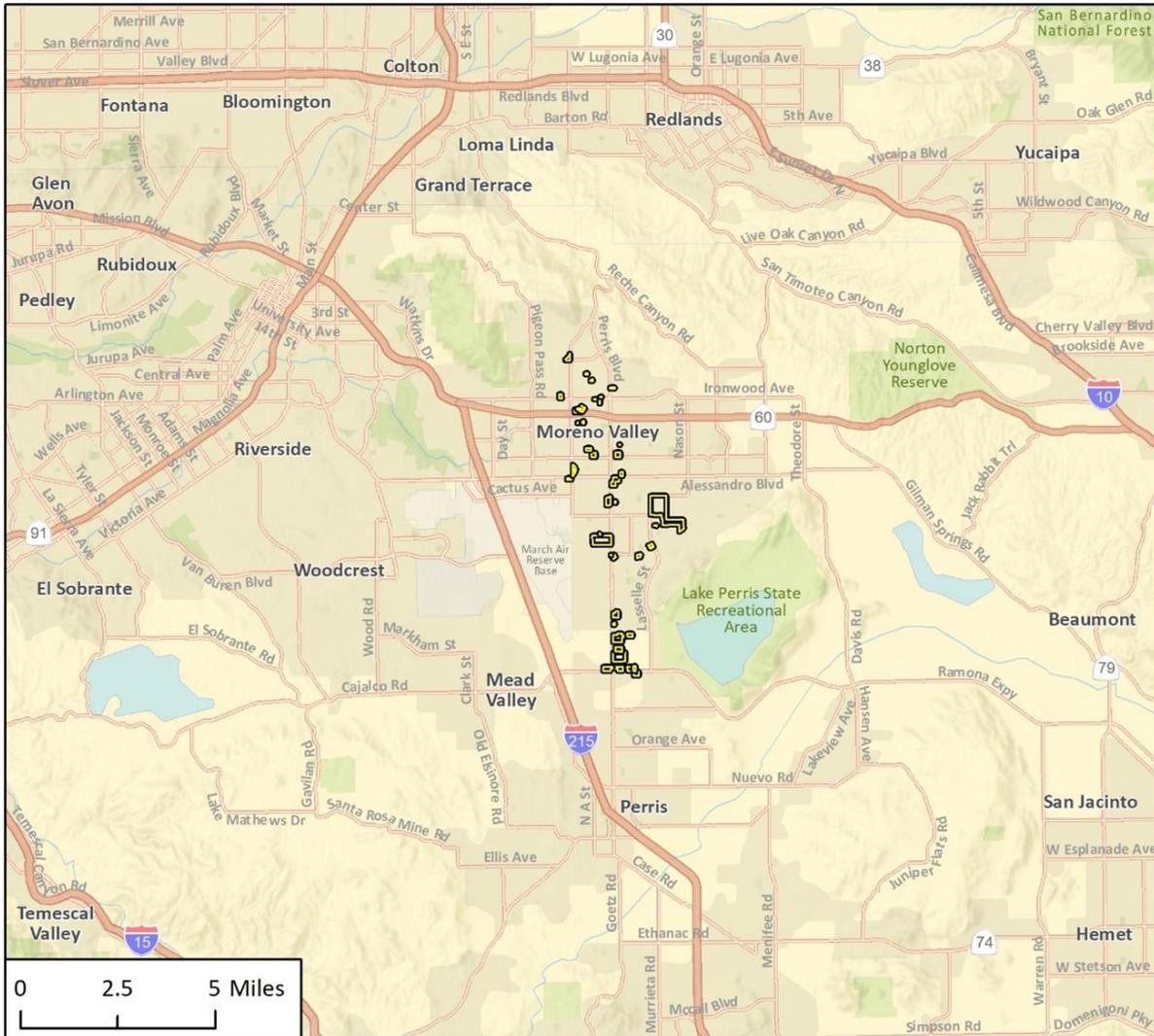
Rincon Consultants, Inc. conducted a paleontological resource assessment for the proposed Perris North Basin Groundwater Contamination Monitoring Project (project) located in the cities of Moreno Valley and Perris, Riverside County, California. The goals of this assessment are to identify the geologic units that may be impacted by development of the project, determine the paleontological sensitivity of geologic units underlying the project sites, assess the potential for impacts to paleontological resources from development of the project, and recommend mitigation measures to reduce impacts to scientifically significant paleontological resources, pursuant to California Environmental Quality Act (CEQA).

This paleontological resource assessment consisted of a fossil locality record search at the Natural History Museum of Los Angeles County (NHMLAC), a review of existing geologic maps and paleontological locality data, and a review of primary literature regarding fossiliferous geologic units within the project sites and vicinity. Following the literature review and records search, this report assessed the paleontological sensitivity of the geologic units underlying the project sites, determined the potential for impacts to significant paleontological resources, and proposed mitigation measures to reduce impacts to less than significant.

Project Location and Description

The Eastern Municipal Water District (EMWD) proposes the construction and operation of twenty monitoring wells (MW) at twenty locations throughout the cities of Moreno Valley and Perris in Riverside County, California. Forty-one potential locations, including optional locations, were evaluated for paleontological constraints for the proposed MW sites. The project sites, consisting of several individual parcels, are located east of the Perris Reservoir and Bernasconi Hills, west of the Escondido Freeway (Interstate Highway 215), south of the Box Springs Mountains and Kalmia Hills, and north of the Ramona Expressway and Colorado River Aqueduct (Figure 1 and Figure 2a-d). The project sites are mapped within the United States Geological Survey (USGS) *Sunnymead* and *Perris, CA* 7.5-minute quadrangles. The project sites are in a developed area characterized by a mix of agricultural, residential, commercial, and light industrial uses.

