

APPENDIX A: CALEEMOD DATA SHEETS

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

Saint Anthony SWS Consolidation
Riverside-Salton Sea County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	161.00	1000sqft	3.70	161,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	15			Operational Year	2022
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MW hr)	1270.9	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Assumes pipeline trenches 5 feet wide.

Construction Phase - Grading captures trenching, hdd, pipe install. Paving captures resurfacing.

Off-road Equipment - Construction equipment list provided by engineers.

Off-road Equipment -

Trips and VMT - Trips provided by engineers.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15

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tblConstructionPhase	NumDays	8.00	261.00
tblConstructionPhase	NumDays	18.00	261.00
tblConstructionPhase	PhaseEndDate	5/17/2021	3/31/2022
tblConstructionPhase	PhaseEndDate	4/28/2022	3/31/2022
tblConstructionPhase	PhaseStartDate	5/6/2021	4/1/2021
tblConstructionPhase	PhaseStartDate	4/5/2022	4/1/2021
tblGrading	AcresOfGrading	0.00	4.00
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	30.00	43.00
tblTripsAndVMT	WorkerTripNumber	20.00	43.00

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2.0 Emissions Summary

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					
2021	4.0677	37.4956	42.8964	0.0778	1.0870	1.9838	3.0708	0.2883	1.8270	2.1153	0.0000	7,573.187 1	7,573.187 1	2.0338	0.0000	7,624.031 9
2022	3.6475	32.8396	42.3265	0.0775	1.0883	1.6626	2.7510	0.2887	1.5314	1.8201	0.0000	7,539.381 6	7,539.381 6	2.0308	0.0000	7,590.150 1
Maximum	4.0677	37.4956	42.8964	0.0778	1.0883	1.9838	3.0708	0.2887	1.8270	2.1153	0.0000	7,573.187 1	7,573.187 1	2.0338	0.0000	7,624.031 9

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					
2021	4.0677	37.4956	42.8964	0.0778	1.0780	1.9838	3.0618	0.2874	1.8270	2.1143	0.0000	7,573.187 1	7,573.187 1	2.0338	0.0000	7,624.031 9
2022	3.6475	32.8396	42.3265	0.0775	1.0794	1.6626	2.7420	0.2877	1.5314	1.8191	0.0000	7,539.381 6	7,539.381 6	2.0308	0.0000	7,590.150 1
Maximum	4.0677	37.4956	42.8964	0.0778	1.0794	1.9838	3.0618	0.2877	1.8270	2.1143	0.0000	7,573.187 1	7,573.187 1	2.0338	0.0000	7,624.031 9

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

	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	0.82	0.00	0.31	0.33	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

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	0.0892	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376
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
Total	0.0892	1.5000e-004	0.0165	0.0000	0.0000	6.0000e-005	6.0000e-005	0.0000	6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005	0.0000	0.0376

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	0.0892	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376
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
Total	0.0892	1.5000e-004	0.0165	0.0000	0.0000	6.0000e-005	6.0000e-005	0.0000	6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005	0.0000	0.0376

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

	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	Grading	Grading	4/1/2021	3/31/2022	5	261	
2	Paving	Paving	4/1/2021	3/31/2022	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 3.7

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

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Forklifts	2	8.00	89	0.20
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Grading	Trenchers	1	8.00	78	0.50
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	2	8.00	158	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Tractors/Loaders/Backhoes	6	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	0	0.00	187	0.41
Paving	Paving Equipment	2	6.00	132	0.36

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
Grading	12	43.00	10.00	5.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	43.00	10.00	5.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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3.2 Grading - 2021

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					0.0163	0.0000	0.0163	1.7500e-003	0.0000	1.7500e-003			0.0000			0.0000
Off-Road	2.4858	24.6192	27.1561	0.0449		1.3961	1.3961		1.2844	1.2844		4,348.5062	4,348.5062	1.4064		4,383.6661
Total	2.4858	24.6192	27.1561	0.0449	0.0163	1.3961	1.4124	1.7500e-003	1.2844	1.2862		4,348.5062	4,348.5062	1.4064		4,383.6661

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	9.0000e-005	4.1600e-003	5.5000e-004	1.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.1000e-004	1.0000e-005	1.2000e-004		1.5313	1.5313	9.0000e-005		1.5335
Vendor	0.0224	0.8987	0.1594	2.4100e-003	0.0576	1.6000e-003	0.0592	0.0166	1.5300e-003	0.0181		253.7403	253.7403	0.0193		254.2219
Worker	0.2029	0.1154	1.5800	4.5600e-003	0.4774	2.8100e-003	0.4802	0.1266	2.5900e-003	0.1292		454.7928	454.7928	0.0109		455.0640
Total	0.2254	1.0182	1.7400	6.9800e-003	0.5354	4.4200e-003	0.5398	0.1433	4.1300e-003	0.1474		710.0643	710.0643	0.0302		710.8194

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

3.2 Grading - 2021

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					7.3100e-003	0.0000	7.3100e-003	7.9000e-004	0.0000	7.9000e-004			0.0000			0.0000
Off-Road	2.4858	24.6192	27.1561	0.0449		1.3961	1.3961		1.2844	1.2844	0.0000	4,348.5062	4,348.5062	1.4064		4,383.6661
Total	2.4858	24.6192	27.1561	0.0449	7.3100e-003	1.3961	1.4034	7.9000e-004	1.2844	1.2852	0.0000	4,348.5062	4,348.5062	1.4064		4,383.6661

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	9.0000e-005	4.1600e-003	5.5000e-004	1.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.1000e-004	1.0000e-005	1.2000e-004		1.5313	1.5313	9.0000e-005		1.5335
Vendor	0.0224	0.8987	0.1594	2.4100e-003	0.0576	1.6000e-003	0.0592	0.0166	1.5300e-003	0.0181		253.7403	253.7403	0.0193		254.2219
Worker	0.2029	0.1154	1.5800	4.5600e-003	0.4774	2.8100e-003	0.4802	0.1266	2.5900e-003	0.1292		454.7928	454.7928	0.0109		455.0640
Total	0.2254	1.0182	1.7400	6.9800e-003	0.5354	4.4200e-003	0.5398	0.1433	4.1300e-003	0.1474		710.0643	710.0643	0.0302		710.8194

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

3.2 Grading - 2022

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					0.0163	0.0000	0.0163	1.7500e-003	0.0000	1.7500e-003			0.0000			0.0000
Off-Road	2.2123	21.4025	26.9203	0.0450		1.1668	1.1668		1.0734	1.0734		4,351.7190	4,351.7190	1.4074		4,386.9049
Total	2.2123	21.4025	26.9203	0.0450	0.0163	1.1668	1.1830	1.7500e-003	1.0734	1.0752		4,351.7190	4,351.7190	1.4074		4,386.9049

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	9.0000e-005	3.7900e-003	5.3000e-004	1.0000e-005	1.1100e-003	1.0000e-005	1.1300e-003	2.8000e-004	1.0000e-005	2.9000e-004		1.5139	1.5139	9.0000e-005		1.5160
Vendor	0.0209	0.8498	0.1482	2.3800e-003	0.0576	1.3400e-003	0.0589	0.0166	1.2900e-003	0.0179		251.5773	251.5773	0.0182		252.0332
Worker	0.1898	0.1039	1.4574	4.4000e-003	0.4774	2.7400e-003	0.4801	0.1266	2.5200e-003	0.1291		438.1753	438.1753	9.7400e-003		438.4189
Total	0.2108	0.9575	1.6061	6.7900e-003	0.5360	4.0900e-003	0.5402	0.1435	3.8200e-003	0.1473		691.2664	691.2664	0.0281		691.9681

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

3.2 Grading - 2022

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					7.3100e-003	0.0000	7.3100e-003	7.9000e-004	0.0000	7.9000e-004			0.0000			0.0000
Off-Road	2.2123	21.4025	26.9203	0.0450		1.1668	1.1668		1.0734	1.0734	0.0000	4,351.7190	4,351.7190	1.4074		4,386.9049
Total	2.2123	21.4025	26.9203	0.0450	7.3100e-003	1.1668	1.1741	7.9000e-004	1.0734	1.0742	0.0000	4,351.7190	4,351.7190	1.4074		4,386.9049

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	9.0000e-005	3.7900e-003	5.3000e-004	1.0000e-005	1.1100e-003	1.0000e-005	1.1300e-003	2.8000e-004	1.0000e-005	2.9000e-004		1.5139	1.5139	9.0000e-005		1.5160
Vendor	0.0209	0.8498	0.1482	2.3800e-003	0.0576	1.3400e-003	0.0589	0.0166	1.2900e-003	0.0179		251.5773	251.5773	0.0182		252.0332
Worker	0.1898	0.1039	1.4574	4.4000e-003	0.4774	2.7400e-003	0.4801	0.1266	2.5200e-003	0.1291		438.1753	438.1753	9.7400e-003		438.4189
Total	0.2108	0.9575	1.6061	6.7900e-003	0.5360	4.0900e-003	0.5402	0.1435	3.8200e-003	0.1473		691.2664	691.2664	0.0281		691.9681

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

3.3 Paving - 2021

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	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342		1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.0371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1311	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342		1,804.5523	1,804.5523	0.5670		1,818.7270

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	9.0000e-005	4.1600e-003	5.5000e-004	1.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.1000e-004	1.0000e-005	1.2000e-004		1.5313	1.5313	9.0000e-005		1.5335
Vendor	0.0224	0.8987	0.1594	2.4100e-003	0.0576	1.6000e-003	0.0592	0.0166	1.5300e-003	0.0181		253.7403	253.7403	0.0193		254.2219
Worker	0.2029	0.1154	1.5800	4.5600e-003	0.4774	2.8100e-003	0.4802	0.1266	2.5900e-003	0.1292		454.7928	454.7928	0.0109		455.0640
Total	0.2254	1.0182	1.7400	6.9800e-003	0.5354	4.4200e-003	0.5398	0.1433	4.1300e-003	0.1474		710.0643	710.0643	0.0302		710.8194

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

3.3 Paving - 2021

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	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342	0.0000	1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.0371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1311	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342	0.0000	1,804.5523	1,804.5523	0.5670		1,818.7270

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	9.0000e-005	4.1600e-003	5.5000e-004	1.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.1000e-004	1.0000e-005	1.2000e-004		1.5313	1.5313	9.0000e-005		1.5335
Vendor	0.0224	0.8987	0.1594	2.4100e-003	0.0576	1.6000e-003	0.0592	0.0166	1.5300e-003	0.0181		253.7403	253.7403	0.0193		254.2219
Worker	0.2029	0.1154	1.5800	4.5600e-003	0.4774	2.8100e-003	0.4802	0.1266	2.5900e-003	0.1292		454.7928	454.7928	0.0109		455.0640
Total	0.2254	1.0182	1.7400	6.9800e-003	0.5354	4.4200e-003	0.5398	0.1433	4.1300e-003	0.1474		710.0643	710.0643	0.0302		710.8194

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

3.3 Paving - 2022

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	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.0371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0137	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.1297	1,805.1297	0.5672		1,819.3091

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	9.0000e-005	3.7900e-003	5.3000e-004	1.0000e-005	1.1100e-003	1.0000e-005	1.1300e-003	2.8000e-004	1.0000e-005	2.9000e-004		1.5139	1.5139	9.0000e-005		1.5160
Vendor	0.0209	0.8498	0.1482	2.3800e-003	0.0576	1.3400e-003	0.0589	0.0166	1.2900e-003	0.0179		251.5773	251.5773	0.0182		252.0332
Worker	0.1898	0.1039	1.4574	4.4000e-003	0.4774	2.7400e-003	0.4801	0.1266	2.5200e-003	0.1291		438.1753	438.1753	9.7400e-003		438.4189
Total	0.2108	0.9575	1.6061	6.7900e-003	0.5360	4.0900e-003	0.5402	0.1435	3.8200e-003	0.1473		691.2664	691.2664	0.0281		691.9681

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

3.3 Paving - 2022

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	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.0371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0137	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091

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	9.0000e-005	3.7900e-003	5.3000e-004	1.0000e-005	1.1100e-003	1.0000e-005	1.1300e-003	2.8000e-004	1.0000e-005	2.9000e-004		1.5139	1.5139	9.0000e-005		1.5160
Vendor	0.0209	0.8498	0.1482	2.3800e-003	0.0576	1.3400e-003	0.0589	0.0166	1.2900e-003	0.0179		251.5773	251.5773	0.0182		252.0332
Worker	0.1898	0.1039	1.4574	4.4000e-003	0.4774	2.7400e-003	0.4801	0.1266	2.5200e-003	0.1291		438.1753	438.1753	9.7400e-003		438.4189
Total	0.2108	0.9575	1.6061	6.7900e-003	0.5360	4.0900e-003	0.5402	0.1435	3.8200e-003	0.1473		691.2664	691.2664	0.0281		691.9681

4.0 Operational Detail - Mobile

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

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
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

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	13.80	6.20	6.20	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	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

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

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas 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

Mitigated

	Natural Gas 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

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

	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	0.0892	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376
Unmitigated	0.0892	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376

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	0.0307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376
Total	0.0892	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

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	0.0307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376
Total	0.0892	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376

7.0 Water Detail

7.1 Mitigation Measures Water

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

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Summer

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

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

Saint Anthony SWS Consolidation
Riverside-Salton Sea County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	161.00	1000sqft	3.70	161,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	15			Operational Year	2022
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MW hr)	1270.9	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Assumes pipeline trenches 5 feet wide.

Construction Phase - Grading captures trenching, hdd, pipe install. Paving captures resurfacing.

Off-road Equipment - Construction equipment list provided by engineers.

Off-road Equipment -

Trips and VMT - Trips provided by engineers.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

tblConstructionPhase	NumDays	8.00	261.00
tblConstructionPhase	NumDays	18.00	261.00
tblConstructionPhase	PhaseEndDate	5/17/2021	3/31/2022
tblConstructionPhase	PhaseEndDate	4/28/2022	3/31/2022
tblConstructionPhase	PhaseStartDate	5/6/2021	4/1/2021
tblConstructionPhase	PhaseStartDate	4/5/2022	4/1/2021
tblGrading	AcresOfGrading	0.00	4.00
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	30.00	43.00
tblTripsAndVMT	WorkerTripNumber	20.00	43.00

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

2.0 Emissions Summary

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					
2021	4.0628	37.4847	42.3486	0.0767	1.0870	1.9839	3.0709	0.2883	1.8271	2.1154	0.0000	7,458.971 9	7,458.971 9	2.0354	0.0000	7,509.858 0
2022	3.6441	32.8267	41.8194	0.0764	1.0883	1.6627	2.7511	0.2887	1.5315	1.8202	0.0000	7,428.685 7	7,428.685 7	2.0325	0.0000	7,479.498 4
Maximum	4.0628	37.4847	42.3486	0.0767	1.0883	1.9839	3.0709	0.2887	1.8271	2.1154	0.0000	7,458.971 9	7,458.971 9	2.0354	0.0000	7,509.858 0

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					
2021	4.0628	37.4847	42.3486	0.0767	1.0780	1.9839	3.0620	0.2874	1.8271	2.1144	0.0000	7,458.971 9	7,458.971 9	2.0354	0.0000	7,509.858 0
2022	3.6441	32.8267	41.8194	0.0764	1.0794	1.6627	2.7421	0.2877	1.5315	1.8192	0.0000	7,428.685 7	7,428.685 7	2.0325	0.0000	7,479.498 4
Maximum	4.0628	37.4847	42.3486	0.0767	1.0794	1.9839	3.0620	0.2877	1.8271	2.1144	0.0000	7,458.971 9	7,458.971 9	2.0354	0.0000	7,509.858 0

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

	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	0.82	0.00	0.31	0.33	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

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	0.0892	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376
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
Total	0.0892	1.5000e-004	0.0165	0.0000	0.0000	6.0000e-005	6.0000e-005	0.0000	6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005	0.0000	0.0376

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	0.0892	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376
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
Total	0.0892	1.5000e-004	0.0165	0.0000	0.0000	6.0000e-005	6.0000e-005	0.0000	6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005	0.0000	0.0376

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

	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	Grading	Grading	4/1/2021	3/31/2022	5	261	
2	Paving	Paving	4/1/2021	3/31/2022	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 3.7

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

OffRoad Equipment

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Forklifts	2	8.00	89	0.20
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Grading	Trenchers	1	8.00	78	0.50
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	2	8.00	158	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Tractors/Loaders/Backhoes	6	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	0	0.00	187	0.41
Paving	Paving Equipment	2	6.00	132	0.36

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
Grading	12	43.00	10.00	5.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	43.00	10.00	5.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

3.2 Grading - 2021

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					0.0163	0.0000	0.0163	1.7500e-003	0.0000	1.7500e-003			0.0000			0.0000
Off-Road	2.4858	24.6192	27.1561	0.0449		1.3961	1.3961		1.2844	1.2844		4,348.506 2	4,348.506 2	1.4064		4,383.666 1
Total	2.4858	24.6192	27.1561	0.0449	0.0163	1.3961	1.4124	1.7500e-003	1.2844	1.2862		4,348.506 2	4,348.506 2	1.4064		4,383.666 1

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	1.0000e-004	4.1900e-003	6.4000e-004	1.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.1000e-004	1.0000e-005	1.2000e-004		1.4928	1.4928	1.0000e-004		1.4953
Vendor	0.0239	0.8893	0.1897	2.3100e-003	0.0576	1.6500e-003	0.0592	0.0166	1.5800e-003	0.0182		243.4625	243.4625	0.0215		244.0000
Worker	0.1990	0.1194	1.2758	4.0900e-003	0.4774	2.8100e-003	0.4802	0.1266	2.5900e-003	0.1292		408.0014	408.0014	9.4300e-003		408.2372
Total	0.2230	1.0128	1.4661	6.4100e-003	0.5354	4.4700e-003	0.5398	0.1433	4.1800e-003	0.1475		652.9567	652.9567	0.0310		653.7325

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

3.2 Grading - 2021

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					7.3100e-003	0.0000	7.3100e-003	7.9000e-004	0.0000	7.9000e-004			0.0000			0.0000
Off-Road	2.4858	24.6192	27.1561	0.0449		1.3961	1.3961		1.2844	1.2844	0.0000	4,348.506 2	4,348.506 2	1.4064		4,383.666 1
Total	2.4858	24.6192	27.1561	0.0449	7.3100e-003	1.3961	1.4034	7.9000e-004	1.2844	1.2852	0.0000	4,348.506 2	4,348.506 2	1.4064		4,383.666 1

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	1.0000e-004	4.1900e-003	6.4000e-004	1.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.1000e-004	1.0000e-005	1.2000e-004		1.4928	1.4928	1.0000e-004		1.4953
Vendor	0.0239	0.8893	0.1897	2.3100e-003	0.0576	1.6500e-003	0.0592	0.0166	1.5800e-003	0.0182		243.4625	243.4625	0.0215		244.0000
Worker	0.1990	0.1194	1.2758	4.0900e-003	0.4774	2.8100e-003	0.4802	0.1266	2.5900e-003	0.1292		408.0014	408.0014	9.4300e-003		408.2372
Total	0.2230	1.0128	1.4661	6.4100e-003	0.5354	4.4700e-003	0.5398	0.1433	4.1800e-003	0.1475		652.9567	652.9567	0.0310		653.7325

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

3.2 Grading - 2022

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					0.0163	0.0000	0.0163	1.7500e-003	0.0000	1.7500e-003			0.0000			0.0000
Off-Road	2.2123	21.4025	26.9203	0.0450		1.1668	1.1668		1.0734	1.0734		4,351.7190	4,351.7190	1.4074		4,386.9049
Total	2.2123	21.4025	26.9203	0.0450	0.0163	1.1668	1.1830	1.7500e-003	1.0734	1.0752		4,351.7190	4,351.7190	1.4074		4,386.9049

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	9.0000e-005	3.8100e-003	6.2000e-004	1.0000e-005	1.1100e-003	1.0000e-005	1.1300e-003	2.8000e-004	1.0000e-005	2.9000e-004		1.4755	1.4755	9.0000e-005		1.4778
Vendor	0.0223	0.8398	0.1770	2.2900e-003	0.0576	1.3900e-003	0.0590	0.0166	1.3300e-003	0.0179		241.3292	241.3292	0.0204		241.8386
Worker	0.1867	0.1074	1.1749	3.9400e-003	0.4774	2.7400e-003	0.4801	0.1266	2.5200e-003	0.1291		393.1138	393.1138	8.4800e-003		393.3258
Total	0.2091	0.9510	1.3526	6.2400e-003	0.5360	4.1400e-003	0.5402	0.1435	3.8600e-003	0.1473		635.9185	635.9185	0.0289		636.6422

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

3.2 Grading - 2022

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					7.3100e-003	0.0000	7.3100e-003	7.9000e-004	0.0000	7.9000e-004			0.0000			0.0000
Off-Road	2.2123	21.4025	26.9203	0.0450		1.1668	1.1668		1.0734	1.0734	0.0000	4,351.7190	4,351.7190	1.4074		4,386.9049
Total	2.2123	21.4025	26.9203	0.0450	7.3100e-003	1.1668	1.1741	7.9000e-004	1.0734	1.0742	0.0000	4,351.7190	4,351.7190	1.4074		4,386.9049

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	9.0000e-005	3.8100e-003	6.2000e-004	1.0000e-005	1.1100e-003	1.0000e-005	1.1300e-003	2.8000e-004	1.0000e-005	2.9000e-004		1.4755	1.4755	9.0000e-005		1.4778
Vendor	0.0223	0.8398	0.1770	2.2900e-003	0.0576	1.3900e-003	0.0590	0.0166	1.3300e-003	0.0179		241.3292	241.3292	0.0204		241.8386
Worker	0.1867	0.1074	1.1749	3.9400e-003	0.4774	2.7400e-003	0.4801	0.1266	2.5200e-003	0.1291		393.1138	393.1138	8.4800e-003		393.3258
Total	0.2091	0.9510	1.3526	6.2400e-003	0.5360	4.1400e-003	0.5402	0.1435	3.8600e-003	0.1473		635.9185	635.9185	0.0289		636.6422

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

3.3 Paving - 2021

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	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342		1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.0371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1311	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342		1,804.5523	1,804.5523	0.5670		1,818.7270

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	1.0000e-004	4.1900e-003	6.4000e-004	1.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.1000e-004	1.0000e-005	1.2000e-004		1.4928	1.4928	1.0000e-004		1.4953
Vendor	0.0239	0.8893	0.1897	2.3100e-003	0.0576	1.6500e-003	0.0592	0.0166	1.5800e-003	0.0182		243.4625	243.4625	0.0215		244.0000
Worker	0.1990	0.1194	1.2758	4.0900e-003	0.4774	2.8100e-003	0.4802	0.1266	2.5900e-003	0.1292		408.0014	408.0014	9.4300e-003		408.2372
Total	0.2230	1.0128	1.4661	6.4100e-003	0.5354	4.4700e-003	0.5398	0.1433	4.1800e-003	0.1475		652.9567	652.9567	0.0310		653.7325

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

3.3 Paving - 2021

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	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342	0.0000	1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.0371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1311	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342	0.0000	1,804.5523	1,804.5523	0.5670		1,818.7270

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	1.0000e-004	4.1900e-003	6.4000e-004	1.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.1000e-004	1.0000e-005	1.2000e-004		1.4928	1.4928	1.0000e-004		1.4953
Vendor	0.0239	0.8893	0.1897	2.3100e-003	0.0576	1.6500e-003	0.0592	0.0166	1.5800e-003	0.0182		243.4625	243.4625	0.0215		244.0000
Worker	0.1990	0.1194	1.2758	4.0900e-003	0.4774	2.8100e-003	0.4802	0.1266	2.5900e-003	0.1292		408.0014	408.0014	9.4300e-003		408.2372
Total	0.2230	1.0128	1.4661	6.4100e-003	0.5354	4.4700e-003	0.5398	0.1433	4.1800e-003	0.1475		652.9567	652.9567	0.0310		653.7325

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

3.3 Paving - 2022

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	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.0371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0137	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.1297	1,805.1297	0.5672		1,819.3091

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	9.0000e-005	3.8100e-003	6.2000e-004	1.0000e-005	1.1100e-003	1.0000e-005	1.1300e-003	2.8000e-004	1.0000e-005	2.9000e-004		1.4755	1.4755	9.0000e-005		1.4778
Vendor	0.0223	0.8398	0.1770	2.2900e-003	0.0576	1.3900e-003	0.0590	0.0166	1.3300e-003	0.0179		241.3292	241.3292	0.0204		241.8386
Worker	0.1867	0.1074	1.1749	3.9400e-003	0.4774	2.7400e-003	0.4801	0.1266	2.5200e-003	0.1291		393.1138	393.1138	8.4800e-003		393.3258
Total	0.2091	0.9510	1.3526	6.2400e-003	0.5360	4.1400e-003	0.5402	0.1435	3.8600e-003	0.1473		635.9185	635.9185	0.0289		636.6422

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

3.3 Paving - 2022

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	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.0371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0137	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091

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	9.0000e-005	3.8100e-003	6.2000e-004	1.0000e-005	1.1100e-003	1.0000e-005	1.1300e-003	2.8000e-004	1.0000e-005	2.9000e-004		1.4755	1.4755	9.0000e-005		1.4778
Vendor	0.0223	0.8398	0.1770	2.2900e-003	0.0576	1.3900e-003	0.0590	0.0166	1.3300e-003	0.0179		241.3292	241.3292	0.0204		241.8386
Worker	0.1867	0.1074	1.1749	3.9400e-003	0.4774	2.7400e-003	0.4801	0.1266	2.5200e-003	0.1291		393.1138	393.1138	8.4800e-003		393.3258
Total	0.2091	0.9510	1.3526	6.2400e-003	0.5360	4.1400e-003	0.5402	0.1435	3.8600e-003	0.1473		635.9185	635.9185	0.0289		636.6422

4.0 Operational Detail - Mobile

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

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
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

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	13.80	6.20	6.20	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	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

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

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas 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

Mitigated

	Natural Gas 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

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

	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	0.0892	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376
Unmitigated	0.0892	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376

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	0.0307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376
Total	0.0892	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Winter

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	0.0307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376
Total	0.0892	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0376

7.0 Water Detail

7.1 Mitigation Measures Water

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

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

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	161.00	1000sqft	3.70	161,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	15			Operational Year	2022
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MW hr)	1270.9	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Assumes pipeline trenches 5 feet wide.

Construction Phase - Grading captures trenching, hdd, pipe install. Paving captures resurfacing.

Off-road Equipment - Construction equipment list provided by engineers.

Off-road Equipment -

Trips and VMT - Trips provided by engineers.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15

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tblConstructionPhase	NumDays	8.00	261.00
tblConstructionPhase	NumDays	18.00	261.00
tblConstructionPhase	PhaseEndDate	5/17/2021	3/31/2022
tblConstructionPhase	PhaseEndDate	4/28/2022	3/31/2022
tblConstructionPhase	PhaseStartDate	5/6/2021	4/1/2021
tblConstructionPhase	PhaseStartDate	4/5/2022	4/1/2021
tblGrading	AcresOfGrading	0.00	4.00
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	30.00	43.00
tblTripsAndVMT	WorkerTripNumber	20.00	43.00

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2.0 Emissions Summary

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					
2021	0.3969	3.6960	4.1820	7.5800e-003	0.1059	0.1954	0.3013	0.0280	0.1800	0.2080	0.0000	669.4630	669.4630	0.1817	0.0000	674.0058
2022	0.1156	1.0516	1.3414	2.4500e-003	0.0359	0.0532	0.0891	9.2700e-003	0.0490	0.0583	0.0000	216.5880	216.5880	0.0590	0.0000	218.0617
Maximum	0.3969	3.6960	4.1820	7.5800e-003	0.1059	0.1954	0.3013	0.0280	0.1800	0.2080	0.0000	669.4630	669.4630	0.1817	0.0000	674.0058

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					
2021	0.3969	3.6960	4.1820	7.5800e-003	0.1047	0.1954	0.3001	0.0279	0.1800	0.2079	0.0000	669.4623	669.4623	0.1817	0.0000	674.0051
2022	0.1156	1.0516	1.3414	2.4500e-003	0.0347	0.0532	0.0879	9.1500e-003	0.0490	0.0582	0.0000	216.5878	216.5878	0.0590	0.0000	218.0615
Maximum	0.3969	3.6960	4.1820	7.5800e-003	0.1047	0.1954	0.3001	0.0279	0.1800	0.2079	0.0000	669.4623	669.4623	0.1817	0.0000	674.0051

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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	1.65	0.00	0.59	0.64	0.00	0.09	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	4-1-2021	6-30-2021	1.3508	1.3508
2	7-1-2021	9-30-2021	1.3657	1.3657
3	10-1-2021	12-31-2021	1.3651	1.3651
4	1-1-2022	3-31-2022	1.1723	1.1723
		Highest	1.3657	1.3657

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	tons/yr										MT/yr					
Area	0.0161	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0700e-003
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	0.0161	1.0000e-005	1.4800e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0700e-003

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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	0.0161	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0700e-003
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	0.0161	1.0000e-005	1.4800e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0700e-003

	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	Grading	Grading	4/1/2021	3/31/2022	5	261	
2	Paving	Paving	4/1/2021	3/31/2022	5	261	

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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 3.7

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
Grading	Forklifts	2	8.00	89	0.20
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Grading	Trenchers	1	8.00	78	0.50
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	2	8.00	158	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Tractors/Loaders/Backhoes	6	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	0	0.00	187	0.41
Paving	Paving Equipment	2	6.00	132	0.36

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
Grading	12	43.00	10.00	5.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	43.00	10.00	5.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2021

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					2.1200e-003	0.0000	2.1200e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2449	2.4250	2.6749	4.4200e-003		0.1375	0.1375		0.1265	0.1265	0.0000	388.5725	388.5725	0.1257	0.0000	391.7143
Total	0.2449	2.4250	2.6749	4.4200e-003	2.1200e-003	0.1375	0.1396	2.3000e-004	0.1265	0.1268	0.0000	388.5725	388.5725	0.1257	0.0000	391.7143

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3.2 Grading - 2021

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	1.0000e-005	4.2000e-004	6.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1354	0.1354	1.0000e-005	0.0000	0.1356
Vendor	2.2600e-003	0.0891	0.0171	2.3000e-004	5.5900e-003	1.6000e-004	5.7500e-003	1.6100e-003	1.5000e-004	1.7700e-003	0.0000	22.2879	22.2879	1.8100e-003	0.0000	22.3331
Worker	0.0181	0.0122	0.1326	4.1000e-004	0.0462	2.8000e-004	0.0465	0.0123	2.6000e-004	0.0125	0.0000	37.3966	37.3966	8.7000e-004	0.0000	37.4184
Total	0.0203	0.1016	0.1497	6.4000e-004	0.0519	4.4000e-004	0.0523	0.0139	4.1000e-004	0.0143	0.0000	59.8199	59.8199	2.6900e-003	0.0000	59.8871

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					9.5000e-004	0.0000	9.5000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2449	2.4250	2.6749	4.4200e-003		0.1375	0.1375		0.1265	0.1265	0.0000	388.5720	388.5720	0.1257	0.0000	391.7138
Total	0.2449	2.4250	2.6749	4.4200e-003	9.5000e-004	0.1375	0.1385	1.0000e-004	0.1265	0.1266	0.0000	388.5720	388.5720	0.1257	0.0000	391.7138

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3.2 Grading - 2021

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	1.0000e-005	4.2000e-004	6.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1354	0.1354	1.0000e-005	0.0000	0.1356
Vendor	2.2600e-003	0.0891	0.0171	2.3000e-004	5.5900e-003	1.6000e-004	5.7500e-003	1.6100e-003	1.5000e-004	1.7700e-003	0.0000	22.2879	22.2879	1.8100e-003	0.0000	22.3331
Worker	0.0181	0.0122	0.1326	4.1000e-004	0.0462	2.8000e-004	0.0465	0.0123	2.6000e-004	0.0125	0.0000	37.3966	37.3966	8.7000e-004	0.0000	37.4184
Total	0.0203	0.1016	0.1497	6.4000e-004	0.0519	4.4000e-004	0.0523	0.0139	4.1000e-004	0.0143	0.0000	59.8199	59.8199	2.6900e-003	0.0000	59.8871

3.2 Grading - 2022

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					2.1200e-003	0.0000	2.1200e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0708	0.6849	0.8615	1.4400e-003		0.0373	0.0373		0.0344	0.0344	0.0000	126.3300	126.3300	0.0409	0.0000	127.3515
Total	0.0708	0.6849	0.8615	1.4400e-003	2.1200e-003	0.0373	0.0395	2.3000e-004	0.0344	0.0346	0.0000	126.3300	126.3300	0.0409	0.0000	127.3515

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3.2 Grading - 2022

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	1.2000e-004	2.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0435	0.0435	0.0000	0.0000	0.0435
Vendor	6.9000e-004	0.0273	5.1800e-003	8.0000e-005	1.8200e-003	4.0000e-005	1.8600e-003	5.2000e-004	4.0000e-005	5.7000e-004	0.0000	7.1783	7.1783	5.6000e-004	0.0000	7.1922
Worker	5.5000e-003	3.5500e-003	0.0397	1.3000e-004	0.0150	9.0000e-005	0.0151	3.9900e-003	8.0000e-005	4.0700e-003	0.0000	11.7058	11.7058	2.5000e-004	0.0000	11.7122
Total	6.1900e-003	0.0310	0.0449	2.1000e-004	0.0169	1.3000e-004	0.0170	4.5200e-003	1.2000e-004	4.6500e-003	0.0000	18.9276	18.9276	8.1000e-004	0.0000	18.9479

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					9.5000e-004	0.0000	9.5000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0708	0.6849	0.8615	1.4400e-003		0.0373	0.0373		0.0344	0.0344	0.0000	126.3299	126.3299	0.0409	0.0000	127.3513
Total	0.0708	0.6849	0.8615	1.4400e-003	9.5000e-004	0.0373	0.0383	1.0000e-004	0.0344	0.0345	0.0000	126.3299	126.3299	0.0409	0.0000	127.3513

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3.2 Grading - 2022

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	1.2000e-004	2.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0435	0.0435	0.0000	0.0000	0.0435
Vendor	6.9000e-004	0.0273	5.1800e-003	8.0000e-005	1.8200e-003	4.0000e-005	1.8600e-003	5.2000e-004	4.0000e-005	5.7000e-004	0.0000	7.1783	7.1783	5.6000e-004	0.0000	7.1922
Worker	5.5000e-003	3.5500e-003	0.0397	1.3000e-004	0.0150	9.0000e-005	0.0151	3.9900e-003	8.0000e-005	4.0700e-003	0.0000	11.7058	11.7058	2.5000e-004	0.0000	11.7122
Total	6.1900e-003	0.0310	0.0449	2.1000e-004	0.0169	1.3000e-004	0.0170	4.5200e-003	1.2000e-004	4.6500e-003	0.0000	18.9276	18.9276	8.1000e-004	0.0000	18.9479

3.3 Paving - 2021

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	0.1078	1.0677	1.2076	1.8600e-003		0.0570	0.0570		0.0526	0.0526	0.0000	161.2506	161.2506	0.0507	0.0000	162.5173
Paving	3.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1114	1.0677	1.2076	1.8600e-003		0.0570	0.0570		0.0526	0.0526	0.0000	161.2506	161.2506	0.0507	0.0000	162.5173

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3.3 Paving - 2021

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	1.0000e-005	4.2000e-004	6.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1354	0.1354	1.0000e-005	0.0000	0.1356
Vendor	2.2600e-003	0.0891	0.0171	2.3000e-004	5.5900e-003	1.6000e-004	5.7500e-003	1.6100e-003	1.5000e-004	1.7700e-003	0.0000	22.2879	22.2879	1.8100e-003	0.0000	22.3331
Worker	0.0181	0.0122	0.1326	4.1000e-004	0.0462	2.8000e-004	0.0465	0.0123	2.6000e-004	0.0125	0.0000	37.3966	37.3966	8.7000e-004	0.0000	37.4184
Total	0.0203	0.1016	0.1497	6.4000e-004	0.0519	4.4000e-004	0.0523	0.0139	4.1000e-004	0.0143	0.0000	59.8199	59.8199	2.6900e-003	0.0000	59.8871

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	0.1078	1.0677	1.2076	1.8600e-003		0.0570	0.0570		0.0526	0.0526	0.0000	161.2504	161.2504	0.0507	0.0000	162.5171
Paving	3.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1114	1.0677	1.2076	1.8600e-003		0.0570	0.0570		0.0526	0.0526	0.0000	161.2504	161.2504	0.0507	0.0000	162.5171

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Annual

3.3 Paving - 2021

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	1.0000e-005	4.2000e-004	6.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1354	0.1354	1.0000e-005	0.0000	0.1356
Vendor	2.2600e-003	0.0891	0.0171	2.3000e-004	5.5900e-003	1.6000e-004	5.7500e-003	1.6100e-003	1.5000e-004	1.7700e-003	0.0000	22.2879	22.2879	1.8100e-003	0.0000	22.3331
Worker	0.0181	0.0122	0.1326	4.1000e-004	0.0462	2.8000e-004	0.0465	0.0123	2.6000e-004	0.0125	0.0000	37.3966	37.3966	8.7000e-004	0.0000	37.4184
Total	0.0203	0.1016	0.1497	6.4000e-004	0.0519	4.4000e-004	0.0523	0.0139	4.1000e-004	0.0143	0.0000	59.8199	59.8199	2.6900e-003	0.0000	59.8871

3.3 Paving - 2022

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	0.0313	0.3047	0.3902	6.1000e-004		0.0156	0.0156		0.0144	0.0144	0.0000	52.4028	52.4028	0.0165	0.0000	52.8144
Paving	1.1900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0324	0.3047	0.3902	6.1000e-004		0.0156	0.0156		0.0144	0.0144	0.0000	52.4028	52.4028	0.0165	0.0000	52.8144

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Annual

3.3 Paving - 2022

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	1.2000e-004	2.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0435	0.0435	0.0000	0.0000	0.0435
Vendor	6.9000e-004	0.0273	5.1800e-003	8.0000e-005	1.8200e-003	4.0000e-005	1.8600e-003	5.2000e-004	4.0000e-005	5.7000e-004	0.0000	7.1783	7.1783	5.6000e-004	0.0000	7.1922
Worker	5.5000e-003	3.5500e-003	0.0397	1.3000e-004	0.0150	9.0000e-005	0.0151	3.9900e-003	8.0000e-005	4.0700e-003	0.0000	11.7058	11.7058	2.5000e-004	0.0000	11.7122
Total	6.1900e-003	0.0310	0.0449	2.1000e-004	0.0169	1.3000e-004	0.0170	4.5200e-003	1.2000e-004	4.6500e-003	0.0000	18.9276	18.9276	8.1000e-004	0.0000	18.9479

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	0.0313	0.3047	0.3902	6.1000e-004		0.0156	0.0156		0.0144	0.0144	0.0000	52.4027	52.4027	0.0165	0.0000	52.8143
Paving	1.1900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0324	0.3047	0.3902	6.1000e-004		0.0156	0.0156		0.0144	0.0144	0.0000	52.4027	52.4027	0.0165	0.0000	52.8143

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Annual

3.3 Paving - 2022

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	1.2000e-004	2.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0435	0.0435	0.0000	0.0000	0.0435
Vendor	6.9000e-004	0.0273	5.1800e-003	8.0000e-005	1.8200e-003	4.0000e-005	1.8600e-003	5.2000e-004	4.0000e-005	5.7000e-004	0.0000	7.1783	7.1783	5.6000e-004	0.0000	7.1922
Worker	5.5000e-003	3.5500e-003	0.0397	1.3000e-004	0.0150	9.0000e-005	0.0151	3.9900e-003	8.0000e-005	4.0700e-003	0.0000	11.7058	11.7058	2.5000e-004	0.0000	11.7122
Total	6.1900e-003	0.0310	0.0449	2.1000e-004	0.0169	1.3000e-004	0.0170	4.5200e-003	1.2000e-004	4.6500e-003	0.0000	18.9276	18.9276	8.1000e-004	0.0000	18.9479

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Annual

	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	13.80	6.20	6.20	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	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

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5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas 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	tons/yr										MT/yr					
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	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000							

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

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Annual

5.3 Energy by Land Use - Electricity

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

	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	0.0161	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0700e-003
Unmitigated	0.0161	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0700e-003

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Annual

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	tons/yr										MT/yr					
Architectural Coating	5.6000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0700e-003
Total	0.0162	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0700e-003

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	5.6000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0700e-003
Total	0.0162	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8800e-003	2.8800e-003	1.0000e-005	0.0000	3.0700e-003

7.0 Water Detail

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Annual

7.1 Mitigation Measures Water

	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

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Annual

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

Saint Anthony SWS Consolidation - Riverside-Salton Sea County, Annual

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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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

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

Equipment Type	Number
----------------	--------

11.0 Vegetation

APPENDIX B: BIOLOGICAL RESOURCES TECHNICAL STUDY



Saint Anthony's and Valley View Water Systems Consolidation Project

Biological Resources Technical Study

prepared for

Woodard & Curran

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Laguna Hills, CA 92653

prepared with the assistance of

Rincon Consultants, Inc.

180 North Ashwood Avenue
Ventura, California 93003

July 2019

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1 Introduction

Rincon Consultants, Inc. (Rincon) prepared this Biological Resources Technical Study (BRTS) to document the current existing conditions and evaluate the potential for project-related impacts to biological resources during the consolidation of separate small water systems (SWS) for two site locations: 1) the Saint Anthony's site and 2) Valley View site. The project is part of the East Coachella Valley Water Supply Project (ECVWSP). Coachella Valley Water District (CVWD) is the project's responsible lead agency. The project is located near the towns of Thermal and Mecca in unincorporated Riverside County, California.

1.1 Project Location

The project consists of two locations east of the Peninsular Ranges in the central and southern portions of the Coachella Valley: the Saint Anthony's site is located near the town of Mecca and the Valley View site is located in Thermal, both in unincorporated Riverside County, California (Figure 1). The proposed project locations lie within the boundaries of the Coachella Valley Multiple Species Habitat Conservation Plan and Natural Community Conservation Plan (CVMSHCP); however, they are not in an identified conservation area.

The Saint Anthony's site is depicted on Township 7S, Range 8E, Sections 9-16 of the U.S. Geological Survey *Valerie*, CA 7.5-minute topographic quadrangle and Township 7S, Range 9E, Sections 7, 8, 18, and 17 of the U.S. Geological Survey *Mecca*, CA 7.5-minute topographic quadrangle, San Bernardino Baseline and Meridian. It is located approximately 2.5 miles south of the junction of State Route (SR) 86 and SR-111 near the town of Mecca. Specifically, the project site is along 66th Avenue between Hammond Road to the east and Martinez Road to the west. A portion of the project site extends along Lincoln Street between 66th Avenue and 68th Avenue. Agriculture and open space are the dominant land uses adjacent to the project site.

The Valley View site is depicted on Township 6S, Range 8E, Sections 14, 15, 22, and 23 of the U.S. Geological Survey *Indio* and *Thermal Canyon*, CA 7.5-minute topographic quadrangles, San Bernardino Baseline and Meridian. It is directly west of SR-111 in the town of Thermal. Specifically, the project site is along Desert Cactus Drive, Fillmore Street, Airport Boulevard and Soto Street bounded by Pierce Street to the east and Orange Street to the west. Agriculture and residential land uses dominate the areas adjacent to the project site. SR- 86 bisects a portion of the project site.

The Saint Anthony's site and the Valley View site are collectively referred to as the "project site."

1.2 Project Description

The proposed project involves the consolidation of independent SWSs into CVWD's potable water system through the installation of new pipeline infrastructure. The consolidation will occur at two locations as described above: the Saint Anthony's site and the Valley View site (Figure 2).

The St. Anthony's site consists of three privately owned SWSs: Manuela Garcia Water, Saint Anthony Mobile Home Park (MHP), and Seferino Huerta. The existing potable water supply for the three

SWSs consists of local groundwater supplied by privately owned groundwater wells. The Manuela Garcia SWS serves a small mobile home park with a total of 14 service connections. The Saint Anthony MHP is a community water system that serves approximately 95 mobile homes. The Seferino Huerta SWS is a mobile home park that has 13 service connections. New infrastructure for the proposed project would consist of the following:

- A 30-inch diameter pipeline (Phase 1B and Phase 2 pipeline extensions) totaling approximately 22,000 feet (4.2 miles) in length that runs along to adjacent to Avenue 66
- A 12-inch diameter pipeline measuring approximately 4,500 feet in length along Lincoln Street
- 460 feet of 1-inch, 2-inch and 4-inch diameter service laterals connecting to the Avenue 66 Phase 2 pipeline and 12-inch diameter water pipeline along Lincoln Street and extending to the property boundary of each SWS, as well as 2-inch diameter pipelines on the MHP properties to complete service to the existing SWSs
- 60 feet of 6-inch diameter fire service that would connect to the Avenue 66 pipeline and 12-inch Lincoln Street pipeline and extend to fire hydrants or backflow preventers to provide fire service to each SWS
- Modifications to the existing on-site SWSs may include removal of some existing infrastructure (e.g., tanks, pipelines, connections) and specifically abandonment of the wells.

The Valley View site consists of nine privately owned SWSs: Campos MHP, De Leon Ranch, Desert View MHP, Luciano Valenzuela, Magdaleno Lopez, Meza's Ranch, Soto Water, Valley View MHP, and Vista Norte Estates. The existing potable water supply for the nine SWSs consists of local groundwater supplied by privately owned groundwater wells. The Campos MHP SWS serves a small mobile home park with a total of 14 service connections. The De Leon Ranch SWS serves a labor camp with 13 dwellings. The Desert View MHP is a community water system serving a mobile home park with 22 service connections. The Luciano Valenzuela SWS serves a mobile home park with 13 connections. The Magdaleno Lopez SWS serves six residential connections. The Meza's Ranch SWS is a new community water system serving a main residence and 7 mobile homes. The Soto Water SWS has eight service connections. The Valley View MHP is a community water system serving a mobile home park with 42 service connections. The Vista Norte Estates SWS is comprised of 13 service connections. New infrastructure for the Valley View portion of the project would consist of the following:

- 30-inch diameter water main along Airport Boulevard, totaling 5,400 linear feet, connecting to the existing 18-inch diameter water main on Pierce Street.
- 12-inch diameter water mains in Soto Street, Fillmore Street, 55th Avenue, and Desert Cactus Drive, totally 9,100 linear feet, connecting to the 30-inch water main along Airport Boulevard.
- One-inch and two-inch diameter service laterals totaling 1,100 linear feet. These would connect to the proposed 30-inch and 12-inch diameter water mains in Airport Boulevard, Soto Street, Avenue 55, and Desert Cactus Drive and would extend to the property boundaries of each SWS.