Figure 1 Regional Vicinity



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Project Location

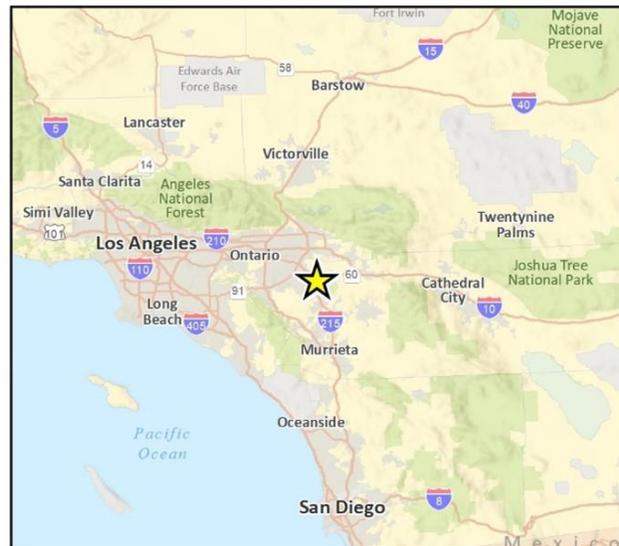
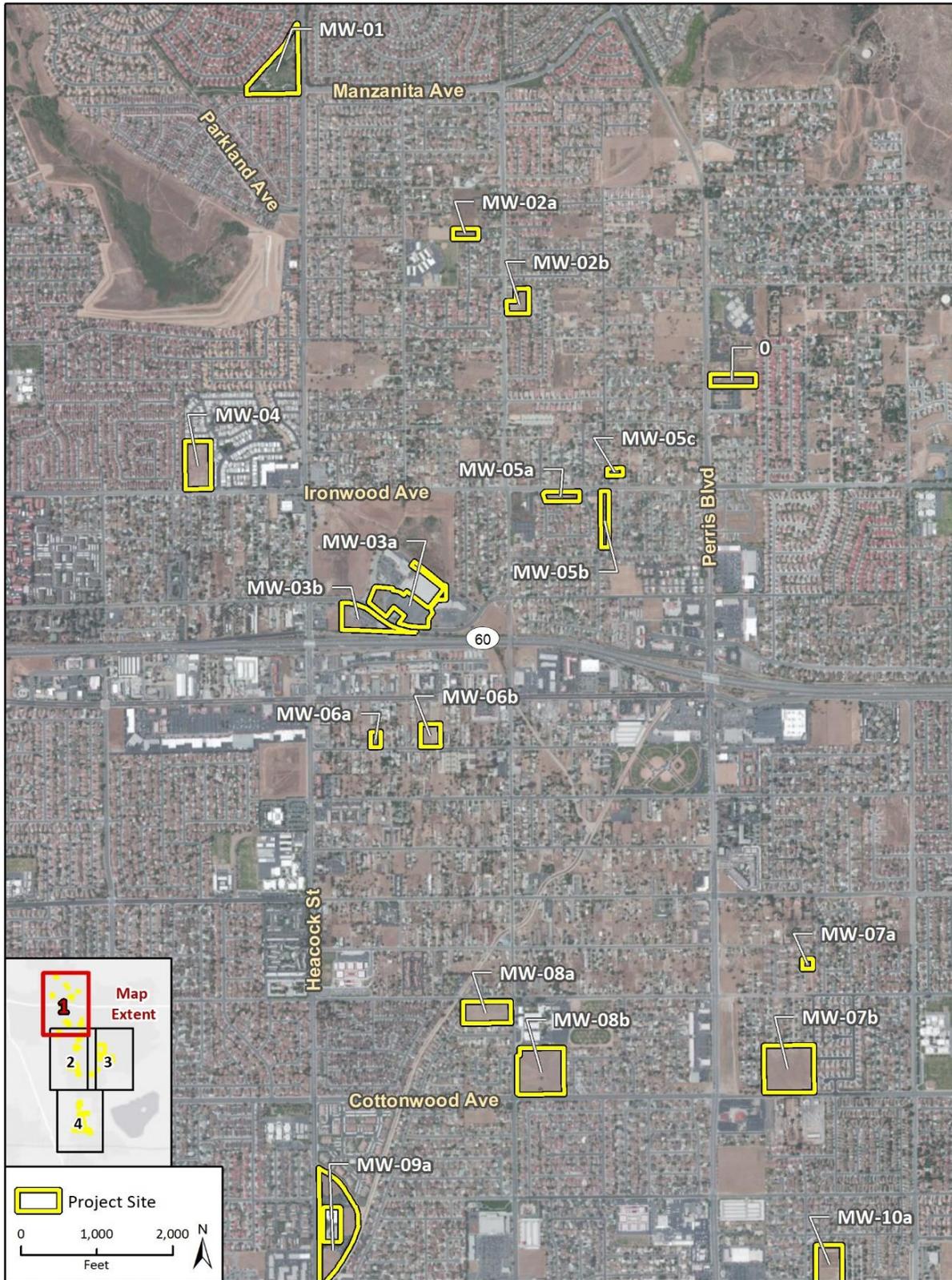


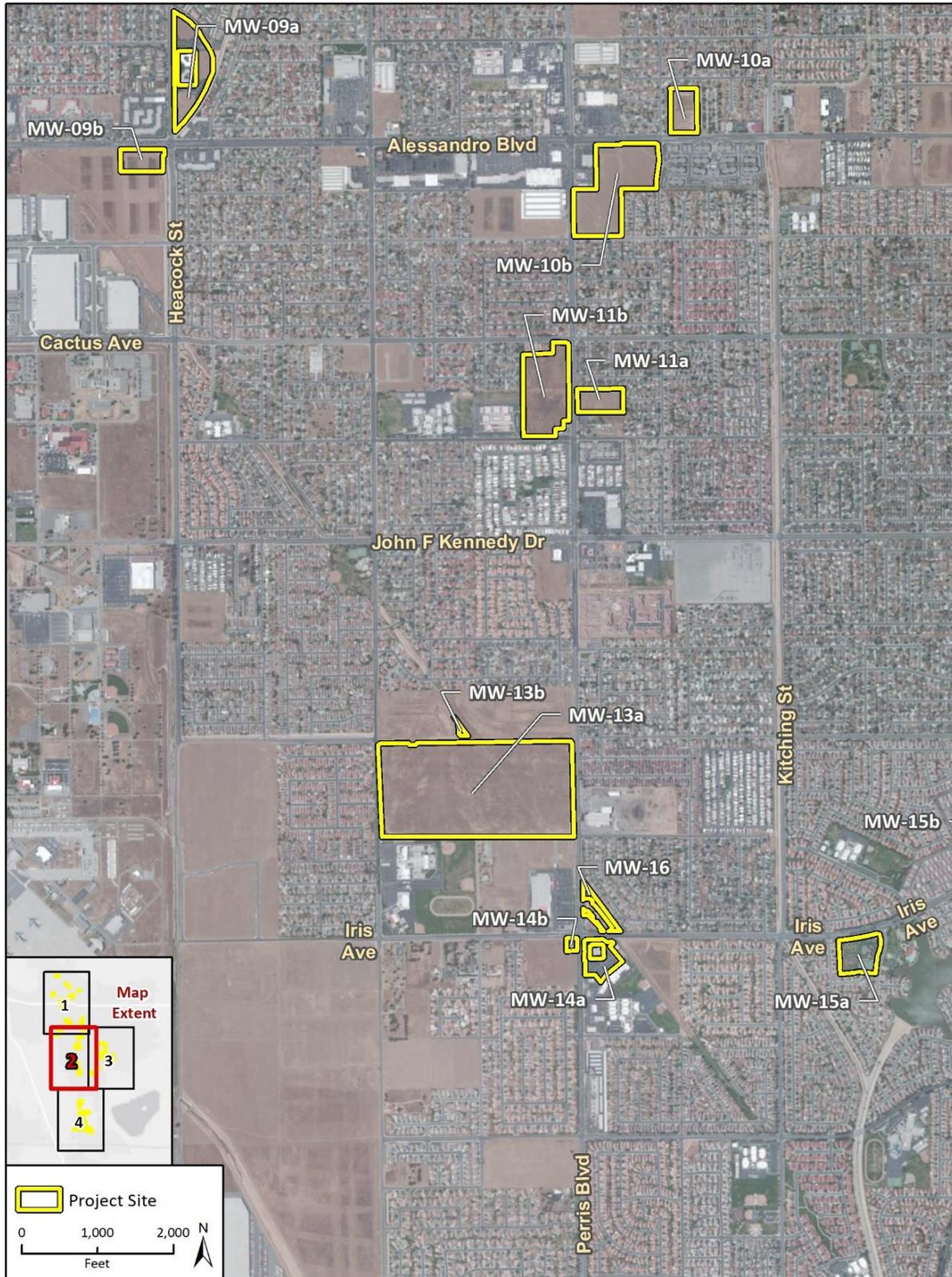
Fig 1 Regional Location - 2021

Figure 2a Project Locations (1 of 4)