- One-inch and two-inch diameter on-property pipelines, totaling 1,500 feet to complete service to the existing SWSs. These pipelines would connect the 1-inch and 2-inch diameter laterals to the existing potable distribution system at each SWS.
- 6-inch diameter piping, totaling 2,300 feet, connecting from the proposed water mains to fire hydrants or backflow preventors to provide fire service to each SWS. Fire hydrants would be located in accordance with CVWD and Riverside County Fire Department standards.
- Modifications to the existing on-site SWSs may include removal of some existing infrastructure (e.g., tanks, pipelines, connections) and specifically demolition of the wells.

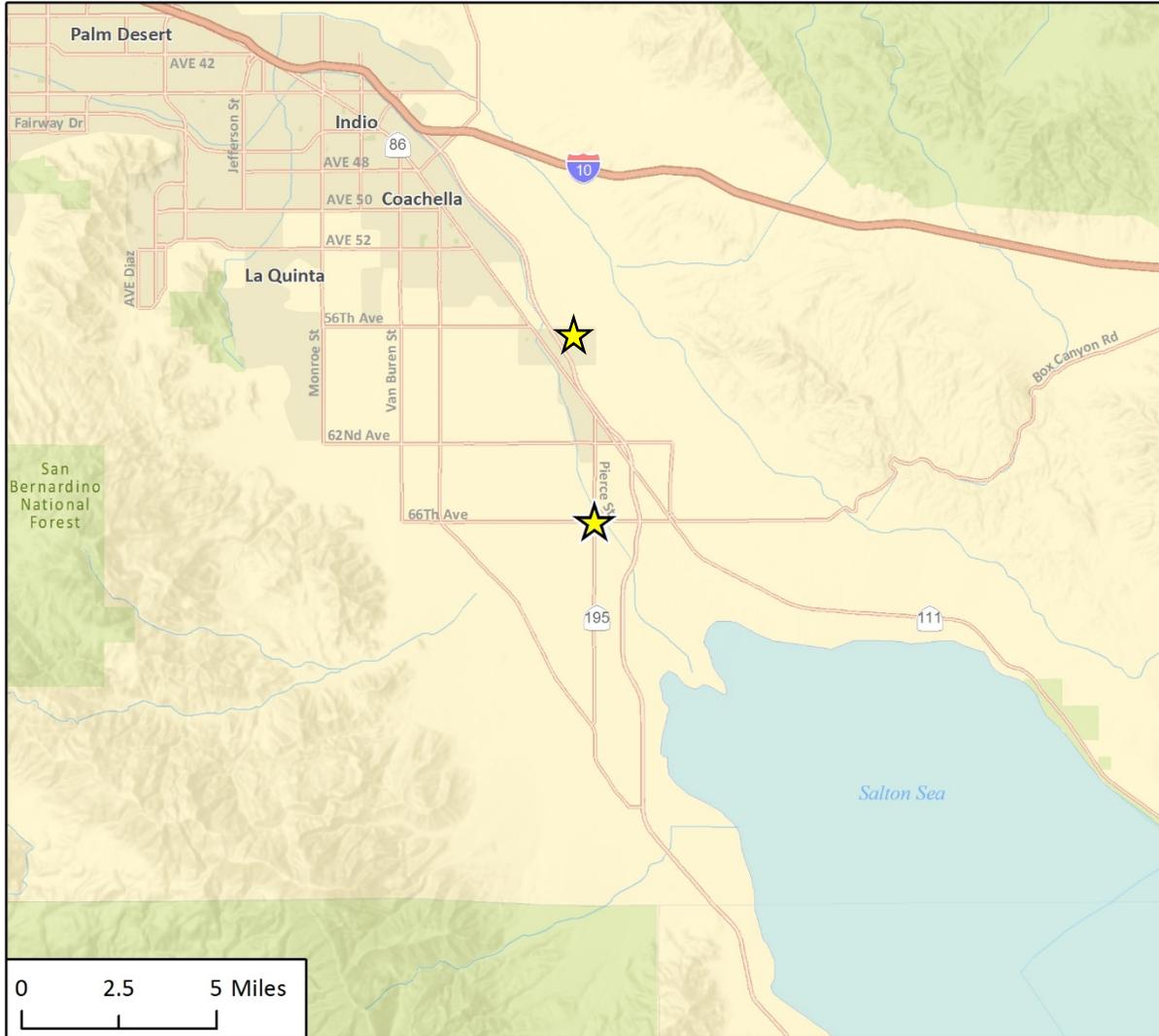
Along much of the alignment, trench excavation would be used for the installation of the pipeline. A backhoe, excavator, or trencher would be used to dig trenches for pipe installation. In general, the pipelines would be installed at depths of 5-6 feet below ground surface with a width of 3-5 feet. Service laterals will be installed at depths of approximately 5 feet, with a width of 3-4 feet. The water pipelines at both locations would be installed within existing County of Riverside roadway rights of way and SWS properties. Construction is anticipated to last 12 months. Disturbance activities would occur on existing dirt access roads and in vegetated areas adjacent to the access roads. Disturbed areas would be restored to original grade and vegetated areas would be replanted with the appropriate native species.

CVWD also proposes constructing an approximately 2,500-foot-long pipeline segment west of Desert Cactus Drive. The proposed pipeline section will be located north of Airport Boulevard and will cross under the Whitewater River/Coachella Valley Stormwater Channel and Highway 111 to connect with an existing CVWD water main. This pipeline segment is not a part of the proposed project at this time. Therefore, this segment is not included in the current BRTR and will be analyzed at a later date as part of a separate CEQA-Plus review.

1.3 Area of Potential Effects

The project Area of Potential Effects (APE) generally depicts all areas expected to be affected by the proposed project, including construction staging areas. For this study, the APE includes the project disturbance footprint associated with the installation of the water pipeline. The project site must additionally be considered as a three-dimensional space and includes any ground disturbance associated with the project. As such, the APE also includes a 50-foot buffer (25 feet on either side of the pipeline) to address potential indirect project effects such as noise and dust. The location of the APE is depicted in Figure 3.

Figure 1 Regional Project Location



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★ Project Location

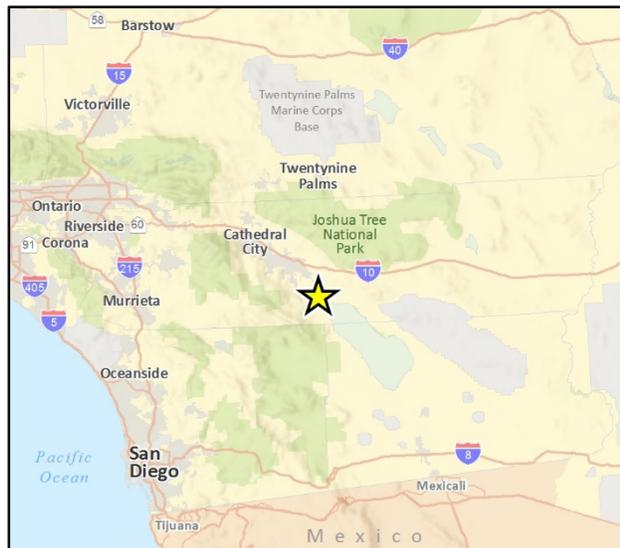
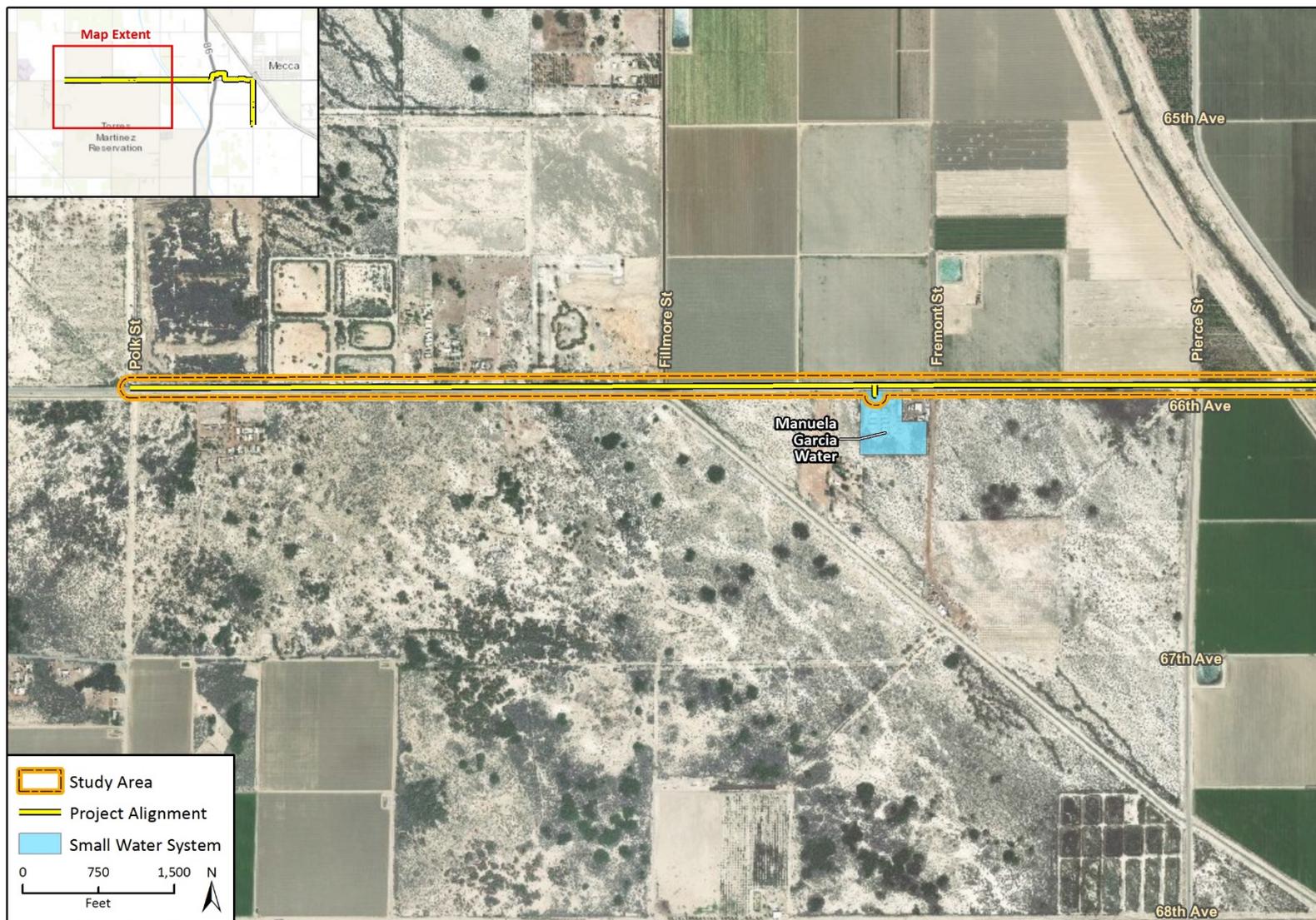


Fig 1 Regional Location - St Anthony

Figure 2a St. Anthony's Site – Project Overview



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Additional data provided by CVWD 2019.

Fig 2a Project Location - St Anthony

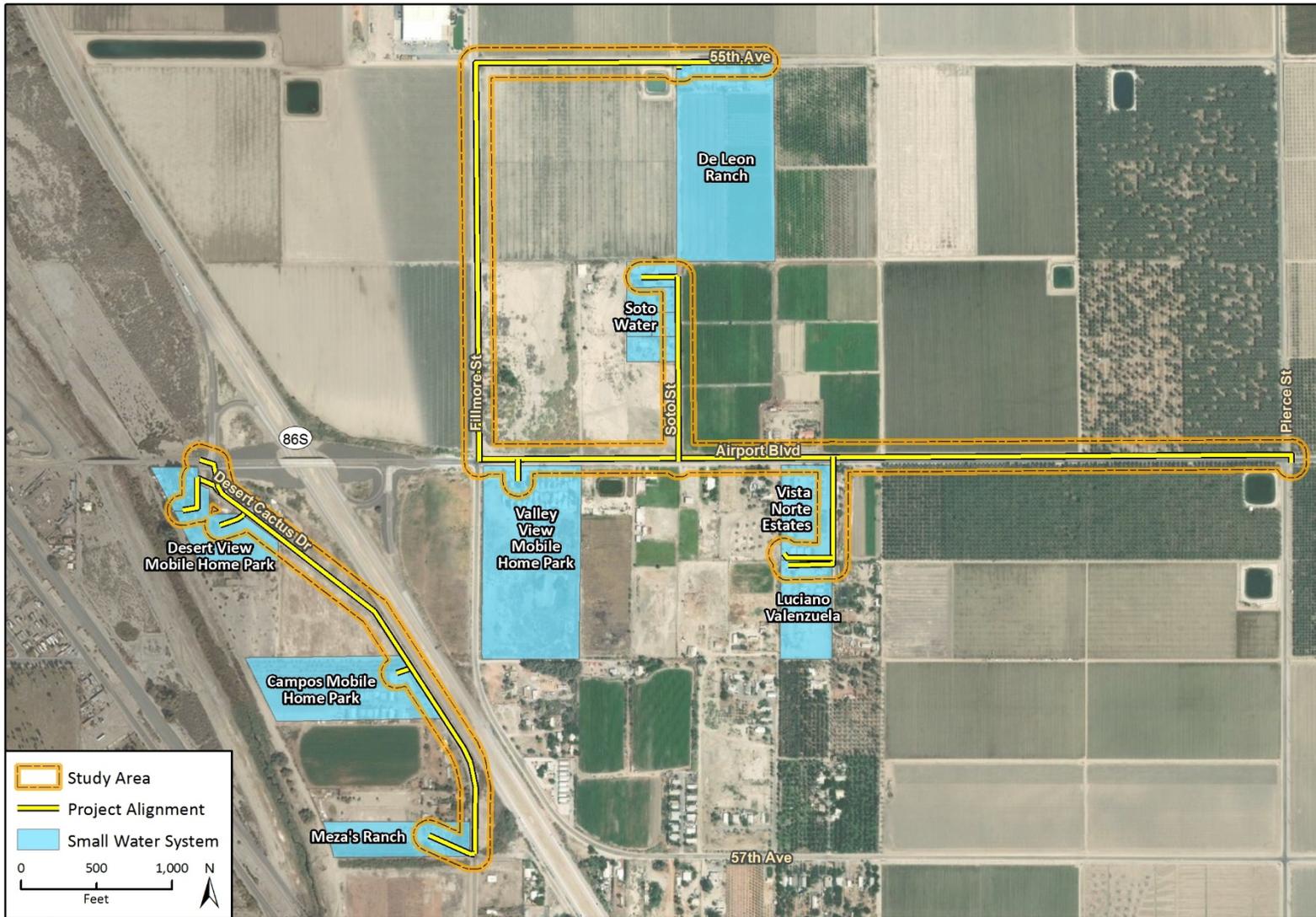
Figure 3b St. Anthony's Site – Project Overview



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Additional data provided by CVWD 2019.

Fig 2b Project Location - St Anthony

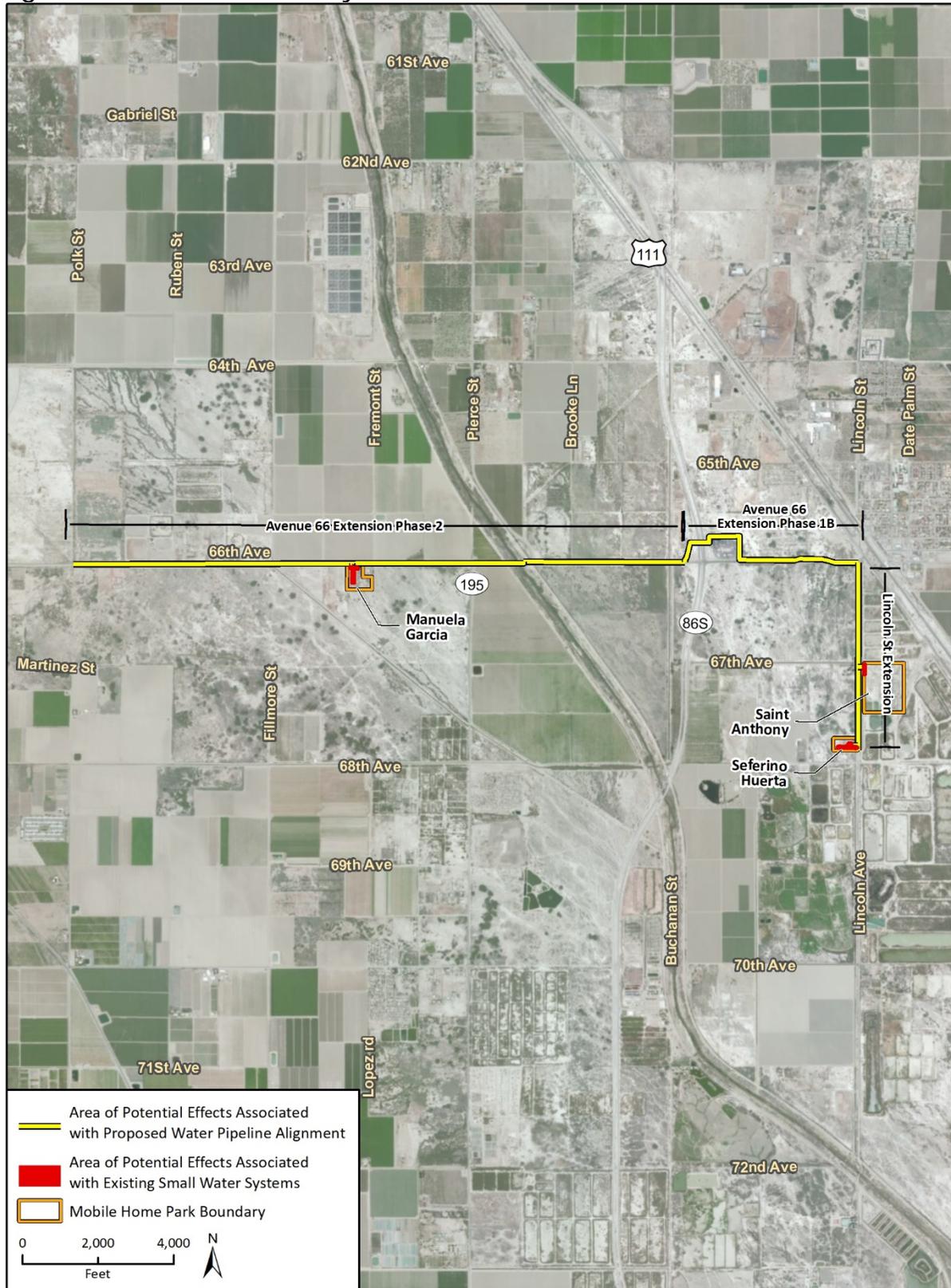
Figure 2c Valley View Site – Project Overview



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Additional data provided by CVWD 2019.

Fig 2 Project Location - Valley View

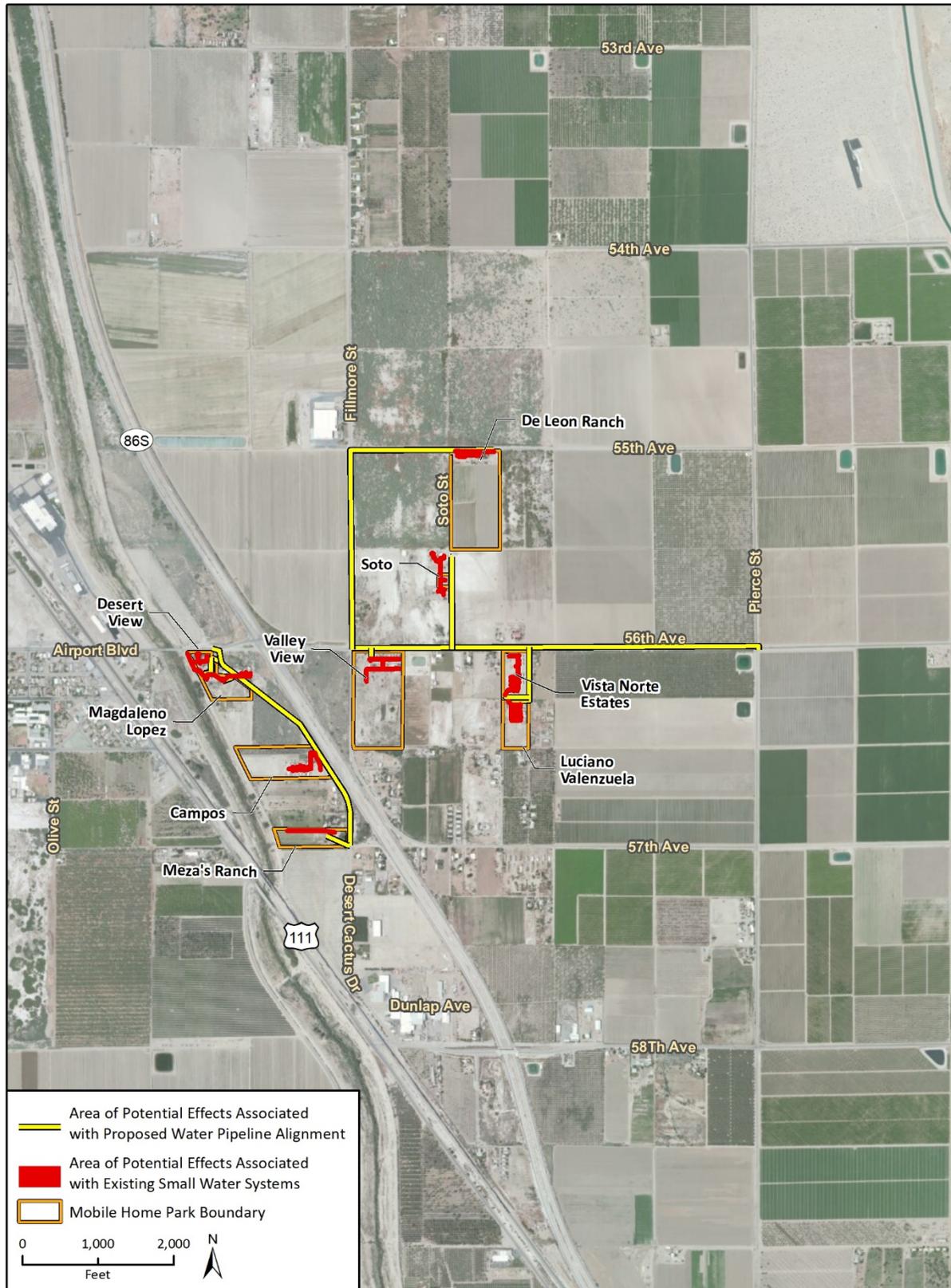
Figure 3a St. Anthony's Site - Area of Potential Effects



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Fig 2 Project Location St Anthony, Aerial

Figure 3b Valley View Site - Area of Potential Effects



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Fig 2. Project Location Valley View, Aerial

2 Methodology

2.1 Regulatory Setting

This section provides a general summary of the applicable federal and state regulations related to biological resources that could occur within the project site and immediate vicinity. Regulated or sensitive biological resources considered and evaluated in this BRTS include special status plant and wildlife species, other nesting birds and raptors, sensitive plant communities, potentially jurisdictional waters and wetlands, wildlife movement corridors, and locally protected resources, such as protected trees.

Coachella Valley Water District is the responsible lead agency for this project under the California Environmental Quality Act (CEQA).

2.1.1 Environmental Statutes

For the purposes of this BRTS, potential project-related impacts to biological resources were analyzed on the basis of the following regulatory statutes and guiding documents:

- **California Environmental Quality Act (CEQA).** Requires environmental review prior to approval of discretionary projects, and requires significant impacts to be mitigated if feasible.
- **Federal Endangered Species Act (ESA) and California Endangered Species Act (CESA).** These laws prohibit the unauthorized take of federally and state-listed threatened and endangered species.
- **Federal Clean Water Act (CWA) and Porter-Cologne Water Quality Control Act.** These laws prohibit unauthorized discharges of pollutants, including fill material for construction, into jurisdictional waters of the United States and waters of the State.
- **California Fish and Game Code (CFG) Sections 1600 et seq.** These sections of the CFG set forth the Lake/ Streambed Alteration Agreement program, through which the California Department of Fish and Wildlife (CDFW) regulates activities that would divert, obstruct, or alter streambeds.
- **Migratory Bird Treaty Act (MBTA) and CFG Section 3503.** These laws prohibit the destruction of birds, including their eggs, nests, and nestlings.
- **Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP).** The project site lies within the boundary of CVMSHCP, which is an adopted, regional plan with the overall goal to enhance and maintain biological diversity and ecosystem processes while allowing future economic growth.

2.1.2 Guidelines for Determining CEQA Significance

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

- a) Have substantial adverse effects, 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 Game 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 Game or US Fish and Wildlife Service.
 - c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, 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.

2.2 Database and Literature Review

Prior to conducting the biological field survey for this BRTS, Rincon reviewed a variety of literature sources to obtain baseline information about the biological resources with potential to occur at the project site and in the surrounding areas. The literature review included information from standard biological reference materials and regionally applicable regulatory guiding documents including (but not limited to) the following: Baldwin et al., 2012; and Sawyer et al., 2009. Rincon also conducted queries of several relevant scientific databases that provide information about occurrences of sensitive biological resources: the California Department of Fish and Wildlife (CDFW; formerly the California Department of Fish and Game) California Natural Diversity Data Base (CNDDDB) (California Department of Fish and Wildlife, 2019) and Biogeographic Information and Observation System (California Department of Fish and Wildlife, 2019); the U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal (U.S. Fish and Wildlife Service, 2019a) and Information, Planning, and Conservation (IPaC) System Query (U.S. Fish and Wildlife Service, 2019b); National Wetlands Inventory (NWI) (United States Department of the Interior, Fish and Wildlife Service 2019); the United States Department of Agriculture, Natural Resource Conservation Service (NRCS) Web Soil Survey (Natural Resources Conservation Service, 2019); and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (California Native Plant Society, 2019). The queries included the *Mecca*, *Indio*, *Thermal Canyon*, and *Valerie* California USGS 7.5-minute topographic quadrangles and the other eight USGS quadrangles that surround each of them (*Cottonwood Basin*, *Mortmar*, *Rabbit Peak*, *Oasis*, *Salton*, *Myoma*, *West Berdoo Canyon*, *Rockhouse Canyon*, *La Quinta*, *Martinez Mountain*, and *Clark Lane NE*).

Rincon compiled a complete list of special status species previously documented within a five-mile radius of the project site from the CNDDDB query and those species reported from the USFWS-IPaC query (Appendix A). Then an analysis to determine which of these special status species have the potential to occur within the project site was conducted. The habitat requirements for each regionally occurring special status species were assessed and compared to the type and quality of habitats observed on-site during the biological field survey. Conclusions regarding which special status species have the potential to occur on-site were based not only on background research and literature review previously mentioned; but also on the data collected in the field during the site

survey. Several regionally occurring special status species were eliminated due to lack of suitable habitat within the project site, range in elevation, and/or geographic distribution. Special status species determined to have the potential to occur within the project site; as well as the results of the field survey efforts are discussed in Section 4. Special status species that were determined not to have potential to occur within the project site are not discussed further in this BRTS

2.3 Focused Biological Field Survey

Rincon Senior Biologist, Megan Minter conducted the biological field survey for this BRTS on February 12, 2019. The survey was conducted from 9:00 am to 2:00 pm. The temperature ranged from 55°F to 62°F. The wind was calm and the cloud cover was minimal.

During the field survey an inventory of all plant species observed was compiled, the existing vegetation communities were further classified, and the general site conditions were documented. Plant species nomenclature and taxonomy followed *The Jepson Manual: Vascular Plants of California*, second edition (Baldwin et al., 2012). The vegetation classification used for this analysis is based on Sawyer et al. (2009) but it has been modified as needed to most accurately describe the existing vegetation communities on-site.

The field survey consisted of a biologist walking and driving the extent of the Study Area, documenting the condition of the habitats on-site, and recording the plants and animals observed within and adjacent to the new pipeline alignments and connection areas within a 100-foot buffer (Study Area). Inaccessible private property was surveyed using binoculars. Evidence of human disturbance was noted and photographs of notable features were taken. Avian species were identified using the *Sibley Guide to Birds* (Sibley 2000).

3 Existing Conditions

This section summarizes the results of the focused biological field survey effort and provides further analysis of the data collected in the field. Discussions regarding the general environmental setting, vegetation communities present, plant and wildlife species observed, special status species issues, and other biological resource constraints on-site are presented below. Representative photographs of the project site are provided in Appendix B and a complete list of all the plant and wildlife species observed on-site during the biological field survey is presented as Appendix C.

3.1 Topography and Soils

The project site is located in central Riverside County, within the Coachella Valley (Figure 1). The Coachella Valley is a desert valley that is bounded by the Little San Bernardino Mountains and Joshua Tree National Park in the east, San Jacinto Mountains and Santa Rosa Mountains to the west and southwest, the Salton Sea to the southeast, and San Geronio Mountain to the north. The site elevation ranges from 40 to 58 meters (130 to 190 feet) below mean sea level.

Based on the most recent soil survey for Riverside County (NRCS Web Soil Survey) the Study Area contains five mapped soil types listed below and shown on Figure 4:

- Coachella fine sand, 0 to 2 percent slopes
- Gilman fine sandy loam, 0 to 2 percent slopes
- Gilman silt loam, 0 to 2 percent slopes
- Indio very fine sandy loam
- Salton silty clay loam

The Coachella, Gilman, Indio and Salton series consist of fine, mostly well drained alkaline soils formed from recent alluvium. These soils are used primarily for growing citrus fruits, grapes, alfalfa, dates and truck crops under irrigation. Natural vegetation typically includes ephemeral grasses and forbs, and a sparse cover of bursage, creosote bush, saltbush, mesquite and other desert shrubs and weeds. None of these soils are considered hydric.

These soil units are from the USDA NRCS Soil Survey of Riverside County, California, which was conducted on a broader scale than this study and did not necessarily include on-site observations. The physical characteristics of the soil unit, as described above, are general and not necessarily indicative of characteristics actually present on the property.

3.2 Land Cover and Vegetation

The project site is within the lower Colorado desert which is a subdivision of the Sonoran Desert Region (DSon) geographic subdivision of California. The DSon subdivision is a component of the larger Desert Province (D) geographic region, which occurs within the even larger California Floristic Province (Baldwin et al., 2012). The majority of the proposed project alignment is within developed urban and agricultural areas. The land and vegetation cover is shown overlain on aerial imagery in Figure 5 below. The land cover and vegetation types described below were observed within the Study Area.

3.2.1 Tamarisk Scrub

The tamarisk scrub habitat type on the project site corresponds to the *Tamarix* spp. semi-natural shrubland stands more recently described by Sawyer et al. (2009). Tamarisk scrub is dominated by the non-native and highly-invasive tamarisk (*Tamarix* spp.). This weedy plant community is usually a monoculture of tamarisk that has supplanted native wetland plant species. Tamarisk usually invades following disturbance. Within the Study Area, this plant community typically occurs in washes and areas subject to runoff from irrigation waters.

3.2.2 Disturbed/Ruderal

Disturbed/ruderal habitat consists of areas that have been physically disturbed and are no longer recognizable as a native or naturalized vegetation association, but continue to retain a soil substrate. Within the Study Area, this habitat type is dominated by Russian thistle (*Salsola tragus*), a variety of thistles from the *Centaurea*, *Cynara*, and *Carduus* genera, mustards (*Brassica* spp., *Hirschfeldia incana*, *Sisymbrium* spp.), and non-native grasses (*Bromus* spp., *Schimus* spp.).

3.2.3 Agriculture

Agricultural areas within the Study Area include active farmland supporting a variety of crops including dates and lettuce. Agricultural areas also include pastureland and fallow cropland. These areas are usually tilled/disked regularly, irrigated, and are subject to regular planting and harvesting.

3.2.4 Developed

Developed areas within the Study Area include mobile home parks, paved and dirt roads, and other buildings and paved areas. Mobile home parks within the Study Area contain ornamental trees and shrubs such as eucalyptus (*Eucalyptus* spp.), palm trees (*Washingtonia* spp., *Phoenix dactylifera*) and oleander (*Nerium oleander*).

3.3 General Wildlife

The Study Area and surrounding areas provide habitat suitable for wildlife species that commonly occur in southern California suburban areas. Wildlife observed on or adjacent to the site included bird species such as American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), snowy egret (*Egretta thula*), northern mockingbird (*Mimus polyglottos*), and common raven (*Corvus corax*). Coyote (*Canis latrans*) scat as well as some lizard and small animal burrows were observed within disturbed/ruderal areas within the Study Area.

Figure 4a St. Anthony's Site – Soils



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Additional data provided by CVWD 2019. Soils data provided by Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database 2019.

Fig. 3a Soils - St Anthony

Figure 4b St. Anthony's Site – Soils

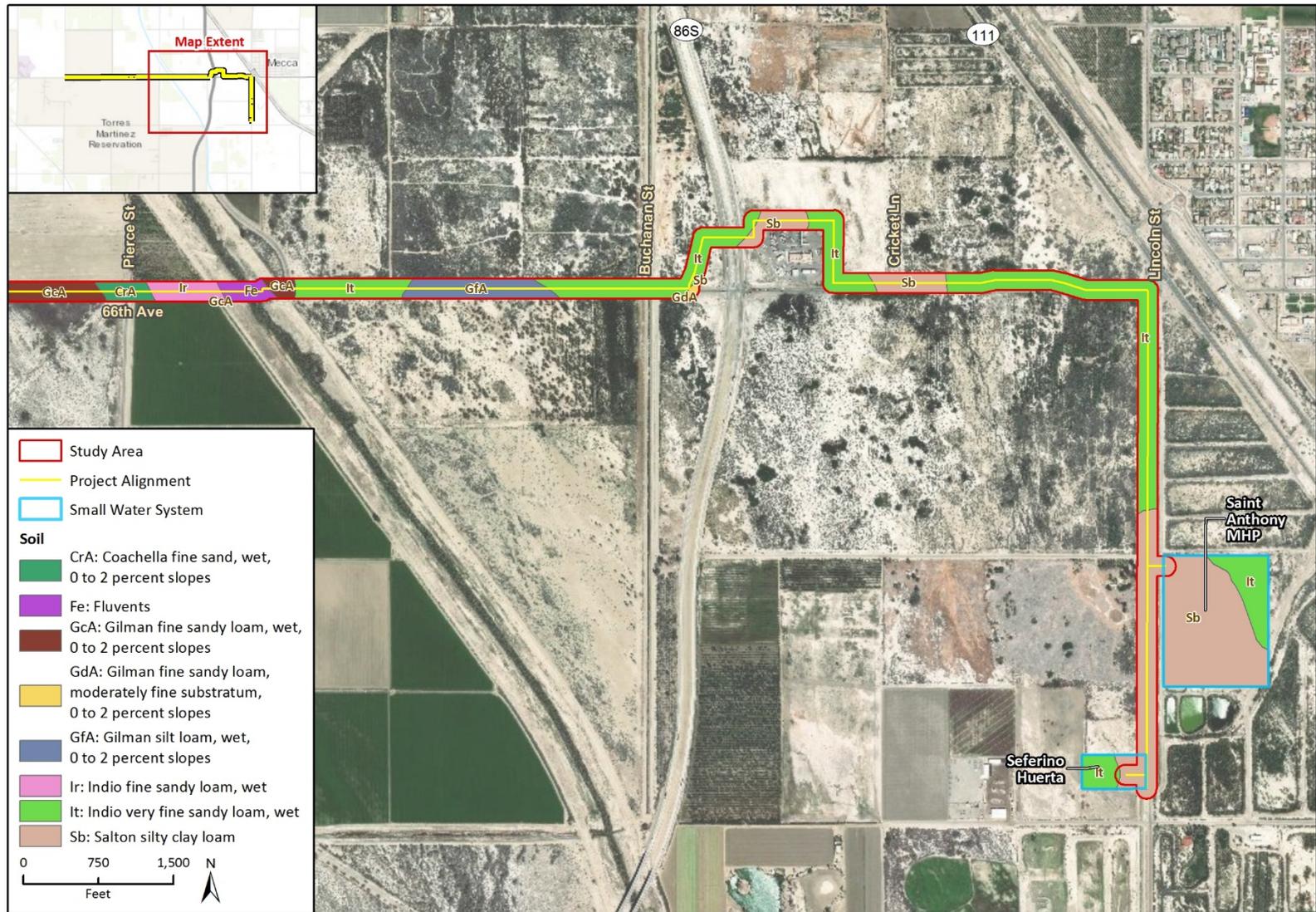
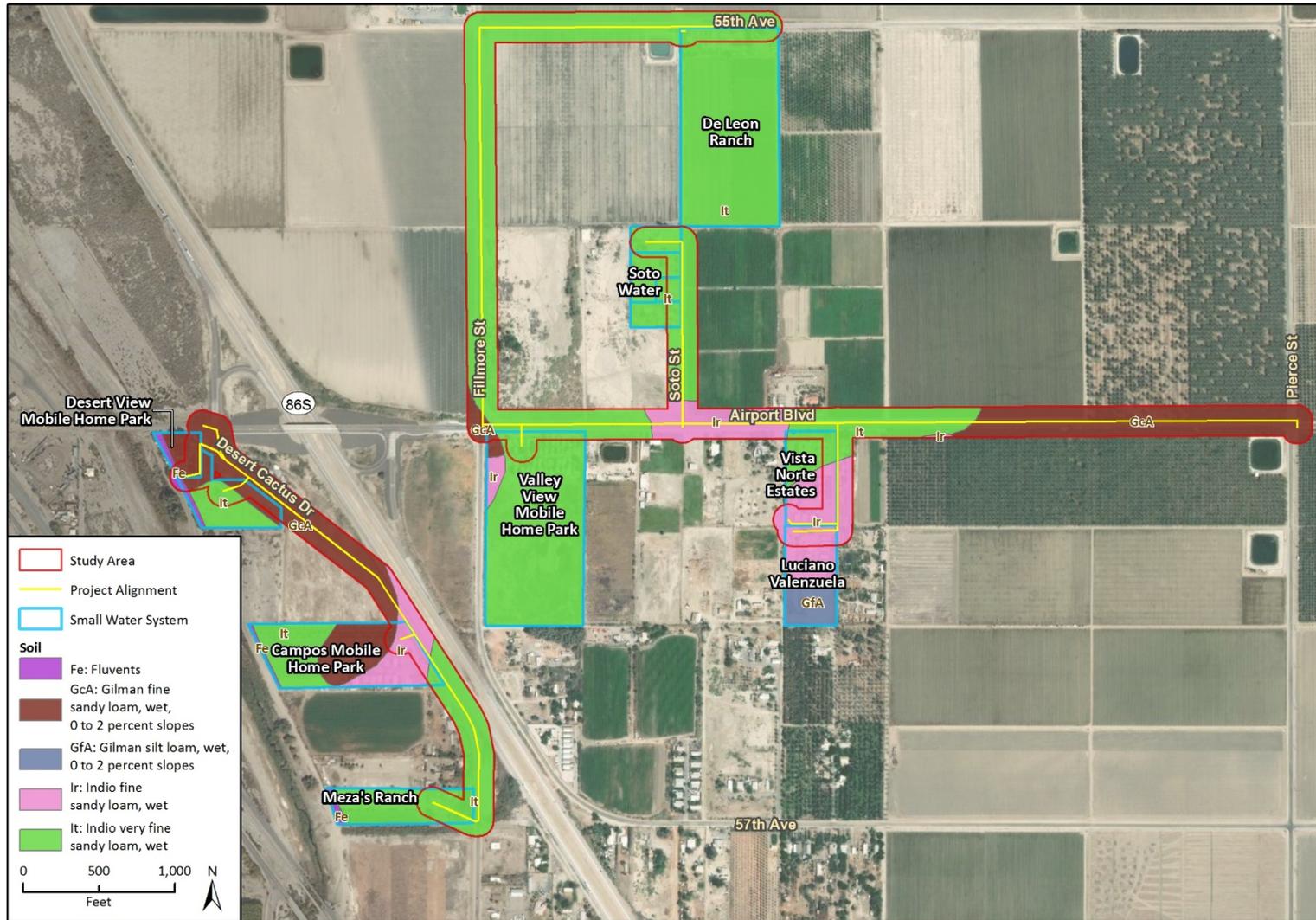


Fig. 3b Soils - St Anthony

Figure 4c Valley View Site – Soils



Imagery provided by Microsoft Bing and its licensors © 2019.
 Additional data provided by CVWD 2019. Soils data provided by Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database 2019.

Fig. 3 Soils - Valley View

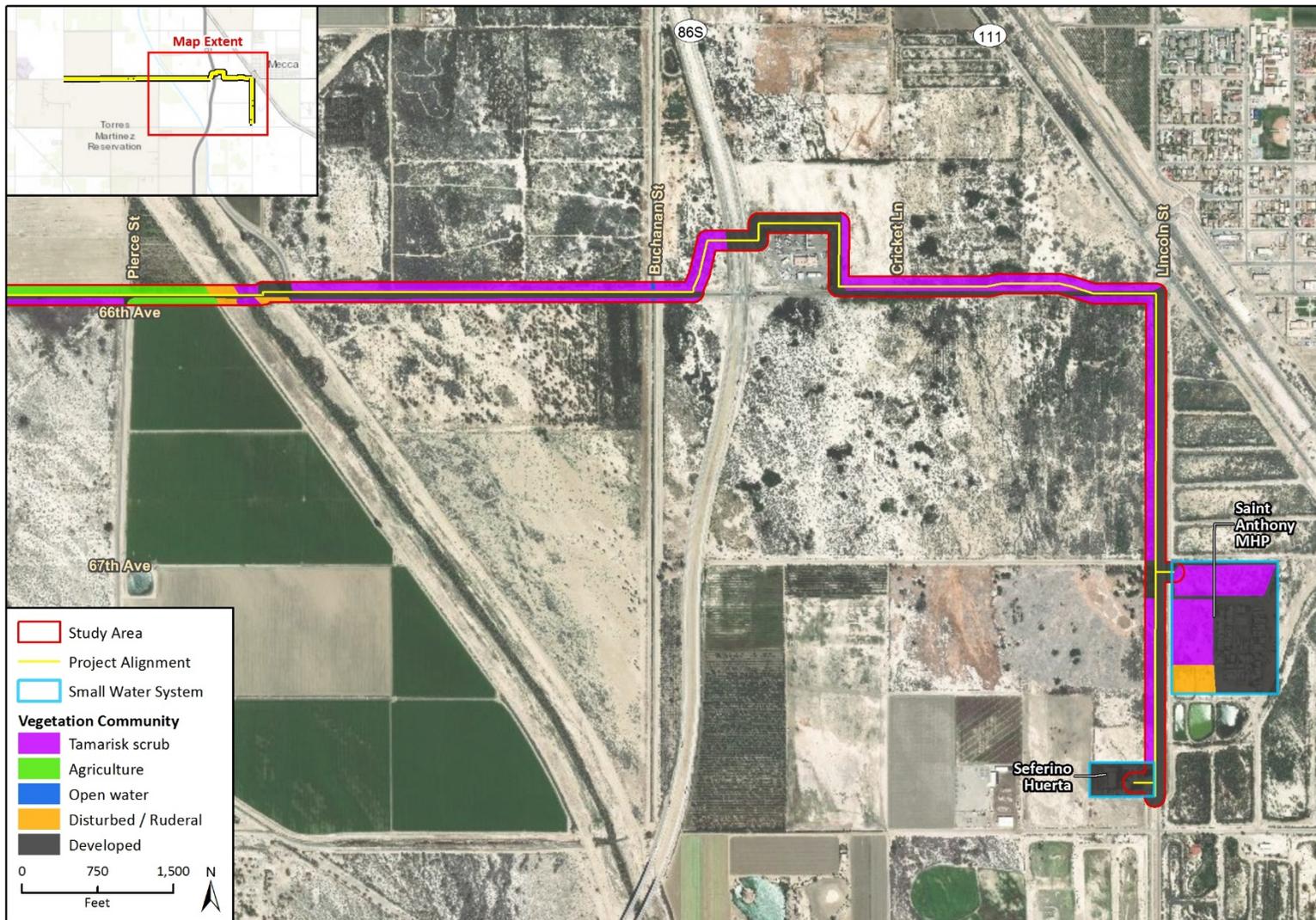
Figure 5a St. Anthony's Site – Vegetation



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 Additional data provided by CVWD 2019.

Fig 4a Vegetation Communities - St Anthony

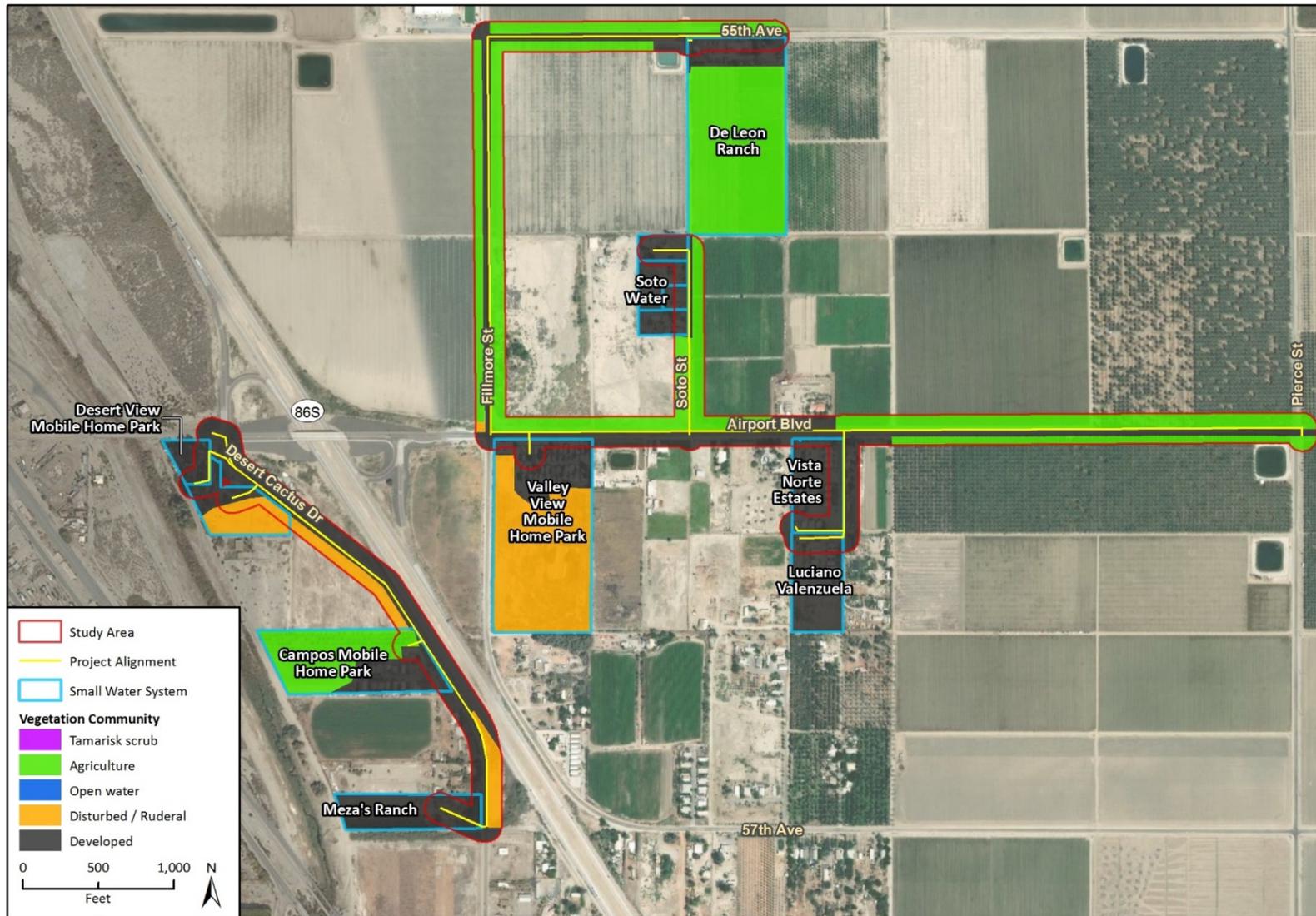
Figure 5b St. Anthony's Site – Vegetation



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Additional data provided by CVWD 2019.