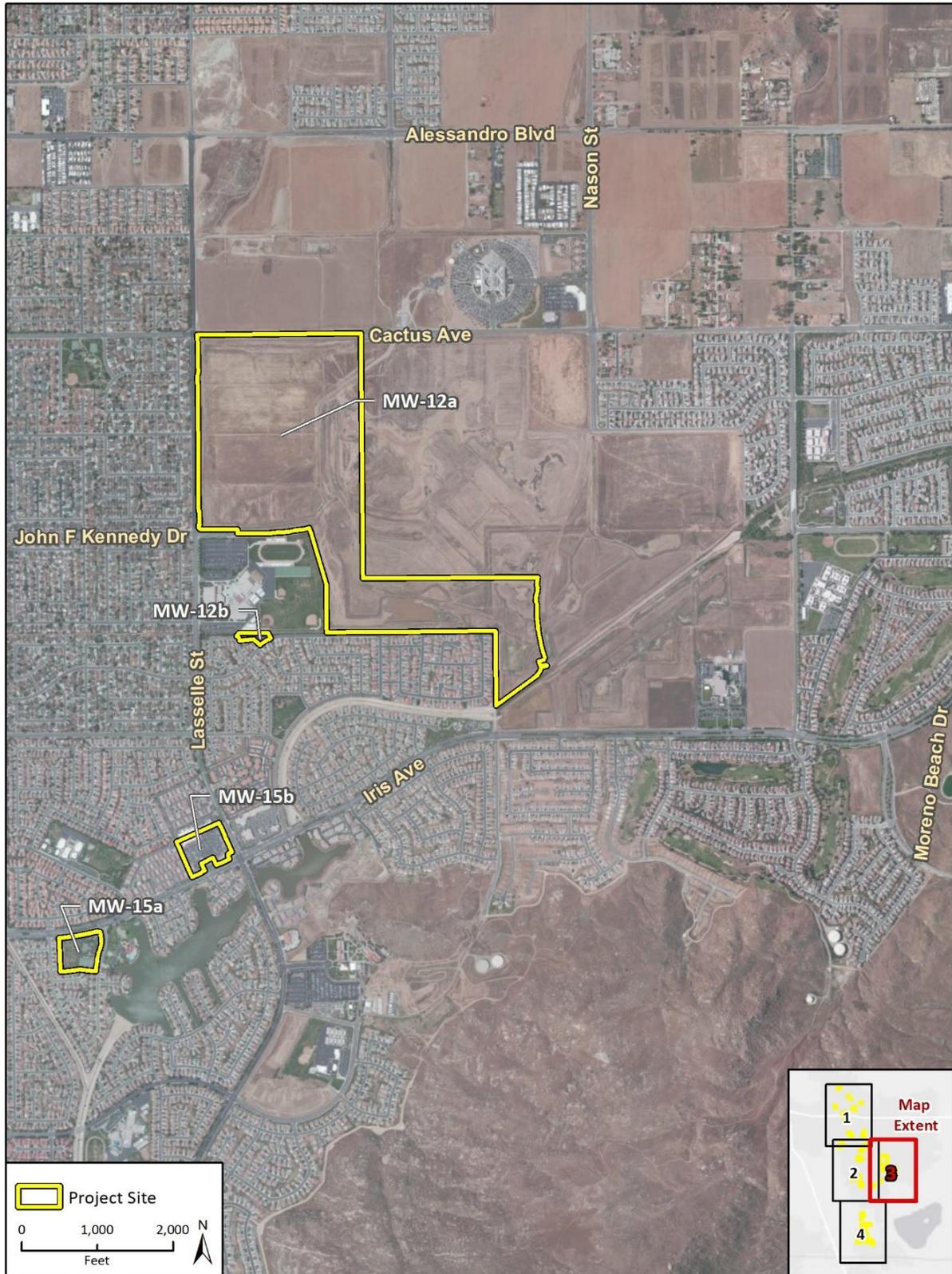
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Figure 2b Project Location (2 of 4)



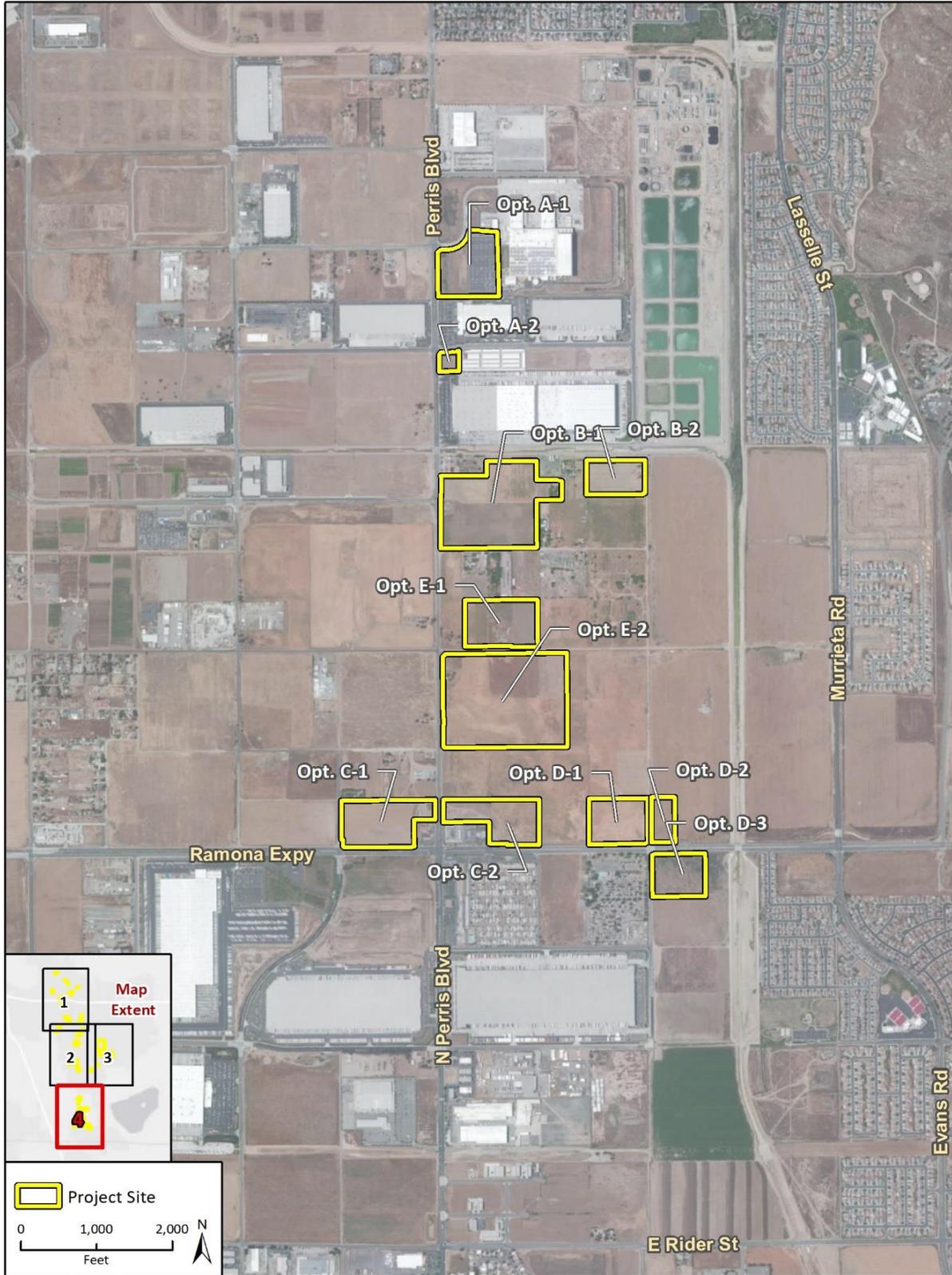
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Figure 2c Project Location (3 of 4)