Fig 4b Vegetation Communities - St Anthony

Figure 5c Valley View Site – Vegetation



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 Additional data provided by CVWD 2019.

Fig 4 Vegetation Communities - Valley View

4 Sensitive Biological Resources

This section discusses the general presence or potential for special status biological resources to occur within the project site. ‘Potential to occur’ is based on the presence or absence of suitable habitat for each special status species reported in the scientific database queries that were conducted for the proposed project. Several scientific databases were queried, multiple sources of pertinent scientific literature were reviewed, and the technical expertise of Rincon’s staff was utilized to determine the habitat requirements, ecology, and distribution of the special status plant species potentially affected by the proposed project. All occurrences of special status species, sensitive vegetation communities, and USFWS designated critical habitats that have been reported by the resource agencies within a five-mile radius of the project site were plotted on a map using geographic information system (GIS) software. As discussed in Section 2.2, an analysis was conducted to determine which of the regionally occurring special status species have potential to occur within the project site (Appendix A). The potential for each special status species to occur in the Study Area was evaluated according to the following criteria:

- **Not Expected.** 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).
- **Low Potential.** 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.
- **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 5 years).

Plant or animal taxa may be considered "sensitive" or as having “special-status” due to declining populations, vulnerability to habitat change, or because they have restricted ranges. Some are listed as threatened or endangered by the USFWS by the CDFW, or both and are protected by the federal and state ESAs. Others have been identified as sensitive or as special status species by the USFWS, the CDFW, or by private conservation organizations, including the CNPS. Unlisted species of special concern do not have formal state or federal status.

For the purpose of this report, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS and National Marine Fisheries Service (NMFS) under the ESA; those listed or candidates for listing as Rare, Threatened, or Endangered by the CDFW under the CESA or Native Plant Protection Act; those recognized as Species of Special Concern (SSC) by the CDFW; and plants occurring on lists 1 and 2 of the CNPS California Rare Plant Rank (CRPR) system, per the following definitions:

- **Rank 1A** = Plants presumed extinct in California;
- **Rank 1B.1** = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);
- **Rank 1B.2** = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);
- **Rank 1B.3** = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);
- **Rank 2** = Rare, threatened or endangered in California, but more common elsewhere.

In addition, special-status species are ranked globally (G) and subnationally (S) 1 through 3 based on NatureServe's (2010) methodologies:

- **G1 or S1** - Critically Imperiled Globally or State-wide
- **G2 or S2** - Imperiled Globally or State-wide
- **G3 or S3** - Vulnerable to extirpation or extinction Globally or State-wide

Plant communities are also considered special-status biological resources if they have limited distributions, have high value for sensitive wildlife, contain special-status species, or are particularly susceptible to disturbance. The CDFW ranks special-status communities as “threatened” or “very threatened” and keeps records of their occurrences in CNDDB.

4.1 Special Status Plant Species

Rincon biologists determined that the Study Area does not contain suitable habitat for any special status plant species (Appendix A). While 27 special status plant species have been previously documented within a five-mile radius by the CNDDB, the project site does not contain suitable habitat for any of these species based on a variety of factors, including: the disturbance history of the site, lack of suitable soils, inappropriate hydrologic conditions, absence of appropriate vegetation communities, or being outside the elevation range of the species.

4.2 Special Status Wildlife Species

Rincon evaluated 26 wildlife species for their potential to occur within the project site (Appendix A). The assessment of the potential for these species to occur is based upon the presence of suitable habitat as identified during surveys and existing knowledge of species occurrences and distributions in the region. The site was determined to contain marginally suitable habitat for western yellow bat (*Lasiurus xanthinus*) and western mastiff bat (*Eumops perotis californicus*). Accordingly, these species have moderate potential to occur within the project site. Western yellow and western mastiff bat could roost in trees adjacent to the project site. No special status wildlife species were observed within the Study Area during the survey effort.

The project site provides general nesting bird habitat. Nesting birds are protected by the MBTA and the FGC 3503 and 3503.5. The Study Area provides suitable nesting habitat for numerous species of birds common in the area and nesting birds are likely to be present within the project limits during the nesting season.

4.3 Critical Habitat and Wild and Scenic Rivers

The Study Area is not within any federally designated critical habitat areas nor within or adjacent to any federally designated Wild and Scenic Rivers.

4.4 Sensitive Plant Communities

Plant communities are considered sensitive biological resources if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in CNDDDB. Similar to special-status plant and wildlife species, vegetation alliances are ranked 1 through 5 based on NatureServe's (2010) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive.

According to the CNDDDB, no sensitive plant communities are tracked within a five-mile radius the project site.

4.5 Jurisdictional Waters and Wetlands

Areas potentially subject to United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW jurisdiction were assessed during the literature review and field visit. The Study Area contains the Coachella Valley Stormwater Channel (CVSC) and its connecting irrigation channels, which are potentially subject to USACE, RWQCB, and CDFW jurisdiction. The CVSC is a previously developed, unlined downstream extension of the Whitewater River constructed as a drainageway for agricultural irrigation return, treated wastewater, and storm runoff. The CVSC is a direct tributary to the Salton Sea and is considered and maintained as a vegetated flood control channel within the Study Area. Within the Study Area, the CVSC contains dense tamarisk scrub. Other small connecting channels are unvegetated.

4.6 Wildlife Movement

Wildlife movement and habitat fragmentation are important issues in assessing impacts to wildlife. Habitat fragmentation occurs when a proposed action results in a single, unified habitat area being divided into two or more areas in such a way that the division isolates the two new areas from each other. Isolation of habitat occurs when wildlife cannot move freely from one portion of the habitat to another or from one habitat type to another, as in the fragmentation of habitats within and around "checkerboard" residential development. Habitat fragmentation also can occur when a portion of one or more habitats is converted into another habitat, as when annual burning converts scrub habitats to grassland habitats.

The proposed project footprint is located within previously developed and routinely managed areas that offer little to no value to wildlife movement. These areas are subject to frequent human disturbance that do not provide linkage to wildlife habitat.

4.7 Local Policies and Tree Protection

Riverside County Ordinance 559 protects oak (*Quercus*) woodlands and requires a permit for removal of any native trees on parcels greater than one-half acre in size and above 5,000 feet in elevation. No trees within the Study Area meet these criteria.

4.8 Conservation Plans

The project site is within the CVMSHCP area (Figure 6). The CVMSHCP is a comprehensive, multi-jurisdictional habitat conservation plan focusing on the conservation of species and their associated habitats in the Coachella Valley region of Riverside County. The overall goal of the CVMSHCP is to maintain and enhance biological diversity and ecosystem processes within the region while allowing for future economic growth (CVAG 2007).

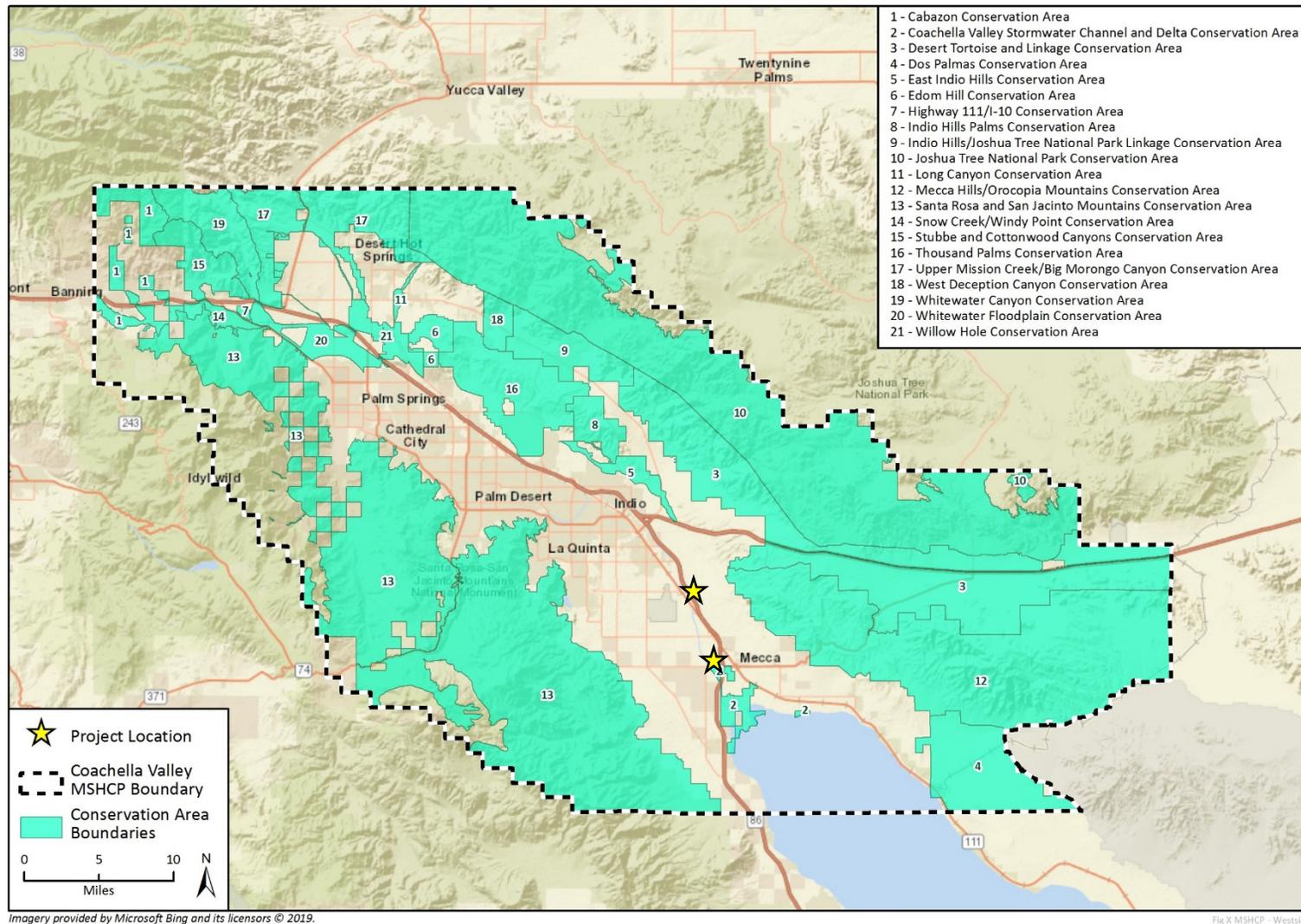
The CVMSHCP covers 27 sensitive plant and wildlife species (CVMSHCP covered species) as well as 27 natural communities and includes 21 conservation areas. Covered species include both listed and non-listed species that are conserved by the CVMSHCP. The overall provisions for the plan are subdivided according to specific resource conservation goals that have been organized according to geographic areas defined as Conservation Areas. These areas are identified as Core, Essential, or Other Conserved Habitat for sensitive plant, invertebrate, amphibian, reptile, bird, and mammal species, Essential Ecological Process Areas, and Biological Corridors and Linkages.

Each Conservation Area has specific Conservation Objectives that must be satisfied. The CVMSHCP received final approval on October 1, 2008. The approval of the CVMSHCP and execution of the Implementing Agreement (IA) provides signatories to the Plan coverage for take during covered activities in concurrence with the appropriate wildlife agency.

The project site occurs within the planning boundary of the CVMSHCP and a small portion of the St. Anthony's site lies within the Coachella Valley Stormwater Channel and Delta CVMSHCP Conservation Area boundary. The portion of the site within the Conservation Area is the fenced interior of the Seferino Huerta Mobile Home Park. Additional portions of the St. Anthony's project along 66th Avenue and Lincoln Street are directly adjacent to the Coachella Valley Stormwater Channel and Delta CVMSHCP Conservation Area.

The purpose of CVMSHCP Land Use Adjacency Guidelines is to avoid or minimize indirect effects from development adjacent to or within the Conservation Areas. In this context, "adjacent" means to share a common boundary with any parcel in a designated Conservation Area. Indirect effects include noise, lighting, drainage, intrusion of people, and the introduction of nonnative plants and nonnative predators such as dogs and cats. The St. Anthony's project site occurs partially within and adjacent to the Coachella Valley Stormwater Channel and Delta CVMSHCP Conservation Area.

Figure 6 CVMSHCP Conservation Areas



5 Impact Analysis and Mitigation Measures

This section discusses the possible adverse impacts to biological resources that may occur from implementation of the proposed project and suggests appropriate mitigation measures that would reduce those impacts to less than significant levels. The criteria used to evaluate potential project-related impacts to biological resources are presented in Section 2.1.2.

5.1 Special Status Plant Species

Rincon biologists determined that the Study Area does not contain suitable habitat for any special status plant species (Appendix A). While 29 special status plant species have been previously documented within a five-mile radius by the CNDDDB and a fifteen-quad radius by the CNPS, the project site does not contain suitable habitat for these species based on a variety of factors, including: the disturbance history of the site, lack of suitable soils, inappropriate hydrologic conditions, or absence of appropriate vegetation communities. Due to the absence of potential impacts, no measures are recommended.

5.2 Special Status Wildlife Species

No special-status wildlife species were observed within the Study Area. Two bat species, the western yellow bat and western mastiff bat, were determined to have moderate potential to occur roosting in trees within the Study Area (Appendix A). Project impacts are limited to previously-disturbed areas with high human activity. With the implementation of the mitigation measures listed below, the proposed project does not have the potential to result in direct or indirect impacts to special-status wildlife species.

Mitigation Measure BIO-1: Roosting Bats Impact Avoidance and Minimization

A qualified biologist shall conduct a pre-construction survey for roosting bats at least two weeks prior to, but not more than 30 days prior to, the start of construction. The survey shall include all trees, bridges, and structures suitable for roosting by the western yellow bat and western mastiff bat. The pre-construction survey shall be conducted within the disturbance footprint and a 100-foot buffer with inaccessible areas (i.e. private lands) surveyed with binoculars, as feasible.

If active bat roosts are present onsite, a buffer zone of 100 feet shall be established around the roosts that excludes construction activities or other disturbances. Tree removal activities shall occur only during periods when bats are not roosting in those trees proposed to be removed, as determined by a qualified biologist. If active maternity roosts or non-breeding bat hibernacula are found in trees scheduled to be removed, removal activities will be conducted during a season when young are not present.

Mitigation Measure BIO-2: Burrowing Owl Impact Avoidance and Minimization

To avoid potential impacts to western burrowing owl (*Athene cunicularia*), a pre-construction clearance survey for burrowing owl (BUOW) shall be conducted no more than fourteen (14) days prior to initiation of construction activities. The BUOW pre-construction survey shall be conducted on-foot within the proposed disturbance area including a 500-foot buffer. The survey methods will be consistent with the Staff Report on Burrowing Owl Mitigation (CDFW 2012) and shall consist of walking parallel transects spaced adequately to obtain 100% visual coverage of the site. The survey shall be conducted by a biologist familiar with the identification of BUOW and their habitat.

If burrowing owls are found within the Study Area during the pre-construction surveys, active burrows will be avoided. If possible, the timing and location of construction activities will be adjusted to avoid the occupied burrow by the appropriate distance (see below), where possible. Due to the size of the project, it is anticipated that the construction schedule and location can be modified to avoid all potential impacts to occupied burrows during the breeding season. Buffer zones for occupied burrows will be established at 500 feet during the breeding season (February 1 to August 31) and at 100 feet for the non-breeding season. These buffers may be adjusted in consultation with CDFW and CVCC and monitored at the discretion of a qualified biologist. The buffer zone will be clearly marked with flagging and/or construction fencing.

5.3 Nesting Birds

Nesting bird habitat is present within and adjacent to the Study Area, particularly within landscape trees. Nesting bird species are protected by the MBTA and the FGC 3503 and FGC 3503.5. If initial ground disturbance and vegetation/tree trimming or removal is required during the nesting bird season, the project may impact nesting birds through increased injury or mortality or disruption of normal adult behaviors resulting in the abandonment or harm to eggs and nestlings. Construction occurring within the vicinity of nesting birds may also indirectly impact individuals with construction noise and dust. Measures necessary for compliance with FGC 3503 and FGC 3503.5 and the MBTA are provided below.

Mitigation Measure BIO-3: Nesting Birds

Project-related activities should occur outside of the bird breeding season (typically January 1 to September 15) to the extent practicable. If construction must occur within the bird breeding season (January 1 through September 15), then no more than three days prior to initiation of ground disturbance and/or vegetation removal, a nesting bird and raptor pre-construction survey shall be conducted by a qualified biologist within the disturbance footprint plus a 100-foot buffer (300-foot for raptors), where feasible. If the proposed project is phased or construction activities stop for more than one week, a subsequent pre-construction nesting bird and raptor survey will be required prior to each phase of construction within the project site.

Pre-construction nesting bird and raptor surveys shall be conducted during the time of day when birds are active and shall factor in sufficient time to perform this survey adequately and completely. A report of the nesting bird and raptor survey results, if applicable, shall be submitted to the lead agency for review and approval prior to ground and/or vegetation disturbance activities.

If nests are found, their locations shall be flagged. An appropriate avoidance buffer ranging in size from 25 to 50 feet for song birds, and up to 500 feet for raptors depending upon the species and the proposed work activity and CDFW approval, shall be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. Buffers will be determined in conjunction with CDFW through the development of a nesting bird management plan. Active nests shall be monitored at a minimum of once per week until it has been determined that the nest is no longer being used by either the young or adults. No ground disturbance shall occur within this buffer until the qualified biologist confirms that the breeding/nesting is completed and all the young have fledged. If project activities must occur within the buffer, they shall be conducted at the discretion of the qualified biologist. If no nesting birds are observed during pre-construction surveys, no further actions would be necessary.

5.4 Sensitive Vegetation Communities

No sensitive vegetation communities were observed within or adjacent to the Study Area. Furthermore, project impacts are limited to previously-disturbed areas with high human activity. Therefore, the proposed project does not have the potential to result in direct or indirect impacts to sensitive vegetation communities. Due to the absence of potential impacts, no measures are recommended.

5.5 Jurisdictional Waters and Wetlands

The Study Area contains the CVSC and its connecting irrigation channels, which are potentially subject to USACE, RWQCB, and CDFW jurisdiction. The CVSC connects directly to the Salton Sea, which is considered a Traditionally Navigable Water by the USCACE. Impacts to jurisdictional waters have been avoided during the project design process. The project will avoid impacts to jurisdictional waters via horizontal directional drilling (HDD) or jack and bore pipeline installation. As part of the project design, a Stormwater Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) will be developed to ensure that no indirect impacts occur to jurisdictional resources.

5.6 Wildlife Movement

The proposed project footprint is located within previously developed and routinely managed areas that offer little to no value to wildlife movement. The proposed project is not anticipated to have an incremental effect on localized and urban adapted wildlife movement or create habitat fragmentation in the region, nor is it anticipated to have significant impact on regional wildlife movement. Direct impacts to wildlife movement as a result of project implementation would be less than significant. No additional lighting is proposed, and no nocturnal noise generating activities are proposed. Therefore, indirect wildlife movement impacts would be less than significant. Due to the absence of potential impacts, no measures are recommended.

5.7 Local Policies and Tree Protection

The proposed project is not expected to conflict with any local policies or ordinances. In addition, no protected trees are proposed for removal.

5.8 Adopted or Approved Plans

As discussed in Section 4.8, a small portion of the St. Anthony's site lies within the Coachella Valley Stormwater Channel and Delta CVMSHCP Conservation Area boundary. The portion of the project within the Conservation Area is the fenced interior of the Seferino Huerta Mobile Home Park. Additional portions of the St. Anthony's project along 66th Avenue and Lincoln Street are directly adjacent to the Coachella Valley Stormwater Channel and Delta CVMSHCP Conservation Area.

As outlined in the CVMSHCP Section 7.3, the proposed project is considered a covered activity and will comply with applicable avoidance, minimization and mitigation measures outlined in Section 4.4 of the CVMSHCP regarding species and habitat conservation (See Mitigation Measure BIO-3 below). The proposed project will also implement the Section 4.5 Land Use Adjacency Guidelines where applicable to avoid and minimize indirect effects to this conservation area (CVAG 2007). These guidelines include measures regarding drainage, toxics, lighting, noise, invasive species, barriers, and grading/land development. With the implementation of these guidelines and mitigation measures, the proposed project would avoid direct and indirect impacts to this CVMSHCP Conservation Areas and will not conflict with the CVMSHCP Conservation Objectives.

Mitigation Measure BIO-4: CVMSHCP Surveys

Prior to construction, CVWD will coordinate with Coachella Valley Association of Governments (CVAG) or Coachella Valley Conservation Commission (CVCC) on specific burrowing owl and Crissal Thrasher survey requirements of the CVMSHCP that should be implemented for the portion of Seferino Huerta mobile home park located within the Coachella Valley Stormwater Channel and Delta Conservation Area. CVWD will implement any surveys determined to be required by CVAG or the CVCC to ensure compliance with the CVMSHCP.

6 Limitations, Assumptions, and User Reliance

This BRTS has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. Botanical field surveys for the presence or absence of certain taxa have been conducted as part of this assessment but were limited by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. Our botanical and biological field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from review of specified database and literature sources and one site visit. Standard data sources relied upon during the completion of this report, such as the CNDDDB, may vary with regard to accuracy and completeness. In particular, the CNDDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon considers the data sources reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Furthermore, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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Appendix A

Regionally Occurring Special Status Species

Regionally Occurring Special Status Species

<i>Scientific Name</i> Common Name	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence/Basis for Determination
Plants			
<i>Abronia villosa</i> var. <i>aurita</i> chaparral sand- verbena	None/None G5T2? / S2 1B.1	Chaparral, coastal scrub, desert dunes. Sandy areas. -60-1570 m. annual herb. Blooms (Jan)Mar-Sep	Low Potential. Suitable habitat (sandy soils) present in unpaved areas. Nearest known population is over 2 miles east of St. Anthony's site. Disturbance history of project site limits the possibility of occurrence.
<i>Ambrosia monogyra</i> singlewhorl burrobrush	None/None G5 / S2 2B.2	Chaparral, Sonoran desert scrub. Sandy soils. 5-475 m. perennial shrub. Blooms Aug-Nov	Low Potential. Suitable habitat (sandy soils) present in small areas on site and in adjacent areas. However, most recently documented population occurrence near town of Mecca was documented in 1922. Disturbance history of project site limits the possibility of occurrence.
<i>Astragalus bernardinus</i> San Bernardino milk- vetch	None/None G3 / S3 1B.2	Joshua tree woodland, pinyon and juniper woodland. Granitic or carbonate substrates. 275-2286 m. perennial herb. Blooms Apr-Jun	Not Expected. No suitable habitat (Joshua tree woodland) present.
<i>Astragalus lentiginosus</i> var. <i>coachellae</i> Coachella Valley milk-vetch	Endangered/ None G5T1 / S1 1B.2	Sonoran desert scrub, desert dunes. Sandy flats, washes, outwash fans, sometimes on dunes. 35-695 m. annual / perennial herb. Blooms Feb-May	Not Expected. Site is outside of the species known elevation range. Nearest known population is over 3 miles east of St. Anthony's site.
<i>Astragalus sabulonum</i> gravel milk-vetch	None/None G4G5 / S2 2B.2	Desert dunes, Mojavean desert scrub, Sonoran desert scrub. Sandy or gravelly flats, washes, and roadsides. -60-885 m. annual / perennial herb. Blooms Feb-Jun	Low Potential. Suitable habitat (sandy or gravelly flats and roadsides) present in small areas on site and in adjacent areas. Nearest known occurrence is over 2.5 miles east of St. Anthony's site.
<i>Astragalus tricarinatus</i> triple-ribbed milk- vetch	Endangered/ None G2 / S2 1B.2	Joshua tree woodland, Sonoran desert scrub. Hot, rocky slopes in canyons and along edge of boulder-strewn desert washes, with Larrea and Encelia. 455-1525 m. perennial herb. Blooms Feb-May	Not Expected. No suitable habitat (Joshua tree woodland) present. Site is outside of the species known elevation range.
<i>Ayenia compacta</i> California ayenia	None/None G4 / S3 2B.3	Mojavean desert scrub, Sonoran desert scrub. Sandy and gravelly washes in the desert; dry desert canyons. 60-1830 m. perennial herb. Blooms Mar-Apr	Not Expected. No suitable habitat (sandy or gravelly washes) present.
<i>Bursera microphylla</i> little-leaf elephant tree	None/None G4 / S2 2B.3	Sonoran desert scrub. Hillsides and washes and on canyon sides in California; rocky sites. 195-610 m. perennial deciduous tree. Blooms Jun-Jul	Not Expected. No suitable habitat (hillsides and washes) present. Site is outside of the species known elevation range.
<i>Chylismia arenaria</i> sand evening- primrose	None/None G4? / S2S3 2B.2	Sonoran desert scrub. Sandy or rocky sites. -70-915 m. annual / perennial herb. Blooms Nov-May	Not Expected. Site is outside of the species known elevation range and the nearest known population occurrence is more than 5 miles to

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<i>Scientific Name</i> Common Name	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence/Basis for Determination
			the southwest of the project site and was observed in 1924.
<i>Coryphantha alversonii</i> Alverson's foxtail cactus	None/None G3 / S3 4.3	Mojavean desert scrub, Sonoran desert scrub. Sandy or rocky habitat; sites from gravelly slopes and dissected alluvial fans. Granite substrate. 75-1525 m. perennial stem succulent. Blooms Apr-Jun	Not Expected. No suitable habitat (granite substrates) present.
<i>Ditaxis claryana glandular ditaxis</i>	None/None G3G4 / S2 2B.2	Mojavean desert scrub, Sonoran desert scrub. In dry washes and on rocky hillsides. Sandy soils. 0-465 m. perennial herb. Blooms Oct ,Dec, Jan, Feb, Mar	Not Expected. No suitable habitat (dry washes or rocky hillsides) present.
<i>Ditaxis serrata var. californica</i> California ditaxis	None/None G5T3T4 / S2? 3.2	Sonoran desert scrub. On sandy washes and alluvial fans of the foothills and lower desert slopes. 30-1000 m. perennial herb. Blooms Mar-Dec	Not Expected. Limited potential habitat is present within the sandy, unpaved portions of the site. The nearest known population occurrence of the species is more than 5 miles to the east of the St. Anthony's site.
<i>Eschscholzia androuxii</i> Joshua Tree poppy	None/None G3 / S3 4.3	Joshua tree woodland, Mojavean desert scrub. Desert washes, flats, and slopes. Sandy, gravelly, and/or rocky soils. 585-1685 m. annual herb. Blooms Feb-May (Jun)	Not Expected. Site is outside of the species known elevation range.
<i>Jaffueliobryum raii</i> Rau's jaffueliobryum moss	None/None G4? / S2? 2B.3	Alpine dwarf scrub, chaparral, Mojavean desert scrub, Sonoran desert scrub. Dry openings, rock crevices, carbonate. 490-2100 m. moss.	Not Expected. No suitable habitat (rock crevices or openings) present and site is outside of the species known elevation range.
<i>Jaffueliobryum wrightii</i> Wright's jaffueliobryum moss	None/None G4G5 / S2? 2B.3	Alpine dwarf scrub, pinyon and juniper woodland, Mojavean desert scrub. Dry openings, rock crevices, carbonate. 160-2500 m. moss.	Not Expected. No suitable habitat (rock crevices or openings) present and site is outside of the species known elevation range.
<i>Leptosiphon floribundus ssp. hallii</i> Santa Rosa Mountains leptosiphon	None/None G4T1T2 / S1S2 1B.3	Sonoran desert scrub, pinyon and juniper woodland. Desert canyons. 1000-2000 m. perennial herb. Blooms May-Jul(Nov)	Not Expected. No suitable habitat (pinyon and juniper woodland) present.
<i>Lycium torreyi</i> Torrey's box-thorn	None/None G4G5 / S3 4.2	Mojavean desert scrub, Sonoran desert scrub. Sandy, rocky, washes, streambanks, desert valleys. -50-1220 m. perennial shrub. Blooms (Jan-Feb)Mar-Jun(Sep-Nov)	Not Expected. No suitable habitat (washes, streambanks, desert valleys) present. No known populations occur within 5 miles of project site.
<i>Mentzelia tridentata</i> creamy blazing star	None/None G3 / S3 1B.3	Mojavean desert scrub. 545-1100 m. annual herb. Blooms Mar-May	Not Expected. Site is outside of the species known elevation range.
<i>Nemacaulis denudata var. gracilis</i> slender cottonheads	None/None G3G4T3? / S2 2B.2	Coastal dunes, desert dunes, Sonoran desert scrub. In dunes or sand. -50-400 m. annual herb. Blooms (Mar) Apr-May	Not Expected. No suitable habitat (dunes) present.
<i>Petalonyx linearis</i> narrow-leaf sandpaper-plant	None/None G4 / S3? 2B.3	Mojavean desert scrub, Sonoran desert scrub. Sandy or rocky canyons. -30-1090	Not Expected. No suitable habitat (sandy/rocky canyons) present.

<i>Scientific Name</i> Common Name	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence/Basis for Determination
		m. perennial shrub. Blooms (Jan-Feb)Mar-May(Jun-Dec)	
<i>Phaseolus filiformis</i> slender-stem bean	None/None G5 / S1 2B.1	Sonoran desert scrub. Gravelly washes bordered by creosote bush-dominated rocky slopes. annual herb. Blooms Apr	Not Expected. No suitable habitat (gravelly washes) present.
<i>Saltugilia latimeri</i> Latimer's woodland-gilia	None/None G3 / S3 1B.2	Chaparral, Mojavean desert scrub, pinyon and juniper woodland. Rocky or sandy substrate; sometimes in washes, sometimes limestone. 120-2200 m. annual herb. Blooms Mar-Jun	Not Expected. Site is outside of the species known elevation range. No suitable habitat (chaparral, Mojavean desert scrub, woodlands) present.
<i>Salvia greatae</i> Orocopia sage	None/None G2G3 / S2S3 1B.3	Mojavean desert scrub, Sonoran desert scrub. Broad alluvial bajadas and fans adjacent to desert washes in gravelly or rocky soil, rocky slopes of canyons. -45-675 m. perennial evergreen shrub. Blooms Mar-Apr	Not Expected. No suitable habitat (desert scrub) present. No known populations have been recorded within 5 miles of the project site.
<i>Senna covesii</i> Cove's cassia	None/None G5 / S3 2B.2	Sonoran desert scrub. Dry, sandy desert washes, slopes. 255-1295 m. perennial herb. Blooms Mar-Jun(Aug)	Not Expected. No suitable habitat (Sonoran desert scrub) present. No known populations have been recorded within 5 miles of the project site.
<i>Wislizenia refracta</i> ssp. <i>palmeri</i> Palmer's jackass clover	None/None G5T3T5 / S1 2B.2	Chenopod scrub, Sonoran desert scrub, Sonoran thorn woodland, desert dunes, desert wash. Known from desert basins, dunes, washes and benches of sand field ecotones where upland desert scrubs, typically creosote bush scrub or palo verde, transition to halophytic scrub or mesquite. 125-175 m. perennial deciduous shrub. Blooms Jan-Dec	Not Expected. No suitable habitat (dunes or washes) present.
<i>Wislizenia refracta</i> ssp. <i>refracta</i> jackass-clover	None/None G5T5? / S1 2B.2	Playas, desert dunes, Mojavean desert scrub, Sonoran desert scrub. Sandy washes, roadsides, alkaline flats. 380-1160 m. annual herb. Blooms Apr-Nov	Not Expected. Site is outside of the species known elevation range.
<i>Xylorhiza cognata</i> Mecca-aster	None/None G2 / S2 1B.2	Sonoran desert scrub. Steep canyon slopes, in sandstone and clay. 20-305 m. perennial herb. Blooms Jan-Jun	Not Expected. No suitable habitat (steep canyon slopes) present.
Insects			
<i>Oliarces clara</i> cheeseweed owlfly (cheeseweed moth lacewing)	None/None G1G3 / S2	Inhabits the lower Colorado River drainage. Found under rocks or in flight over streams. Larrea tridentata is the suspected larval host.	Not Expected. No suitable aquatic present on or adjacent to the project site.
Fish			
<i>Cyprinodon macularius</i> desert pupfish	Endangered/ Endangered G1 / S1	Desert ponds, springs, marshes and streams in Southern California. Can live in salinities from freshwater to 68 ppt; can withstand temps from 9 - 45 C and dissolved oxygen levels down to 0.1 ppm.	Not Expected. No suitable aquatic present on or adjacent to the project site.

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<i>Xyrauchen texanus</i> razorback sucker	Endangered/ Endangered G1 / S1S2 FP	Found in the Colorado River bordering California. Adapted for swimming in swift currents but also need quiet waters. Spawn in areas of sand/gravel/rocks in shallow water.	Not Expected. No suitable aquatic present on or adjacent to the project site.
Amphibians			
<i>Scaphiopus couchii</i> Couch's spadefoot	None/None G5 / S2 SSC	Temporary desert rain pools that last at least 7 days, with water temps > 15 C, and with subterranean refuge sites close by. An insect food base, especially termites, must be available.	Not Expected. No suitable habitat (desert hardpans) present.
Reptiles			
<i>Gopherus agassizii</i> desert tortoise	Threatened/ Threatened G3 / S2S3	Most common in desert scrub, desert wash, and Joshua tree habitats; occurs in almost every desert habitat. Require friable soil for burrow and nest construction. Creosote bush habitat with large annual wildflower blooms preferred.	Not Expected. Required desert scrub habitat is not present in project area.
<i>Phrynosoma mcallii</i> flat-tailed horned lizard	None/None G3 / S2 SSC	Restricted to desert washes and desert flats in central Riverside, eastern San Diego, and Imperial counties. Critical habitat element is fine sand, into which lizards burrow to avoid temperature extremes; requires vegetative cover and ants.	Not Expected. Species is highly dependent on sand dunes, which are absent from the project site.
<i>Uma inornata</i> Coachella Valley fringe-toed lizard	Threatened/ Endangered G1Q / S1	Limited to sandy areas in the Coachella Valley, Riverside County. Requires fine, loose, windblown sand (for burrowing), interspersed with hardpan and widely-spaced desert shrubs.	Not Expected. Species is highly dependent on sand dunes, which are absent from the project site..
Birds			
<i>Athene cucularia</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. Some elements of suitable habitat exist in the unpaved portions of the site, particularly along irrigation levees. The most recent occurrence (within last 15 years) was recorded more than 3 miles southeast of St. Anthony's project site.
<i>Falco mexicanus</i> prairie falcon	None/None G5 / S4 WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Not Expected. Elements of suitable habitat required for nesting are not present.
<i>Gelochelidon nilotica</i> gull-billed tern	None/None G5 / S1 SSC	Only known breeding colonies at San Diego Bay and the Salton Sea. Nests on low, sandy islets. Known to feed on fishes at mouth of Colorado River and on grasshoppers in alfalfa fields.	Not Expected. Elements of suitable habitat required for nesting are not present.
<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	Not Expected. Elements of suitable habitat required for nesting are not present.

<i>Scientific Name</i> Common Name	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence/Basis for Determination
		low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	
<i>Plegadis chihi</i> white-faced ibis	None/None G5 / S3S4 WL	Shallow freshwater marsh. Dense tule thickets for nesting, interspersed with areas of shallow water for foraging.	Not Expected. Elements of suitable habitat required for nesting are not present.
<i>Polioptila melanura</i> black-tailed gnatcatcher	None/None G5 / S3S4 WL	Primarily inhabits wooded desert wash habitats; also occurs in desert scrub habitat, especially in winter. Nests in desert washes containing mesquite, palo verde, ironwood, acacia; absent from areas where salt cedar introduced.	Low Potential. Elements of suitable habitat required for nesting are not present. Salt cedar has been introduced throughout the project area.
<i>Pyrocephalus rubinus</i> vermillion flycatcher	None/None G5 / S2S3 SSC	During nesting, inhabits desert riparian adjacent to irrigated fields, irrigation ditches, pastures, and other open, mesic areas. Nest in cottonwood, willow, mesquite, and other large desert riparian trees.	Low Potential. Small amounts of marginal nesting habitat is present in riparian areas near the project area.
<i>Rallus obsoletus yumanensis</i> Yuma Ridgway's rail	Endangered/ Threatened G5T3 / S1S2 FP	Nests in freshwater marshes along the Colorado River and along the south and east ends of the Salton Sea. Prefers stands of cattails and tules dissected by narrow channels of flowing water; principle food is crayfish.	Low Potential. Small amounts of marginal nesting habitat is present in riparian areas near the project area.
<i>Rynchops niger</i> black skimmer	None/None G5 / S2 SSC	Nests on gravel bars, low islets, and sandy beaches, in unvegetated sites. Nesting colonies usually less than 200 pairs.	Not Expected. Elements of suitable habitat required for nesting are not present.
<i>Toxostoma crissale</i> Crissal thrasher	None/None G5 / S3 SSC	Resident of southeastern deserts in desert riparian and desert wash habitats. Nests in dense vegetation along streams/washes; mesquite, screwbean mesquite, ironwood, catclaw, acacia, arrowweed, willow.	Not Expected. Elements of suitable habitat required for nesting are not present.
<i>Toxostoma lecontei</i> Le Conte's thrasher	None/None G4 / S3 SSC	Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	Not Expected. Elements of suitable habitat required for nesting are not present.
Mammals			
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	None/None G3G4 / S2 SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Not Expected. Required habitat for roosting not present in project area. Human disturbance is prevalent throughout the project site.
<i>Euderma maculatum</i> spotted bat	None/None G4 / S3 SSC	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Feeds over water and along washes. Feeds	Not Expected. Required habitat for roosting not present in project area.

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<i>Scientific Name</i> Common Name	Status Fed/State ESA CRPR,CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence/Basis for Determination
<i>Eumops perotis californicus</i> western mastiff bat	None/None G5T4 / S3S4 SSC	almost entirely on moths. Needs rock crevices in cliffs or caves for roosting. Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Moderate Potential. Suitable roosting trees are scattered throughout the project area.
<i>Lasiurus xanthinus</i> western yellow bat	None/None G5 / S3 SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Moderate Potential. Suitable roosting trees are scattered throughout the project area.
<i>Neotoma albigula venusta</i> Colorado Valley woodrat	None/None G5T3T4 / S1S2	Low-lying desert areas in southeastern California. Closely associated with beaver-tail cactus & mesquite. Intolerant of cold temps. Eats mainly succulent plants. Distribution influenced by abundance of nest building material.	Not Expected. Little habitat for this species exists in the project area. An occurrence was recorded within 2 miles of St. Anthony's site in 1908.
<i>Perognathus longimembris bangsi</i> Palm Springs pocket mouse	None/None G5T2 / S2 SSC	Desert riparian, desert scrub, desert wash and sagebrush habitats. Most common in creosote-dominated desert scrub. Rarely found on rocky sites. Occurs in all canopy coverage classes.	Low potential. Marginal habitat and canopy coverage may exist in the unpaved portions of the project site.
<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.	Not Expected. Required habitat not present in project area.
<i>Xerospermophilus tereticaudus chlorus</i> Palm Springs round-tailed ground squirrel	None/None G5T2Q / S2 SSC	Restricted to the Coachella Valley. Prefers desert succulent scrub, desert wash, desert scrub, alkali scrub, and levees. Prefers open, flat, grassy areas in fine-textured, sandy soil. Density correlated with winter rainfall.	Low potential. Marginal habitat and canopy coverage may exist in the unpaved portions of the project site. Last known occurrence was recorded within 2 miles of St. Anthony's site in 1938.

Regional Vicinity refers to within a 5-mile radius of site.

BCC = USFWS Bird of Conservation Concern
 FC = Federal Candidate Species
 FE = Federally Endangered
 FP = CDFW Fully Protected
 FT = Federally Threatened
 SE = State Endangered
 ST = State Threatened
 SR = State Rare
 SSC = CDFW Species of Special Concern

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDDB RareFind 5

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

Appendix B

Representative Site Photographs



Photograph 1. View of connection point for Saint Anthony MHP at the St. Anthony's Site, facing north.



Photograph 2. View of connection point for Seferino Huerta at the St. Anthony's Site, facing west.



Photograph 3. View of Coachella Valley Stormwater Channel crossing 66th Avenue within the Study Area, facing northwest.



Photograph 4. View of connection point at Manuela Garcia Water at the St. Anthony's Site, facing southwest.



Photograph 5. View of connection point at Desert View Mobile Home Park at the Valley View Site, facing northwest.



Photograph 6. View of connection point at Campos Mobile Home Park at the Valley View Site, facing west.



Photograph 7. View of connection point at Meza's Ranch at the Valley View Site, facing west.



Photograph 8. View of connection point at Valley View Mobile Home Park at the Valley View Site, facing northwest.



Photograph 9. View of connection point at Vista Norte Estates and Luciano Valenzuela at the Valley View Site, facing northwest.



Photograph 10. View of connection point at Soto Water at the Valley View Site, facing south.



Photograph 11. View of connection point at DeLeon Ranch at the Valley View Site, facing southeast.

Appendix C

Plant and Wildlife Species Observed On-site

Plant and Wildlife Species Observed On-site

Scientific Name	Common Name	Origin
Plants		
<i>Acacia</i> spp.	acacia	Non-native
<i>Agave</i> spp.	agave	Non-native
<i>Ambrosia dumosa</i>	burrobush	Native
<i>Atriplex canescens</i>	fourwing saltbush	Native
<i>Brassica tournefortii</i>	Asian mustard	Non-native
<i>Cryptantha</i> sp.	cryptantha	Native
<i>Encelia actoni</i>	Acton encelia	Native
<i>Eucalyptus</i> sp.	Eucalyptus	Non-native
<i>Hirschfeldia incana</i>	short podded mustard	Non-native
<i>Malva parviflora</i>	cheeseweed	Non-native
<i>Medicago polymorpha</i>	bur clover	Non-native
<i>Mentzelia</i> sp.	blazing star	Native
<i>Nerium oleander</i>	oleander	Non-native
<i>Pennisetum setaceum</i>	fountain grass	Non-native
<i>Polygonum lalathifolium</i>	knotweed	Non-native
<i>Salsola tragus</i>	Russian thistle	Non-native
<i>Schinus molle</i>	pepper tree	Non-native
<i>Schismus arabicus</i>	Arabian schismus	Non-native
<i>Sisymbrium irio</i>	London rocket	Non-native
<i>Tamarix</i> sp.	tamarisk	Non-native
<i>Washingtonia robusta</i>	Mexican fan palm	Non-native
<i>Yucca</i> spp.	yucca	Non-native
Wildlife		
Birds		
<i>Calypte anna</i>	Anna's hummingbird	Native
<i>Corvus brachyrhynchos</i>	American crow	Native
<i>Egretta thula</i>	Snowy egret	Native
<i>Haemorhous mexicanus</i>	house finch	Native
<i>Larus occidentalis</i>	western gull	Native
<i>Mimus polyglottos</i>	northern mockingbird	Native
<i>Sturnella neglecta</i>	western meadowlark	Native
<i>Zenaida macroura</i>	mourning dove	Native
Mammals		
<i>Canis latrans</i>	coyote	Native

Appendix D

Resumes



Megan Minter

SENIOR BIOLOGIST

Ms. Minter is a biologist and wetland specialist that has worked in environmental consulting for 10 years. She has a strong scientific and regulatory background. Her experience includes numerous biological resource assessments, wetland delineations, conducting focused protocol surveys pursuant to the USFWS and various NCCPs/HCPs, preparing technical sections in compliance with CEQA and NEPA requirements, and acquiring Federal and State environmental permits including Clean Water Act Section 404, 401, and California Department of Fish and Game Section 1602 agreements. Ms. Minter has extensive experience preparing CEQA/NEPA compliant documents in support of the attainment of various permits and approvals for a variety of projects in southern California. This includes the production of biological technical reports for EIR/EIS, MNDs, CUPs, and other CEQA documents. Ms. Minter's background includes extensive service to energy utilities, solar developers, pipeline groups, cities, as well as residential and commercial land developers throughout Southern California. Ms. Minter's compliance monitoring experience includes both large-scale infrastructure projects and smaller projects within sensitive habitats.

EDUCATION

M.S., Wildlife and Fisheries Resources, West Virginia University

B.S., Fisheries Sciences, Virginia Polytechnic Institute and State University

CERTIFICATIONS/ REGISTRATIONS

California Rapid Assessment Method Trained

Desert Tortoise Council Introduction to Desert Tortoises and Field Techniques

OSHA 10-hr Construction Safety and Health

EXPERIENCE

Rincon Consultants, Inc. (2018 – present)

Environmental Intelligence, LLC (2013–2018)

GAI Consultants (2010 – 2013)

PROJECT EXPERIENCE

- El Casco Systems Project; SCE; Riverside County, CA (2013-2018): Conducted restoration monitoring for the 15-acre El Casco Substation. Responsibilities included biological monitoring of work near least Bell's vireo habitat, pre-activity surveys for sensitive resources including least Bell's vireo, rare plant counts, assisting botanists with vegetation cover analysis, soil sampling, and weed abatement planning.
- On-Call Biological Services; Metropolitan Water District of Southern California, Los Angeles, San Bernardino, and Riverside Counties, CA (2016-2017): Assisted with project management of small permitting projects on Metropolitan Water District properties; conducted jurisdictional delineations; prepared 404, 401, and 1602 permit application; advised on proper permitting route for maintenance and improvements projects; conducted surveys for least Bell's vireo within suitable habitat; conducted rare plant surveys.
- Lakeview Substation; SCE; San Bernardino County, CA (2014-2015): Assisted with project management, served as lead monitor on site daily, conducted nesting bird surveys, provided guidance on nesting deterrents, conducted preconstruction protocol surveys and sweeps, and coordinated with contractors, regulatory agencies and project personnel.
- Montebello Hills Oil Field; Plains Exploration; Los Angeles County, CA (2013-2018): performed monitoring of construction and ongoing oil field maintenance for coastal California gnatcatcher, coastal cactus wren, least Bell's vireo, and coastal sage scrub vegetation communities. Participated in breeding surveys for California gnatcatcher and coastal cactus wren, in coastal sage scrub vegetation communities on the active oil field site.