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Figure 2d Project Location (4 of 4)



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EMWD proposes a groundwater monitoring project designed to monitor the presence of groundwater contaminants of concern (COCs) from nonpoint sources. These sources occur in the Perris North Basin, also referred to as the Perris North Groundwater Management Zone, which is within the San Jacinto Groundwater Basin. The source locations of contamination were not known at the time this report was written; however, some locations may be identified through analysis and reporting of data collected from the series of proposed monitoring wells. For each MW, an 18-inch borehole would be drilled, and 6-inch casing would be installed, along with a sampling pump located inside the well. For wells within roadway rights-of-way or sidewalks, well heads would be flush mounted to the road or sidewalk. Wells located within parcel lots would either have well heads flush-mounted to the sidewalk or pavement or would include a standpipe surrounded by bollards. Standpipes would be aboveground completions extending two to three feet above grade, with traffic bollards installed around each for the protection of the well head. MW would be drilled to a maximum depth of 200 to 800 feet deep, depending on where in the project site they are located. Assuming a maximum depth of 800 feet, and an 18-inch borehole, approximately 55 cubic yards of drill cuttings would be exported from each MW site. Additional material would be exported from each well site during grading and wellhead construction.

Regulatory Setting

Fossils are remains of ancient, commonly extinct organisms, and as such are nonrenewable resources. The fossil record is a document of the evolutionary history of life on earth, and fossils can be used to understand evolutionary pattern and process, rates of evolutionary change, past environmental conditions, and the relationships among modern species (i.e., systematics). The fossil record is a valuable scientific and educational resource, and individual fossils are afforded protection under federal, state, and local environmental laws, where applicable.

This study has been completed in accordance with the requirements of CEQA and also includes compliance with federal and state regulations in the case a federal nexus is established during the course of project execution. Compliance with both federal and state regulations allows the lead agency (e.g., EMWD) to apply the results of this technical study should a federal nexus be established at a later time. Federal and state regulations applicable to potential paleontological resources in the project sites are summarized below.

Federal Regulations

A variety of federal statutes address paleontological resources specifically. They are applicable to all projects occurring on federal lands and may be applicable to specific projects if the project involves a federal agency license, permit, approval, or funding.

The National Environmental Policy Act (United States Code, Section 4321 et seq.; 40 Code of Federal Regulations, Section 1502.25), as amended, directs federal agencies to “preserve important historic, cultural, and natural aspects of our national heritage (Section 101(b) (4)).” The current interpretation of this language includes scientifically important paleontological resources among those resources potentially requiring preservation.

The Paleontological Resources Preservation Act (PRPA) is part of the Omnibus Public Land Management Act of 2009 (Public Law 111-011 Subtitle D). The PRPA directs the Secretary of the Interior or the Secretary of Agriculture to manage and protect paleontological resources on federal land, and develop plans for inventorying, monitoring, and deriving the scientific and educational use of such resources. The



PRPA prohibits the removal of paleontological resources from federal land without a permit, establishes penalties for violations, and establishes a program to increase public awareness about such resources. While specific to activity occurring on federal lands, some federal agencies may require adherence to the directives outlined in the PRPA for projects on non-federal lands if federal funding is involved, or the project includes federal oversight.

State Regulations

California Environmental Quality Act

Paleontological resources are protected under CEQA, which states in part a project will “normally” have a significant effect on the environment if it, among other things, will disrupt or adversely affect a paleontological site except as part of a scientific study. Specifically, in Section VII(f) of Appendix G of the State CEQA Guidelines, the Environmental Checklist Form, the question is posed thus: “Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.” To determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged). Therefore, CEQA mandates mitigation of adverse impacts, to the extent practicable, to paleontological resources.

CEQA does not define “a unique paleontological resource or site.” However, the Society of Vertebrate Paleontology (SVP) has defined a “significant paleontological resource” in the context of environmental review as follows:

Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are typically to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years) (SVP 2010).

The loss of paleontological resources meeting the criteria outlined above (i.e., a significant paleontological resource) would be a significant impact under CEQA, and the CEQA lead agency is responsible for ensuring that impacts to paleontological resources are mitigated, where practicable, in compliance with CEQA and other applicable statutes.

California Public Resources Code

Section 5097.5 of the Public Resources Code states:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Here “public lands” means those owned by, or under the jurisdiction of, the state or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with Public Resources Code Section 5097.5 for their own activities, including construction and maintenance, and for permit actions (e.g., encroachment permits) undertaken by others.



Local Regulations

City of Moreno Valley

The City of Moreno Valley General Plan Goals, Objectives, Policies, and Programs Chapter (City of Moreno Valley 2006) contains one policy pertaining to paleontological resources. The policy is as follows:

- **Policy 7-6:** In areas where archaeological or paleontological resources are known or reasonably expected to exist, based upon the citywide survey conducted by the University of California, Riverside Archaeological Research Unit, incorporate the recommendations and determinations of that report to reduce potential impacts to levels of insignificance.

City of Perris

The Conservation Element of the City of Perris General Plan (City of Perris 2005) contains one goal, one policy, and one implementation measure pertaining to paleontological resources, which are as follows:

- **Goal IV – Cultural Resources:** Protection of historical, archaeological, and paleontological sites.
- **Policy IV.A:** Comply with state and federal regulations and ensure preservation of the significant historical, archaeological, and paleontological resources.
- **Implementation Measure IV.A.4:** In Area 1 and Area 2 shown on the Paleontological Sensitivity Map [i.e., Exhibit CN-7: Paleontological Sensitivity within the Conservation Element of City of Perris General Plan], paleontological monitoring of all projects requiring subsurface excavations will be required once any excavation begins. In Areas 4 and 5, paleontologic[al] monitoring will be required once subsurface excavations reach five feet in depth, with monitoring levels reduced if appropriate, at the discretion of a certified Project Paleontologist.

According to Exhibit CN-7 of the Conservation Element of the City of Perris General Plan (2005), portions of the project sites are situated in Area 1: High Sensitivity and Area 4: Low to High Sensitivity.

Methods

Rincon evaluated the paleontological sensitivity of the geologic units which underlie the project sites using the results of the paleontological locality search and review of existing information in the scientific literature concerning known fossils in those geologic units. Rincon submitted a request to the NHMLAC for a list of known fossil localities from the project sites and immediate vicinity (i.e., localities recorded on the USGS *Sunnymead* and *Perris* California 7.5-minute topographic quadrangles), reviewed geologic maps, and reviewed primary literature.

Rincon assigned paleontological sensitivities to the geologic units mapped within the project sites. The potential for impacts to significant paleontological resources is based on the potential for ground disturbance to directly impact paleontologically sensitive geologic units. The SVP (2010) has defined paleontological sensitivity and developed a system for assessing paleontological sensitivity, as discussed below.

Paleontological Sensitivity

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes, or which could improve our understanding of paleochronology, paleoecology, paleophylogeography, or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process, evolutionary rates, and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiometric dating is possible. As such, common fossils (especially vertebrates) may be scientifically important, and therefore considered highly significant.