PROJECT EXPERIENCE CONT'D

- Longboat Solar; Duke Energy; San Bernardino County, CA (2014-2017): Assisted with project management; served as lead monitor on site daily; coordinated with contractors, regulatory agencies, and tribal representatives; and conducted pre-construction protocol surveys and sweeps. Also conducted a jurisdictional delineation of the 350-acre project and assisted with the preparation of 401 and 1602 permit applications for impacts to jurisdictional waters.
- Sullivan Canyon L3003 & L407 Pipeline and Right of Way Maintenance Project; Southern California Gas Company (SoCalGas); Los Angeles, CA (2018-2019): Performed a jurisdictional delineation and biological resources assessment along a 4.5-mile section of pipeline, provided project management, completed technical reports, and prepared 404, 401, and 1602 permit applications.
- Vidor 5 Well Abandonment Project; SoCalGas; Los Angeles, CA (2019): Performed a jurisdictional delineation and biological resources assessment at Vidor 5 well location within Ballona Wetlands Ecological Reserve.
- SL 41-23A, Murrieta Creek Pipeline Removal; SoCalGas; Temecula, CA (2018-2019): Performed a jurisdictional delineation and biological resources assessment along the SL 41-23A pipeline crossing Murrieta Creek and advised on project design in order to avoid sensitive resources.
- Major Projects Support, Line 2000 Colorado River HDD Project; SoCalGas; Riverside County, CA (2018): Performed a jurisdictional delineation and biological resources assessment along the L2000 Pipeline Colorado River span.
- On-Call Biological Services; Southern California Edison (SCE); Los Angeles, Orange, San Bernardino, Riverside, and San Diego Counties, CA (2016-2018): Provided project management, quality control, habitat assessments for deteriorated pole replacement, jurisdictional waters delineation, reporting, and acquisition of CWA 401 and 404, and Fish and Game Code LSAA, monitored vegetation management, and conducted pre-construction surveys for sensitive resources.
- On-Call Biological Services; Metropolitan Water District of Southern California, Los Angeles, San Bernardino, and Riverside Counties, CA (2016-2017): Assisted with project management of small permitting projects on Metropolitan Water District properties, conducted jurisdictional delineations; prepared 404, 401, and 1602 permit application, advised on proper permitting route for maintenance and improvements projects.
- Lugo-Victorville Transmission Line Remedial Action Scheme Project; SCE; San Bernardino County, CA (2017-2018): conducted a jurisdictional delineation, mapped vegetation, assisted with minimization of impacts, and prepared 401 and 1602 permit applications along the 84-mile linear project. Supported the Mojave National Preserve's (MNP) review of the client's Special Use Permit application, and the BLM's review of the client's Right of Way grant application.
- Hilltop and Euclid Mixed Use Development; Birdseye Planning; San Diego County, CA (2018): Prepared permit application packages for the acquisition of CWA 401 and 404 permits and Fish and Game Code LSAA.
- Tropico Solar Project; EDF Renewable Energy; Kern County, CA (2014-2018): Conducted a jurisdictional waters delineation, vegetation mapping, and habitat assessments for sensitive plant and wildlife species for a 215-acre solar project in natural lands.
- Magunden-Springville #1 & #2 220-kV; SCE; Kern and Tulare Counties, CA (2015-2016): Conducted a jurisdictional delineation of the 52-mile linear Project. Also prepared the Waters and Wetlands delineation report and assisted with the preparation of 401 and 1602 permit applications for impacts to jurisdictional waters.
- Valentine Solar Project; EDF Renewable Energy; Kern County, CA (2014-2018): Conducted a jurisdictional waters delineation, vegetation mapping, and habitat assessments for sensitive plant and wildlife species for a 2,000-acre solar project in natural lands.
- West Coyote Hills; Chevron; Orange County, CA (2017-2018): Conducted vegetation mapping, jurisdictional delineation, and preconstruction special-status species surveys. Monitored environmental sampling within sensitive habitats.



- Catalina Solar 2; EDF Renewable Energy; Kern County, CA (2014-2017): Assisted with a jurisdictional delineation of the 760-acre Project and assisted with the preparation of 401 and 1602 permit applications for impacts to jurisdictional waters. Served as a biological monitor and coordinated with biologists to ensure all Project components remain in full regulatory compliance.
- Pacific Wind Drainage Impact Mitigation Plan; EDF Renewable Energy; Kern County, CA (2013-2018): Assisted with the preparation and administration of a mitigation plan for impacts to jurisdictional waters, directed landscape crews and irrigation specialists in preparation of mitigation site, coordinated with contractors and agencies, conducted a jurisdictional delineation of the site, and annually assessed and reported vegetative cover in support of restoration efforts.
- Catalina Solar Drainage Impact Mitigation Plan; EDF Renewable Energy; Kern County, CA (2013-2018): Assisted with the preparation and administration of a mitigation plan for impacts to jurisdictional waters, directed landscape crews and irrigation specialists in preparation of mitigation site, coordinated with contractors and agencies, conducted a jurisdictional delineation of the site, and annually assessed and reported vegetative cover in support of restoration efforts.
- Sycamore to Peñasquitos Transmission Line Improvements Project; San Diego County, CA (2013-2014): Conducted a jurisdictional delineation of the 30-mile linear Project. Also prepared the Waters and Wetlands delineation report and assisted with the preparation of 401, 404, and 1602 permit applications for impacts to jurisdictional waters.
- Water Valley Project; SCE; San Bernardino County, CA (2013-2014): Served as a combined role biological and environmental monitor for a large linear utility project. Duties included providing biological and environmental compliance monitoring for the project elements. Also completed clearance and sweep surveys for desert tortoise, burrowing owl, desert kit fox, American badger, nesting birds, and rare plants.
- College Park; Lennar and Standard Pacific Homes; San Bernardino County, CA (2013-2018): Managed and performed breeding and clearance surveys for burrowing owl, nesting birds, and raptors as well as mitigation site monitoring. Also monitored and documented avoidance of burrowing owl and nesting bird compliance.
- Butterfield; Pardee Homes; Riverside County, CA (2013-2017): Conducted annual protocol burrowing owl surveys on a 2,000-acre site comprised of grasslands, grazed lands, and sandy washes. Marked and mapped the active burrowing owl burrows and suitable burrows using GPS and GIS.
- Eastside Water Treatment Facility; Lennar and Standard Pacific Homes; San Bernardino County, CA (2014): Completed pre-construction surveys for special-status species and nesting birds, set up work buffers, and monitored impacts to special-status resources.
- Tournament Hills; Pardee Homes; Riverside County, CA (2013): Assisted under qualified biologists during protocol level surveys for least Bell's vireo using acoustical and visual detections to locate the species and mapped locations using GPS and GIS.



**APPENDIX C: CULTURAL RESOURCES ASSESSMENT AND AB52
CONSULTATION LETTER**



East Coachella Valley Water Supply Project
Saint Anthony Mobile Home Park Water
Consolidation Project

Coachella Valley Water District

Cultural Resources Assessment Report

prepared for

Woodard & Curran

10509 Vista Sorrento Parkway, Suite 205

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Contact: Rosalyn Prickett, Project Manager

prepared with the assistance of

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April 2019



RINCON CONSULTANTS, INC.

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Executive Summary

Woodard & Curran retained Rincon Consultants, Inc. (Rincon) to perform a cultural resources assessment for the Saint Anthony Mobile Home Park Water Consolidation Project (project) near the community of Mecca, Riverside County, California. The project involves the consolidation of three independent mobile home park (MHP) small water systems into Coachella Valley Water District's potable water system (part of the East Coachella Valley Water Supply Project). The purpose of this report is to document the tasks Rincon conducted; specifically, a cultural resources records search, Native American outreach, local historic group consultation, historical imagery review, a field survey, and significance evaluations. Rincon understands the project requires review by the State Water Resources Control Board and may include federal funding sources. Therefore, the cultural resources study was completed in accordance with California Environmental Quality Act (CEQA)-Plus standards to allow for compliance with CEQA, the National Environmental Policy Act, and Section 106 of the National Historic Preservation Act (NHPA).

The results of the cultural resource assessment identified two known cultural resources, Avenue 66 (P-33-020844) and Lincoln Avenue (P-33-020839), in the project Area of Potential Effect (APE). Both resources are ineligible for listing on the on the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR). The study did not identify any other cultural resources in the project APE.

The lack of surface evidence of archaeological remains does not preclude their subsurface existence. The multiple prehistoric archaeological resources documented on the adjacent Torres Martinez Indian Reservation, some of which contain buried cultural deposits, suggest the western portion of the project APE has a moderate to high sensitivity for prehistoric archaeological remains. The results of the field survey revealed surficial deposits have been disturbed throughout much of the APE by the construction and maintenance of roadways and mobile home parks. These previous ground-disturbing activities are expected to be limited to the upper few feet of sediment. Given the maximum depth of ground disturbance in this portion of the APE will be eight feet below ground surface, it is anticipated the water pipeline installation will extend into undisturbed native sediments. These excavations have the potential to impact buried prehistoric archaeological resources potentially present along Avenue 66 and the portion of the APE extending onto the Torres Martinez Indian Reservation.

Based on the results of the current study, Rincon recommends a finding of ***less than significant impact to cultural resources with mitigation incorporated*** under CEQA and ***no effect to historic properties*** under Section 106 of NHPA with adherence to the following measures. The project is also required to adhere to regulations regarding the unanticipated discovery of human remains, detailed below.

Initial Monitoring of Archaeological Resources

Initial project-related ground-disturbing activities conducted along Avenue 66 and the Manuela Garcia MHP adjacent to and within the Torres Martinez Indian Reservation shall be observed by an archaeological and Native American monitor. The archaeological monitor shall be under the direction of a qualified archaeologist meeting the Secretary of the Interior's Professional

Qualifications Standards for prehistoric archaeology (National Park Service 1983). If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall halt and the find shall be evaluated for CRHR and/or NRHP eligibility. Archaeological monitoring may be reduced or halted at the discretion of the qualified archaeologist as warranted by conditions such as encountering bedrock, sediments being excavated are fill materials, or negative findings during initial ground-disturbing activities. If monitoring is reduced, spot-checking shall occur when ground-disturbance moves to a new location or when ground disturbance will extend to depths not previously reached (unless those depths are within bedrock).

Unanticipated Discovery of Cultural Resources

If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) should be contacted immediately to evaluate the find. If the discovery proves to be significant under NHPA and/or CEQA, additional work such as data recovery excavation and Native American consultation may be warranted to mitigate any significant impacts.

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 perform a cultural resources assessment for the Saint Anthony Mobile Home Park Water Consolidation Project (project) near the community of Mecca, Riverside County, California. The project is part of the Coachella Valley Water District's (CVWD) East Coachella Valley Water Supply Project. The purpose of this report is to document the tasks conducted by Rincon, specifically, a cultural resources records search, Native American outreach, historical imagery review, local historic group consultation, a field survey, and significance evaluations. Rincon understands the project requires review by the State Water Resources Control Board and may include federal funding sources. Therefore, the cultural resources study was completed in accordance with California Environmental Quality Act (CEQA)-Plus standards to allow for compliance with CEQA, the National Environmental Policy Act, and Section 106 of the National Historic Preservation Act (NHPA).

1.1 Project Location

The project site is situated west of the community of Mecca in unincorporated Riverside County, California. More specifically, it is situated in Township 7 south, Range 8 east, Sections 9-15, and Township 7 south, Range 9 east, Sections 7, 17, and 18, of the United States Geological Survey (USGS) *Valerie, CA* and *Mecca, CA* 7.5-minute topographic quadrangles (Figure 1). The project site is located in a rural setting consisting of a mixture of agricultural and undeveloped land. The elevation of the project area averages 164 to 204 feet (50 to 64 meters) below mean sea level.

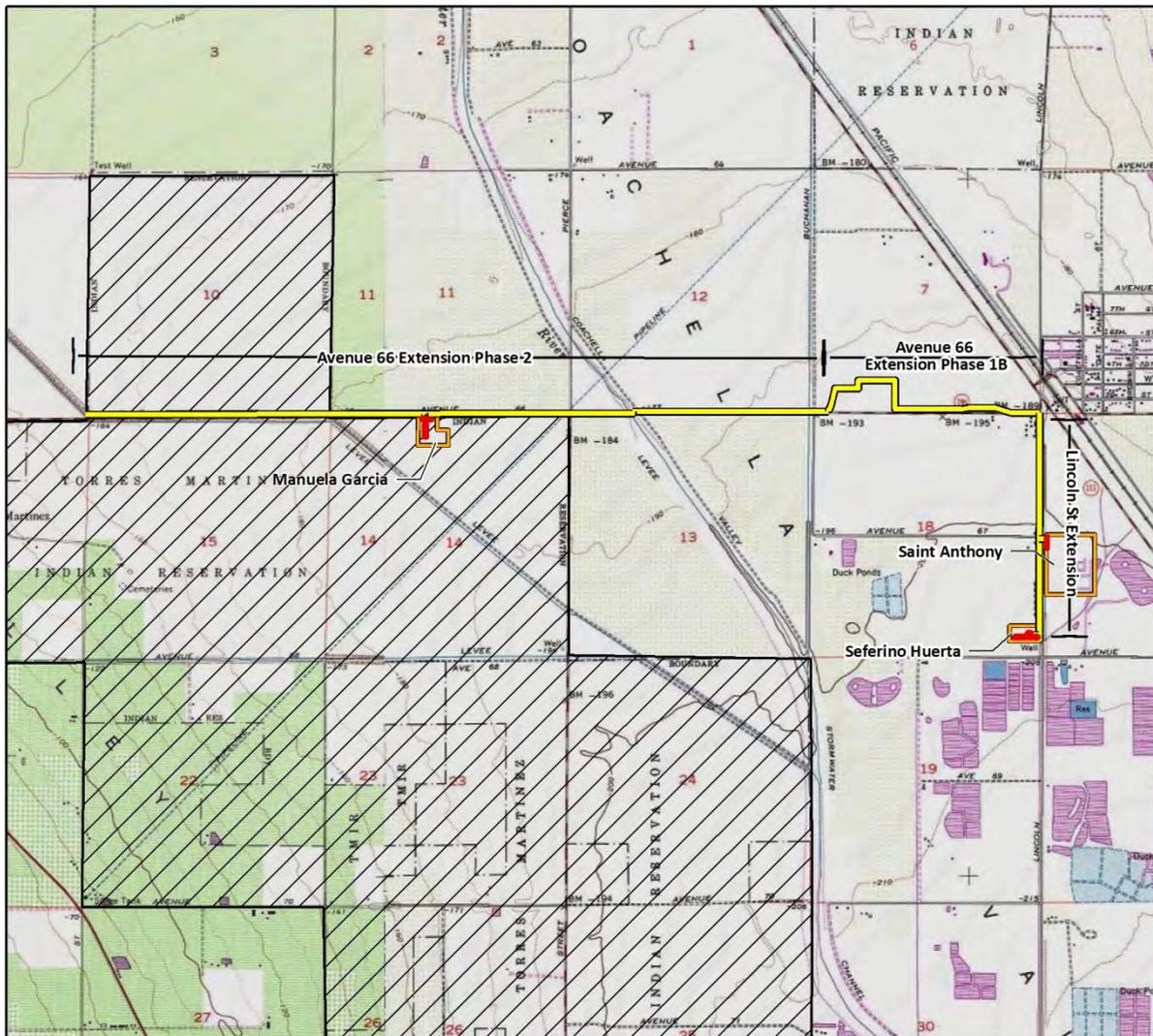
1.2 Project Description

The CVWD proposes infrastructural improvements to the Small Water Systems (SWSs) associated with the Manuela Garcia, Saint Anthony, and Seferino Huerta Mobile Home Parks (MHPs) near the community of Mecca, Riverside County, California (Figure 1). The Manuela Garcia MHP is within the boundary of the Torres Martinez Indian Reservation. The existing potable water supply for the three SWSs consists of local groundwater, which has been shown to contain elevated concentrations of arsenic and other hazardous constituents. The proposed project would consolidate the three privately owned SWSs into the existing CVWD potable water system and increase the reliability of the water supply to these disadvantaged communities. The proposed project is part of the larger East Coachella Valley Water Supply Project, which may receive funding under the Drinking Water State Revolving Fund, a program administered by the State Water Resources Control Board via funds from United States Environmental Protection Agency and/or the United States Department of Agriculture Rural Development Program.

Proposed project system components consist of the following:

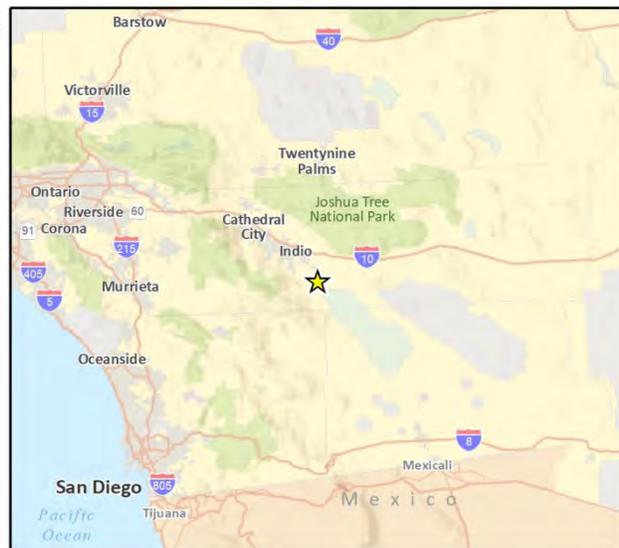
- A 30-inch diameter pipeline (Phase 1B and Phase 2 pipeline extensions) totaling approximately 22,000 feet (4.2 miles) in length that runs along to adjacent to Avenue 66
- A 12-inch diameter pipeline measuring approximately 4,900 feet in length along Lincoln Street
- 400 feet of 1-inch and 2-inch diameter service laterals connecting to the Avenue 66 Phase 2 pipeline and 12-inch diameter water pipeline along Lincoln Street and extending to the property boundary of each SWS

Figure 1 Project Location Map



Imagery provided by National Geographic Society, Esri and its licensors © 2019. Valerie, Mecca Quadrangles. T07S R08E S09-12, T07S R09E S07,14,17,18. 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.

-  Area of Potential Effects Associated with Proposed Water Pipeline Alignment
-  Area of Potential Effects Associated with Existing Small Water Systems
-  Mobile Home Park Boundary
-  Torres Martinez Reservation



- 305 feet of 2-inch diameter pipelines on the MHP properties to complete service to the existing SWSs
- Modifications to the existing on-site SWSs may include removal of some existing infrastructure (e.g., tanks, pipelines, connections) and specifically abandonment of the wells.

The water pipelines would primarily be installed within existing County of Riverside roadway rights-of-way (ROW) and SWS properties. Exceptions to this include portions of the Phase 1B extension pipeline located on private- and state-owned parcels. Along much of the alignment, trench excavation would be used for the installation of the pipeline. A backhoe, excavator, or trencher would be used to dig trenches for pipe installation. In general, pipe trenches would be 3 to 6 feet wide and 4 to 8 feet deep. Deeper installations may be required under special circumstances, such as large utility or channel crossings.

Jack and boring and Horizontal Directional Drilling (HDD) may also be required for the portions of the pipeline which cross under Highway 86, a CVWD irrigation ditch, and the Whitewater River (Coachella Valley Stormwater Channel). The jack and boring method involves the excavation of pits ranging from 10 to 15 feet wide and 10 to 20 feet long on either side of the surface feature to be avoided. HDD crossings would require bore entry holes and the excavation of an entry pit measuring approximately 10 feet by 10 feet in area and approximately 8 feet in depth. In both of these techniques, the ground surface would not be disturbed except at the pit entries.

1.3 Area of Potential Effects

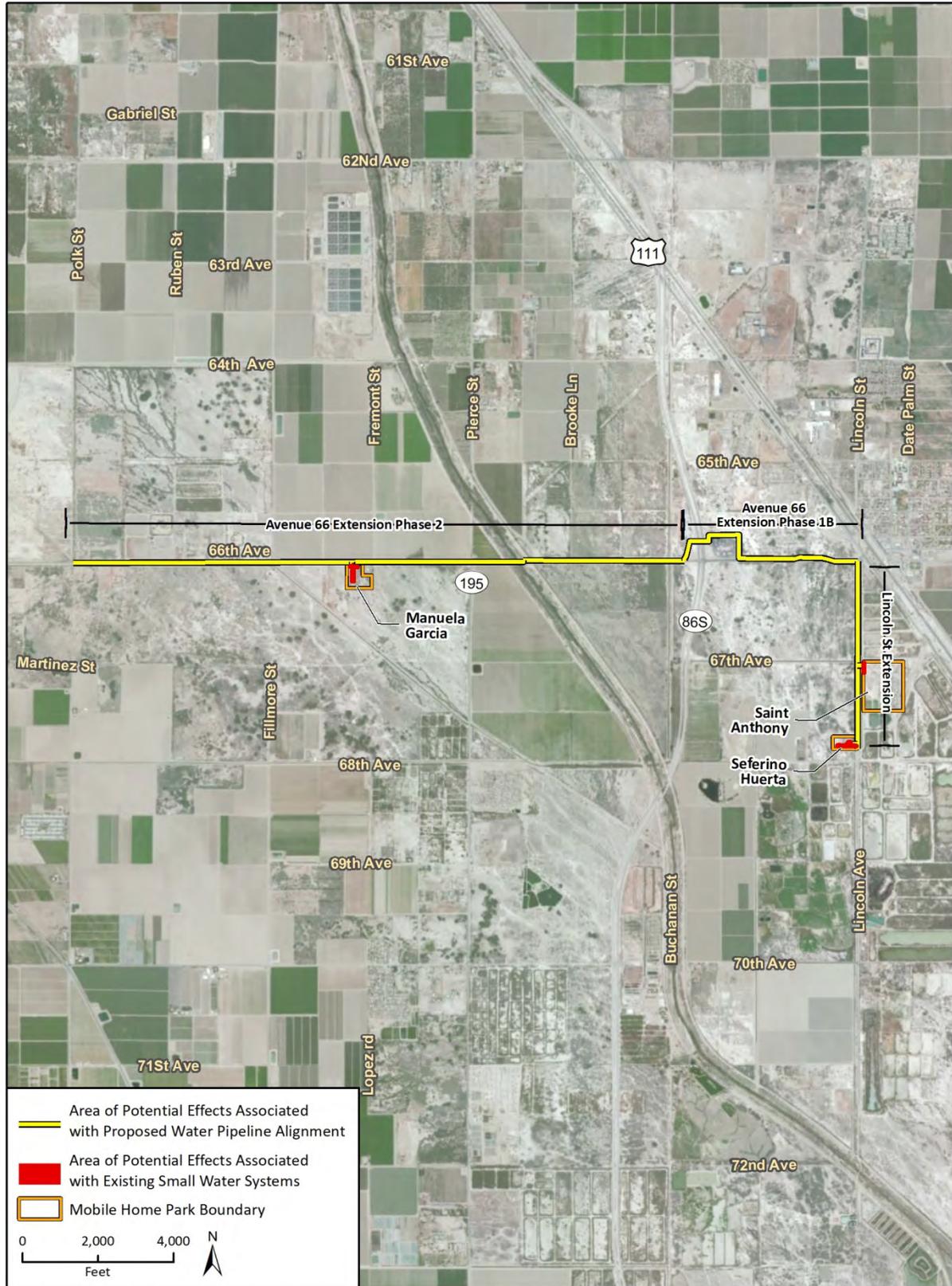
The project Area of Potential Effects (APE) is defined in 36 Code of Federal Regulations (CFR) 800.16(d) as the “geographic area or areas within which a project may directly or indirectly cause changes in the character or use of historic properties if any such property exists.” The APE generally depicts all areas expected to be affected by the proposed project, including construction staging areas. For this study, the APE encompasses the project disturbance footprint associated with the installation of the water pipeline, along with a 10-foot-wide buffer on either side of the alignment. The APE also includes the existing SWSs. Due to the more limited nature of expected disturbance associated with modifications to the existing SWSs, these portions of the APE include a 3-foot-wide surrounding buffer. As shown in Figure 2, much of the horizontal APE is located within the County of Riverside roadway ROW along Avenue 66 and Lincoln Street. Exceptions to this include the portion of the APE that encompasses the Phase 1B pipeline extension around Highway 86 and the three MHPs, one of which (Manuela Garcia) is located on the Torres Martinez Indian Reservation. In total, the horizontal APE encompasses approximately 13.3 acres.