The SVP (2010) describes sedimentary rock units as having high, low, undetermined, or no potential for containing significant nonrenewable paleontological resources. This criterion is based on rock units in which significant fossils have been determined by previous studies to be present or likely to be present. While these standards were written specifically to protect vertebrate paleontological resources, all fields of paleontology have adopted these guidelines, which are given here verbatim:

- I. **High Potential (Sensitivity).** Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered have a high potential for containing significant non-renewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas which contain potentially datable organic remains older than Recent, including deposits associated with nests or middens, and areas which may contain new vertebrate deposits, traces, or trackways are also classified as significant.
- II. **Low Potential (Sensitivity).** Sedimentary rock units that are potentially fossiliferous, but have not yielded fossils in the past or contain common and/or widespread invertebrate fossils of well documented and understood taphonomic, phylogenetic species and habitat ecology. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils prior to the start of construction. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations. However, as excavation for construction gets underway it is possible that significant and unanticipated paleontological resources might be encountered and require a change of classification from Low to High Potential and, thus, require monitoring and mitigation if the resources are found to be significant.
- III. **Undetermined Potential (Sensitivity).** Specific areas underlain by sedimentary rock units for which little information is available have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.
- IV. **No Potential.** Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources.

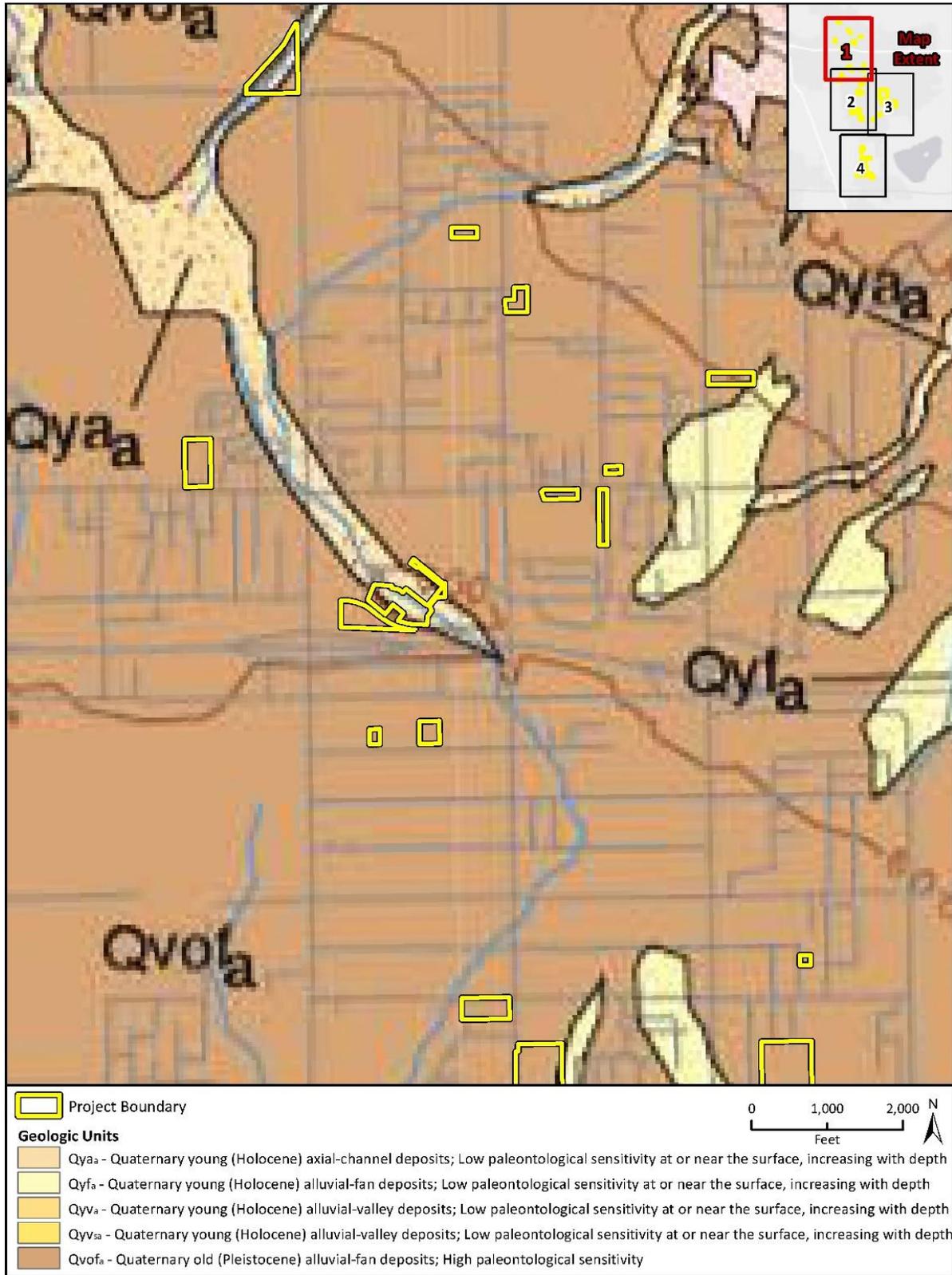
Geologic Setting

The project sites are located within the central Perris Block within the northern portion of the Peninsular Ranges Province, one of eleven major geomorphic provinces in California (California Geological Survey 2002). A geomorphic province is a region of unique topography and geology that is readily distinguished from other regions based on its landforms and diastrophic history (Norris and Webb 1990). The Perris Block is a roughly rectangular area of relatively low relief that has remained relatively stable and undeformed during the Neogene (Norris and Webb 1990; Morton and Miller 2006). It is bound by the Cucamonga Fault Zone to the north, the San Jacinto Mountains to the east, the Elsinore Fault Zone to the southwest, and the Chino Basin to the west. According to Morton and Miller (2006) the Perris Block is underlain by lithologically diverse prebatholithic metasedimentary rocks intruded by Cretaceous plutons of the Peninsular Ranges Batholith, which are subsequently overlain by thin to relatively thick, discontinuous sections of nonmarine Quaternary sediments. Quaternary deposits within the Perris Block consist of Pleistocene and Holocene alluvial fan deposits emanating from the nearby San Gabriel Mountains to the north and fluvial deposits from the Santa Ana River, which bisects the Perris Block and flows southward (Norris and Webb 1990; Morton and Miller 2006).

According to published geologic mapping by Morton and Miller (2006), the project sites include five geologic units mapped at the surface: Quaternary young (Holocene) axial-channel deposits (Qy_a), Quaternary young (Holocene) alluvial-valley deposits (Qy_{v_a} , $Qy_{v_{sa}}$), Quaternary young (Holocene) alluvial-fan deposits (Qy_f_a), and Quaternary old (Pleistocene) alluvial-fan deposits ($Qvof_a$) (Morton & Miller 2006). Quaternary young (Holocene) axial-channel deposits (Qy_a), mapped within a few of the northern project sites, consists of slightly to moderately consolidated silt, sand, and gravel. Quaternary young (Holocene) alluvial-valley deposits (Qy_{v_a} , $Qy_{v_{sa}}$), mapped within the eastern and southern project sites, consist of unconsolidated sand, silt, and clayey alluvium. Quaternary young (Holocene) alluvial-fan deposits (Qy_f_a), mapped within the central project sites, consists of unconsolidated to moderately consolidated silt, sand, pebbly cobbly sand, and bouldery alluvial-fan deposits. Quaternary old (Pleistocene) alluvial-fan deposits ($Qvof_a$), mapped extensively throughout the project sites, consists of orangish brown moderately to well consolidated silt, sand, gravel, and conglomerate (Morton & Miller 2006). Refer to Figure 3a-d for the surficial geologic units mapped within the project sites, as well as their corresponding paleontological sensitivity.

Holocene sediments are generally too young to preserve paleontological resources, but these sediments may grade downward into older deposits of Pleistocene age at moderate or unknown depths. Pleistocene sedimentary deposits (e.g., $Qvof_a$) have a well-documented record of abundant and diverse vertebrate fauna recorded throughout California. Vertebrate fossil taxa recorded in Riverside County include horse, tapir, bison, camelid, deer, mastodon, mammoth, ground sloth, canine, rabbit, and rodent. Pleistocene fossil localities recorded throughout southern California in general yielded fossil whale, sea lion, horse, tapir, ground sloth, bison, peccary, camel, deer, pronghorn, mammoth, short-faced bear, saber-toothed cat, mountain lion, wolf, fox, skunk, rabbit, bat, shrew, mole, pocket gopher, deer mouse, kangaroo rat, pack rat, bird, tortoise, turtle, snake, frog, toad, salamander, bony fish, shark, and ray, as well as invertebrates, such as insect and snail (Agenbroad 2003; Bell et al. 2004; 1991; Merriam 1911; Paleobiology Database 2021; Reynolds et al. 1991; Savage 1951; Savage et al. 1954; Scott and Cox 2008; Springer et al. 2009; Tomiya et al. 2011; Wilkerson et al. 2011; Winters 1954; University of California Museum of Paleontology 2021).

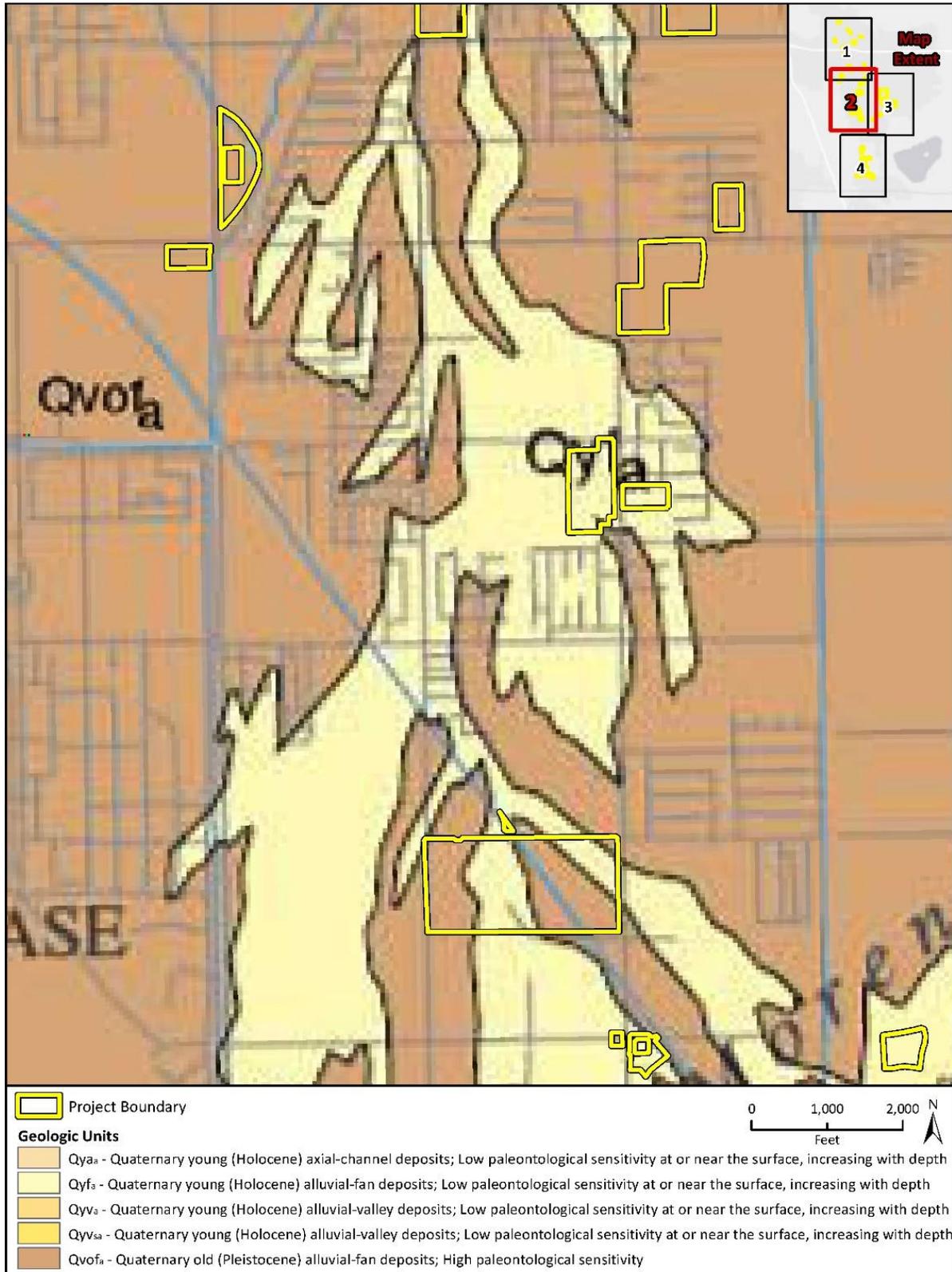
Figure 3a Geologic Units and Paleontological Sensitivity of the Project Sites (1 of 4)



Geologic data provided by Morton and Miller, "Geologic Map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California," 2006.

CRFig A Geologic and Paleontological Sensitivity 2021

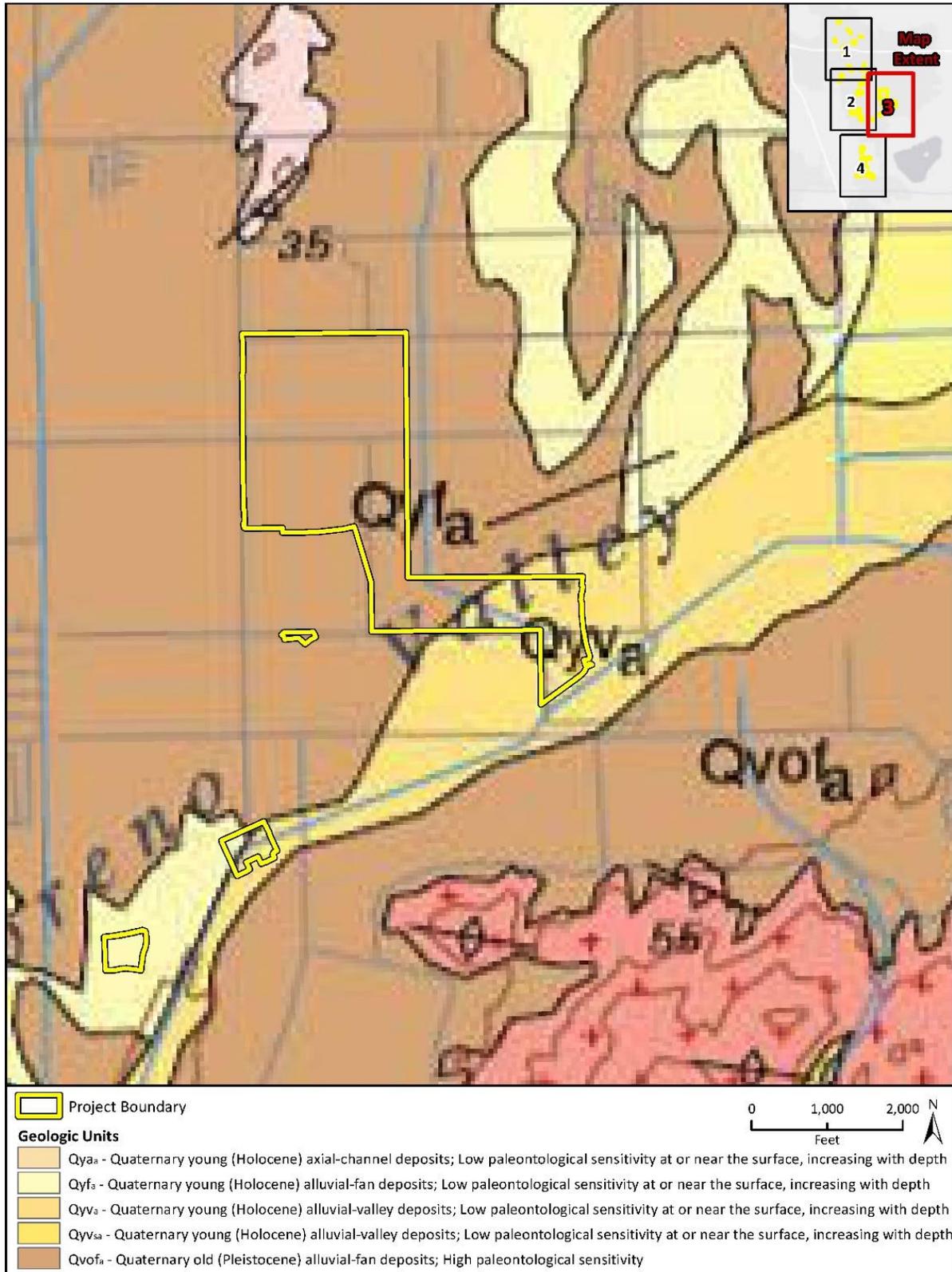
Figure 3b Geologic Units and Paleontological Sensitivity of the Project Sites (2 of 4)



Geologic data provided by Morton and Miller, "Geologic Map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California," 2006.

Cliff X Geologic and Paleo Sensitivity 2021

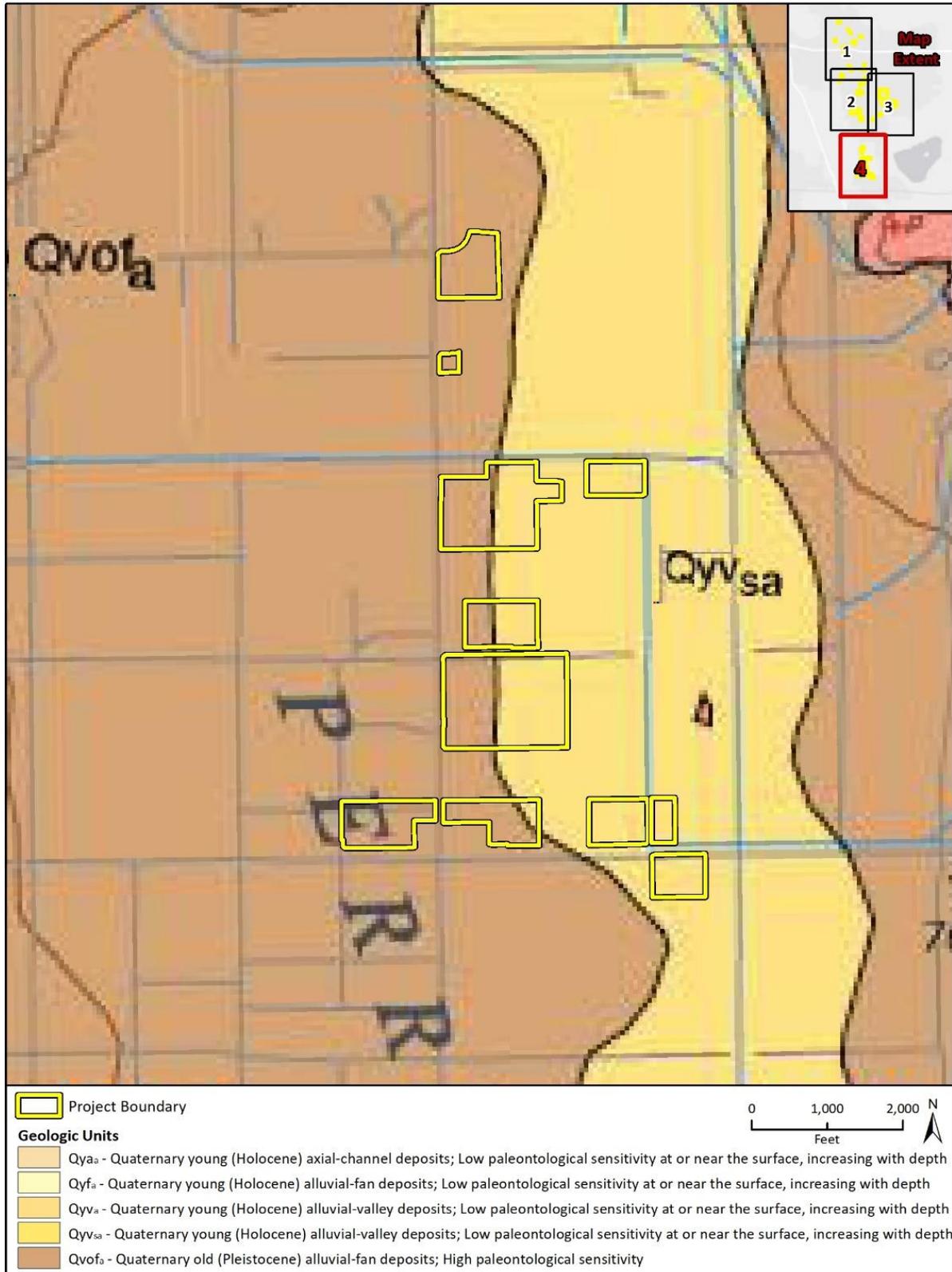
Figure 3c Geologic Units and Paleontological Sensitivity of the Project Sites (3 of 4)



Geologic data provided by Morton and Miller, "Geologic Map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California," 2006.

Cliff X Geologic and Paleo Sensitivity 2021

Figure 3d Geologic Units and Paleontological Sensitivity of the Project Sites (4 of 4)





Results

Locality Search

A search of the paleontological locality records at the NHMLAC resulted in no previously recorded fossil localities in the project sites; however, several vertebrate localities are situated within the project’s vicinity. According to the NHMLAC collection records, the closest Pleistocene vertebrate locality (LACM VP 6059), which yielded fossilized specimens of a camel-like mammal (Camelidae), is approximately 14 miles south of the southernmost project sites. Table 1 summarizes six Pleistocene fossil localities located between 14 and 30 miles from the project sites.

Table 1 Museum Records Search Results

Locality No.	Location	Geologic Unit	Age	Taxa	Depth
LACM VP 6059	Overflow area just east-southeast of Lake Elsinore	Unknown formation	Pleistocene	Camel family (Camelidae)	Unreported
LACM VP 7261	Skinner Reservoir, Auld Valley	Unknown formation (Arenaceous silt)	Pleistocene	Elephant clade (Proboscidea); ungulate (Ungulata)	Unreported
LACM VP 7456	Highway 79 and Butterfield Stage Rd., Pauba Valley near Temecula	Alluvium interbedded silty clay, sandy silt, and silty to coarse grained sand	Pleistocene	Garter snake (<i>Thamnophis</i>); pocket gopher (<i>Thomomys</i>); deer mouse (<i>Peromyscus</i>); snails (gastropods)	Unreported
LACM VP 1207	Hill on east side of sewage disposal plant; 1 mile north-northwest of Corona	Unknown formation	Pleistocene	Bovidae	Unreported
LACM VP 7268, 7271	Sundance Condominiums, South of Los Serranos Golf Course in Chino Hills	Unknown formation	Pleistocene	Horse (<i>Equus</i>)	Unreported
LACM VP 7508	Near intersection of Vellano Club Dr. and Palmero Dr., Oakcrest Development; North of Serrano Canyon in Chino Hills	Unknown formation	Pleistocene	Ground sloth (<i>Nothrotheriops</i>); elephant family (Proboscidea); horse (<i>Equus</i>)	Unreported

Source: Bell 2021

Records maintained by the Western Science Center (WSC) indicate several fossil localities nearby the project sites. WSC localities 192, 193, and 194 rendered fossil ground sloth (*Megalonyx jeffersonii*), lamine camel (*Hemiauchenia* sp.), and horse (*Equus* sp.) less than 10 miles northeast of the project sites (LSA 2014; Radford 2019). Fossils from these localities were recovered from 11 to 13 feet below ground surface within Pleistocene alluvial fan deposits (LSA 2014; Radford 2019).



Paleontological Sensitivity

In accordance with SVP (2010) guidelines, Rincon determined the paleontological sensitivity of the project sites based on a geologic map review, literature review, and museum locality search. Quaternary young sedimentary units (i.e., alluvial-valley deposits [Q_{yv_a} , $Q_{yv_{sa}}$], alluvial-fan deposits [Q_{yf_a}], and axial-channel deposits [Q_{ya_a}]) mapped at the surface of the project sites are assigned a low paleontological sensitivity because Holocene sediments, particularly those younger than 5,000 years old, are generally too young to contain fossilized material. However, Quaternary old (Pleistocene) sedimentary deposits (e.g., Q_{vof_a}) may underlie Quaternary young sedimentary deposits (Q_{yv_a} , $Q_{yv_{sa}}$, Q_{yf_a} , Q_{ya_a}) at unknown depths within the project area and the immediate vicinity. Holocene sediments are underlain by Pleistocene alluvial deposits at a depth as shallow as 11 feet below ground surface based on the presence of Pleistocene vertebrate fossils recovered at depths of 11 to 13 feet within the vicinity of the project sites (LSA 2014; Radford 2019). Intact (native) Quaternary old (Pleistocene) alluvial-fan deposits (Q_{vof_a}) are assigned a high paleontological sensitivity based on its potential to yield scientifically significant paleontological resources (Bell 2021; LSA 2014; Radford 2019).

Findings and Recommendations

Paleontological resources are nonrenewable and are vulnerable to impacts from development related activities. Fossils provide important information for our understanding of past environments, the history of life, past species diversity, how species respond to climate change, and many other lines of scientific inquiry. Impacts to fossils and fossil localities, and loss of fossils from looting or other destructive activity at fossil sites results in the direct loss of scientific data and directly impacts the ability to conduct scientific research on evolutionary patterns and geological processes. Ground-disturbing activities in previously undisturbed portions of the project sites underlain by geologic units with a high paleontological sensitivity (i.e., Pleistocene alluvial-fan deposits) may result in significant impacts to paleontological resources under Appendix G of State CEQA Guidelines. Impacts would be significant if construction activities resulted in destruction, damage, or loss of scientifically important paleontological resources and associated stratigraphic and paleontological data. Activities with the potential to impact paleontological resources include grading, excavation, trenching or other activity that disturbs geologic formations with a high paleontological sensitivity.

The proposed activities include establishing temporary work areas 100 feet wide by 100 feet long at the surface and drilling and installing groundwater monitoring wells between 200 and 800 feet below the ground surface. Minor ground-disturbances within temporary work areas are unlikely to impact previously undisturbed sediments since these work areas contain previously disturbed sediments at the surface. Additionally, vertical drilling of boreholes less than three feet in diameter is not conducive to paleontological monitoring since the drilling activities typically pulverize the soil and sediment cuttings and remove the stratigraphic context of any fossils or microfossils that may be present within the borehole walls or the cuttings. Disturbance to intact (native) Pleistocene sediments from well drilling would be limited due the small (i.e., 18-inch) diameter of the borehole and impacts to paleontological resources due to well drilling would be negligible. Although ground-disturbing activities are likely to impact geologic units of high paleontological sensitivity near the surface or at depth, the potential for encountering significant fossil resources during project-related ground disturbance is low and impacts to paleontological resources are not anticipated.

Further paleontological resources management is not recommended at this time; however, the following measure is recommended in the case of unanticipated fossil discoveries. This measure would



apply to all phases of project construction and would provide that any unanticipated fossils present on site are preserved and that potential impacts to paleontological resources would be less than significant by providing for the recovery, identification and curation of previously unrecovered fossils.

- In the event an unanticipated fossil discovery is made during the course of project development, then in accordance with SVP (2010) guidelines, it is the responsibility of any worker who observes fossils within the project sites to stop work in the immediate vicinity of the find and notify a qualified professional paleontologist who shall be retained to evaluate the discovery, determine its significance and if additional mitigation or treatment is warranted. Work in the area of the discovery will resume once the find is properly documented and authorization is given to resume construction work. Any significant paleontological resources found during construction monitoring will be prepared, identified, analyzed, and permanently curated in an approved regional museum repository.

If you have any questions regarding this Paleontological Resource Assessment, please contact us.

Sincerely,

Rincon Consultants, Inc.

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Principal Environmental Scientist

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APPENDIX E: NOISE MODEL OUTPUT SHEETS

Dump Truck	76.5	72.5	N/A											
Excavator	80.7	76.7	N/A											
Pickup Truck	75	71	N/A											
Pickup Truck	75	71	N/A											
Pickup Truck	75	71	N/A											
Pumps	80.9	77.9	N/A											
Backhoe	77.6	73.6	N/A											
Backhoe	77.6	73.6	N/A											
Welder / Torch	74	70	N/A											
Total	89.6	87.9	N/A											

*Calculated Lmax is the Loudest value.

Dump Truck	71.5	67.5	N/A										
Excavator	75.7	71.7	N/A										
Pickup Truck	70	66	N/A										
Pickup Truck	70	66	N/A										
Pickup Truck	70	66	N/A										
Pumps	75.9	72.9	N/A										
Backhoe	72.6	68.6	N/A										
Backhoe	72.6	68.6	N/A										
Welder / Torch	69	65	N/A										
Total	84.6	82.9	N/A										

*Calculated Lmax is the Loudest value.



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