The APE must also be considered as a three-dimensional space and includes any ground disturbance associated with the project. The vertical depth along most of the APE is not expected to exceed eight feet below ground surface, consistent with the maximum depth necessary to install the water pipeline. The APE may extend from 15 to 40 feet in depth in the vicinity of Highway 86, a CVWD irrigation ditch, and the Whitewater River where jack and boring and/or HDD is required to avoid surface features. 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 Archaeologist and Principal Investigator Tiffany Clark, PhD, Registered Professional Archaeologist (RPA) provided management oversight for this cultural resources study. Dr. Clark

Figure 2 Area of Potential Effects Map



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Fig. 2 Project Location St Anthony_Aerial

meets the Secretary of the Interior's Professional Qualifications Standards for prehistoric and historic archaeology (National Park Service 1983). Archaeologist Tricia Dodds, MA, RPA, completed the records search for the project. Staff archaeologist Lindsay Porras, MA, RPA, assisted with the Native American outreach and local historic group consultation, performed the field survey, and served as primary author for the report. Geographic Information Systems Analysts Erik Holtz and Jon Montgomery prepared the figures found in this report. Senior Technical Editor April Durham, PhD, and Principal Jennifer Haddow, PhD, reviewed this report for quality control. Resumes of key personnel are provided in Appendix A.

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.

CEQA-Plus Studies

A CEQA-Plus study includes compliance with federal and state regulations in the event a federal nexus is established during the course of project execution. A federal nexus may be established if federal funding and/or permitting is obtained or required for the project. 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.

Federal Regulations

2.1.1 National Historic Preservation Act

The proposed project is considered a federal undertaking due to the potential for federal funding and is subject to Section 106 of NHPA. Section 106 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 those 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 NHPA of 1966 (as amended) through one of its implementing regulations, 36 CFR 800 (Protection of Historic Properties), and through the National Environmental Policy Act. Properties of traditional, religious, and cultural importance to Native Americans are considered under Section 101 (d)(6)(A) of NHPA, and Section 106 (36 CFR 800.3-800.10). 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 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 Places (NRHP). Generally, districts, sites, buildings, structures, and objects that possess integrity are eligible for inclusion on the NRHP under 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 that have been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP, 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.

2.2 State

2.2.1 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 California Register of Historical Resources (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* (State CEQA Guidelines, Section 15064.5[a][1-3]).

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 within 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 (Office of Historic Preservation 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 52 (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 TCRs 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

AB 52 also establishes a formal consultation process for California tribes regarding TCRs. Under AB 52, lead agencies are required to “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” Native American tribes to be included in the process are those requesting notice of projects proposed within the jurisdiction of the lead agency. The consultation process for a project must take place prior to the adoption of a negative declaration or mitigation negative declaration or the certification of an environmental impact report.

3 Natural and Cultural Setting

3.1 Natural Setting

The project APE is in the central portion of the Coachella Valley, a region extending for approximately 45 miles southeast from the San Bernardino Mountains to the northern shore of the Salton Sea. Averaging 15 miles wide, the valley is bounded on the west by the San Jacinto and Santa Rosa Mountains and on the north and east by the Little San Bernardino Mountains. The San Andreas Fault runs along the northeastern edge of the valley from the Chocolate Mountains in the south to the Little San Bernardino Mountains in the north. The Whitewater River (Coachella Valley Stormwater Channel) intersects the project APE in a northwest-southeast direction and drains into the Salton Sea.

3.2 Cultural Setting

The Colorado Desert is a distinct geographical region with its own cultural and natural history, but it is embedded in a larger context that includes the Mojave Desert to the north and the Sonoran Desert to the east. The prehistoric period of these desert regions should be viewed in light of drastic climatic events which have reshaped the ecological setting of the region through time. The Salton Sink, also known as the Salton Trough, represents the Colorado Desert ecological setting of the Cahuilla. This desert stretched from the Coachella Valley in the north to Mexico in the south. Prehistorically, the region was lush, fed by overflows of ancient Lake Cahuilla. Present-day environmental conditions can be viewed as one of many alternating periods of lush and dry climates that have occurred through time. Moratto (2004:18) explains this topic thoroughly in the following:

Each lacustral period was followed by centuries when the river did not flow into the region but instead deposited sediments across its southern end. The waters of Lake Cahuilla then evaporated, leaving the desert and Salton Sea. As one might expect, the vicissitudes of ancient Lake Cahuilla strongly affected the course of prehistory in the Colorado Desert.

Several chronological sequences have been proposed by archaeologists to describe cultural change within southern California (Jones and Klar 2007; Moratto 2004). However, no cultural chronology for the Colorado Desert is currently available. Since the project APE is in a transitional zone between the Mojave and Colorado Deserts and these two regions were occupied traditionally by the same cultural groups, the next sections will follow the cultural chronology drafted by Sutton et al. (2007) for the Mojave Desert with descriptions focused on the unique cultural history of the Colorado Desert (Table 1).

3.2.1 Pleistocene Period (ca. Pre-12,000 to 10,000 Calibrated Before Present [cal BP])

The climate of the Pleistocene period in the Colorado Desert is generally characterized as cool and wet (Sutton et al. 2007:231). During this time, the Colorado Desert featured several pluvial lakes. The presence of lakes indicates an environment with plentiful food and water resources suitable for early human habitation, especially as compared to the harsher desert environment now present.

Solid evidence of pre-Clovis (ca. before 11,500 cal BP) archaeological sites in the Colorado Desert remains scarce, but it is possible such occupation occurred and sites with reliable early dates may be found, as has happened elsewhere in the Americas.

Table 1 Cultural Chronology for the Mojave Desert

Approximate Date Range	Temporal Period	Cultural Complex	Previously Known As
Pre – 12,000 cal BP*	Late Pleistocene	Pre-Clovis	Early Man Pre-Projectile Point
12,000 – 10,000 cal BP	Terminal Pleistocene	Paleoindian	Clovis Big Game Hunting Tradition
10,000 – 8000 cal BP	Early Holocene	Lake Mojave	Western Pluvial Lakes Tradition San Dieguito Complex
9000 – 4000 cal BP	Middle Holocene	Pinto Deadman Lake	Little Lake N/A
4000 – 1600 cal BP	Late Holocene	Gypsum	Newberry
1600 – 850 cal BP		Rose Spring	Saratoga Springs I Haiwee
850 cal BP – Historic		Late Prehistoric	Shoshonean Marana Protohistoric

*cal BP refers to Before Present dates derived by radiocarbon dating, “calibrated” to the year 1950, which is used as the “modern carbon” reference point.

Source: Sutton et al. 2007:236

The Clovis Complex is the earliest and only Paleoindian cultural complex widely accepted in the region (Sutton et al. 2007:233-234). Dating to approximately 11,500 cal BP, this complex is defined by large lanceolate-shaped bifaces with fluting, prepared to thin and flatten the base of the artifact for hafting. Other tools associated with the Clovis Complex include large side scrapers, blades derived from prepared cores, and a mixture of expedient flaked tools (Justice 2002:73). Paleo-Indian populations associated with fluted point technology consisted of small, mobile groups who hunted and gathered near permanent sources of water such as pluvial lakes. The tools associated with these populations are found most commonly in the drainage basins of the pluvial lakes (Sutton et al. 2007:234).

Fluted points have been interpreted as tools used for hunting Pleistocene megafauna due to their clear association with megafaunal remains in the Great Plains and Southwest, but most fluted points found in California have lacked corroborating Pleistocene radiocarbon dates (Arnold et al. 2004). One exception appeared during excavations at China Lake in the early 1970s, where fluted points associated with burned remains of extinct megafauna were uncovered (Davis 1975). As Davis and Panlaqui noted (1978:31), the sites at China Lake demonstrate Paleo-Indians exploited many available resources, not just megafauna.

Evidence of terminal Pleistocene and early Holocene habitation in the Mojave Desert has remained sparse until recently, but evidence of habitation in the Colorado Desert at this time is all but absent. Evidence of late Pleistocene occupation in the Mojave was identified on the southern slopes of the Tehachapi Mountains near Cottonwood Creek in the form of a basal fragment of a fluted Clovis projectile point (Glennan 1971, 1987).

3.2.2 Early Holocene (10,000 to 8000 cal BP)

The onset of the early Holocene was marked by warmer temperatures, reduced precipitation, and the eventual drying up of the Pleistocene pluvial lakes. These changes are believed to have caused an irregular distribution of resources available to the early Holocene inhabitants (Sutton et al. 2007:237). In the Mojave Desert Region, the Lake Mojave Complex emerged at this time. This complex reflects an increasingly diversified subsistence strategy which was necessary for successful adaptation to climatic changes.

The Lake Mojave Complex is identified primarily by heavy, stemmed projectile points attributable to the Great Basin Stemmed series, such as Lake Mojave and Silver Lake. Other Lake Mojave Complex tools include bifaces, steep-edged unifaces, crescents, and occasional cobble-core tools with infrequent ground stone implements (Justice 2002:91). Settlement organization components include extensive residential accumulations, workshops, and small camps containing a handful of formed tools (Sutton et al. 2007: 237). Basgall and Overly (2004) have found evidence of occupation near Pleistocene China Lake and Fort Irwin yielding radiocarbon dates from 9500-8000 cal BP

While earlier research presumed a dependence on lacustrine subsistence strategies, recent studies have found Lake Mojave Complex sites in other contexts (e.g., Basgall 2005; Basgall and Jurich 2006; Giambastiani and Berg 2008:14). Sutton et al. (2007:237) stated the Lake Mojave assemblages included tools “consistent with long-term curation and transport.” The presence of exotic lithic materials and marine shell beads in Lake Mojave Complex assemblages further supports the assertion these people were highly mobile and possibly traded with groups over long distances.

Evidence is scant for Early Holocene occupation of the Colorado Desert. Scattered occurrences of large projectile points similar to Pinto and Elko forms have been reported in the region (Schaefer and Laylander 2007), but likely date to the Middle and Late Holocene.

3.2.3 Middle Holocene (9000 to 4000 cal BP)

The middle Holocene climate was generally more arid than the preceding or subsequent periods with multiple oscillations between wetter and drier conditions. The desiccation of the lakes and marshes of the Pleistocene and early Holocene required the region’s inhabitants to rely on streams and springs for water, resulting in lower occupational densities (Aikens 1978; Basgall 2000; Cleland and Spaulding 1992; Sutton 1996; Warren 1984). Average temperatures and aridity increased, peaking between 8000 and 6000 cal BP. Settlement patterns adapted, including a shift to upland settings where sources of water still existed and changes in tool assemblage content and diversity marked the emergence of the Pinto Complex (Sutton 1996).

Campbell and Campbell defined the Pinto Complex based on their work at the Pinto Basin site (1935), but it has a wider distribution throughout the southern California Desert Region than previous complexes. During the latter part of the Early Holocene, archaeological data indicate the Pinto Complex overlaps the Lake Mojave Complex (Sutton et al. 2007:237). The Pinto Complex reflects shifts in subsistence patterns and adaptation to the shrinking of the Pleistocene lakes, including a greater emphasis on the exploitation of plants, with the continued pursuit of artiodactyls and smaller game. The broad distribution of this complex implies a high degree of residential mobility. The hallmarks of the Pinto Complex tool assemblage include concave base and bifurcate base projectile points with strong basal ears and more gradual shoulders (Zyniecki 2003:12). Other diagnostic artifacts of this complex include domed and keeled scrapers, large and small leaf-shaped bifaces, core/cobble tools, large metates and milling slabs, and shaped and unshaped handstones.

Near the end of the middle Holocene the climate became increasingly hotter and more arid. Very few sites date to the period between 5000 and 4000 cal BP. This suggests populations were very low. It is possible some areas were abandoned during this hot period (Sutton et al. 2007:241). In the Colorado Desert specifically, archaeological evidence dating to this time is limited, supporting the notion an arid and drought-ridden environment may have resulted in a migration out of the area (Hayden 1976). Others argue the lack of archaeological evidence at this time may be caused by environmental processes that buried prehistoric resources (Weide 1976).

3.2.4 Late Holocene (4000 cal BP to European Contact)

The climate of the late Holocene was similar to current conditions; cooler and moister than the middle Holocene, but not as cool and moist as the early Holocene. The climate remained highly variable with periods that included the Mojave lakes refilling to levels of earlier high stands, contrasted with at least two major droughts, circa 1124 to 904 cal BP, and circa 807 to 660 cal BP (Stine 1994). A cooler and wetter period occurred between 550 and 100 cal BP (Cleland and Spaulding 1992:4). These climatic changes at the onset of the late Holocene once again resulted in modified subsistence strategies and correlating tool kits of three progressive cultural complexes: Gypsum Complex, Rose Spring Complex, and Late Prehistoric Complex (or period).

Dart-point size projectile points including notched or eared (Elko), concave base (Humboldt), and small-stemmed (Gypsum) types characterized the projectile points of the Gypsum Complex. In addition to these diagnostic points, Gypsum Complex sites included leaf-shaped points, rectangular-based knives, flake scrapers, drills, and occasionally, large scraper planes, choppers, and hammerstones (Warren 1984:416). Manos and milling stones were common and the mortar and pestle were introduced during this period. Other artifacts found at Gypsum Complex sites include split-twig animal figurines, *Olivella* shell beads, and *Haliotis spp.* beads and ornaments, which are indicative of trade with people from the southern California coast and southern Great Basin. The inhabitants of the Mojave Desert exported high-quality, locally available cryptocrystalline materials such as obsidian, chalcedony, and chert for the production of stone tools in exchange for exotic materials.

By 1750 cal BP, a slightly cooler climate appears to have provided for increased population, based on a higher frequency of archaeological sites. The Rose Spring Complex was present from approximately 1815 to 915 cal BP, with regional temporal variations known as the Saratoga Springs, Haiwee, or Amargosa periods (Sutton 1996; Sutton et al. 2007:236). The smaller Rose Spring projectile points replaced the dart-size points of previous complexes and heralded the introduction of the bow and arrow (Yohe 1998). The bow and arrow provided its user a way to fire multiple projectiles rapidly during hunting or warfare and from a position of relative security compared to the atlatl or spear. This technological innovation appears to correspond with the onset of the Numic expansion westward to the coast, which some researchers believe started from southeastern California (Bettinger and Baumhoff 1982; Grayson 1993). Bedrock milling features supplement portable milling stones in villages and ancillary sites within the California deserts.

The Late Prehistoric period (circa 900–250 cal BP) corresponds to the introduction of ceramic artifacts in the region as well as replacement of Rose Spring projectile points with even smaller Desert Side-notched points and Cottonwood series points. Use of mortar and pestle became more widespread during this period and evidence of food storage facilities becomes increasingly common in the archaeological record. In the central Mojave Desert, the Mojave River became a primary focus of occupation, and trade networks increased along the Mojave River and over the San Gabriel Mountains (Sutton 1996).

Archeological evidence left by highly mobile hunter-gatherers in the Mojave Desert during the Late Prehistoric period is typified by sparse scatters of flaked stone, ground stone, and ceramic artifacts, along with features such as hearths, rock rings, and trails. Several important Late Holocene sites are documented in the northern Coachella Valley (Love and Dahdul 2002) and are characterized by clay-lined features, cremations, hearths, milling equipment, shell beads, Coso obsidian bifaces and debitage, and wonderstone debitage. Settlement appears to have been more sustained than previously known for this area at this time.

3.3 Ethnographic Context

Like their neighbors the Luiseño and Juaneño to west, and the Cupeño to the south, the Cahuilla speak a Cupan language, which is part of the Takic linguistic subfamily of the Uto-Aztecan language family. It is thought 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 2004:559).

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 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. Sweat houses and song houses (for non-religious music) were also often present. Each community also had a separate house for the lineage or clan leader. A ceremonial house, or *kiš' ?ámnawet*, associated with the clan leader was 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 also 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 the hunt, these included the bow and arrow, traps, nets, slings and blinds for hunting land mammals and birds, and nets for fishing. The throwing stick was used commonly to bring down rabbits and hares, but when communal hunts were organized for these animals, the Cahuilla often utilized clubs and very large nets.

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 it from vermin. Pottery vessels were made by the Cahuilla, and traded from 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 (1978:578) 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. Certainly, by the time of the first Romero Expedition in 1823-24, they were observed growing corn, pumpkins, and beans in small gardens localized around springs in the Thermal area of 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 this 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 *assistencias*, were established near Cahuilla territory at San Bernardino and San Jacinto. Cahuilla interaction with Europeans at this time was not as intense as it was for native groups living along the coast. This was 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 in 1862-63. By 1891, only 1,160 Cahuilla remained within 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 who resided on reservations.

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

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 briefly described below.

3.4.1 Spanish Period (1769–1822)

In 1542, Juan Rodriguez Cabrillo led the first European expedition to observe what is now southern California. For more than 200 years, Cabrillo and other Spanish, Portuguese, British, and Russian explorers sailed the Alta (upper) California coast and made limited inland expeditions, but they did not establish permanent settlements (Bean 1968; Rolle 2003). Gaspar de Portolá and Franciscan Friar Junípero Serra established the first Spanish settlement in Alta California at Mission San Diego de Alcalá in 1769. This was the first of 21 missions erected by the Spanish between 1769 and 1823.

During this period, Spain also deeded ranchos to prominent citizens and soldiers, though very few in comparison to the following Mexican Period. To manage and expand herds of cattle on these large

ranchos, colonists enlisted the labor of the surrounding Native American population (Engelhardt 1927a). The missions were responsible for administrating the local people as well as converting the population to Christianity (Engelhardt 1927b). Inevitably, this increased local population density and contact with diseases brought by Europeans greatly reduced the Native American population (McCawley 1996).

Friar Francisco Garcés and his group of explorers traveled through the area circa 1771, coming from the Colorado River (Hoover et al. 2002:321). Friar Garcés traveled as far as the Pacific coast along an ancient trade route, known as the Mojave Trail. The purpose of this expedition and the establishment of a Spanish trade route across the Colorado Desert were to further the Crown's missionization, trade, colonizing, and outpost development (Bannon 1974; Pourade 1971). This early expedition allowed for future undertakings by Captain Juan Batista de Anza in 1774. Garcés named the present-day Mojave River, the Arroyo de los Mártires (Stream of the Martyrs). The river was later renamed Rio de las Animas (River of Souls) by Friar Joaquín Pasqual Nuez, who accompanied the 1819 expedition of Lieutenant Gabriel Moraga.

3.4.2 Mexican Period (1822–1848)

The Mexican period commenced when news of the success of the Mexican Revolution (1810-1821) against the Spanish crown reached California in 1822. This period saw extensive interior land grant development as well as exploration west of the Sierra Nevada Mountains by American fur trappers. The California missions declined in power and ultimately were secularized in 1834. The hallmark of the Mexican period was large ranchos deeded to prominent Mexican citizens, frequently soldiers, by the governor. These ranchos became important economic and social centers. About 15 land grants (ranchos) were in Riverside County.

The Mexican Army passed through the region via the San Geronimo Pass and along the eastern edge of the Salton Sink in 1825, but found the route to be impractical (Hoyt 1987). The Yuma to San Diego route was favored and ran along the southern Salton Sink and Imperial Valley. This route would later be utilized by United States Lieutenant Colonel W.H. Emory in 1846, General Kearny's expedition in 1847, and the Mormon Battalion in 1848, establishing a wagon road (Pourade 1971).

3.4.3 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 the conquered territory, including California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming. The discovery of gold in northern California in 1848 led to the California Gold Rush, though the first significant California gold was discovered in Placerita Canyon near the San Fernando Mission in 1842 (Guinn 1977). In 1850, California was admitted to the Union as the 31st state.

Immigrants populated the region by way of wagon roads, the Southern Pacific railroad (Indio, CA to Yuma, AZ), the Bradshaw Trail, and stage routes. Southern California remained dominated by cattle ranches in the early American period, though droughts and increasing population resulted in farming and more urban professions increasingly supplanting ranching through the late nineteenth century. Toward the end of the nineteenth century and into the twentieth century, agricultural entrepreneurs became interested in the Imperial and Coachella Valleys, leading to large-scale irrigation projects such as the Boulder, Hoover, and Imperial dams, the All American Canal System and the Colorado River Aqueduct (Loftus 2016). By 1853, the population of California exceeded 300,000.

Local History

The paucity of water in many areas of the Colorado Desert discouraged farming, and agricultural development only flourished when water was imported in significant quantities. Because of the relatively high water table in the Coachella Valley, the agricultural industry began to develop prior to the importation of water by means of drilling artesian wells. Beginning in the first decade of the twentieth century, Coachella Valley farmers planted extensive acreage in date, fig, and grape crops. Towns that developed with the agricultural growth include Thermal, Mecca, Indio, and Coachella. Because of the extensive farming efforts, the water table in the Coachella Valley was seriously depleted, stimulating the formation of CVWD to promote conservation and replenish the groundwater basin.

Following passage of the Boulder Canyon Project Act of 1928, the waters of the Colorado River were harnessed for the development of agriculture in Imperial and Coachella valleys. CVWD cooperated with the Imperial Irrigation District to develop the All-American Canal and the Coachella Valley extension. Branching off from the All-American Canal, the Old Coachella Canal extends approximately 125 miles north to the northern Coachella Valley, bringing the first imported irrigation water to the valley in 1949 (Nordland 1978).

The community of Mecca was established originally as a railroad siding called Walters in 1875 by the Southern California Railroad. Two years later, the railroad constructed a small depot at the site. By the turn of the century, agriculture began in Mecca. Following the establishment of large-scale irrigation, farming became a lucrative business in the area. Real estate developer R. Holtby Myers of the Mecca Land Company changed the name of the community to Mecca in 1904 as part of his firm's campaign to sell property in the surrounding countryside to settler-farmers (Nordland 1978; Mecca Promotion Company 1904). Date farming became an important enterprise in the area (Nordland 1978). The population of the area grew slowly throughout the early part of the twentieth century in response to the need of farm laborers, most of whom were of Mexican or Native American heritage.

4 Background and Methods

4.1 Cultural Resources Record Search

4.1.1 California Historical Resources Information Center

On January 17, 2019, Rincon conducted a search of the California Historical Resources Information System at the Eastern Information Center (EIC) at the University of California, Riverside. The search was conducted to identify any previously recorded cultural resources and previously conducted cultural resources studies within the APE and a 0.5-mile radius surrounding it. Rincon also reviewed the NRHP, the CRHR, and the California State Historic Resources Inventory list. A summary of these results follows. California Department of Parks and Recreation records, a report list, and maps are included in Appendix B (Confidential).

The records search identified 39 previous cultural resource studies completed within 0.5-mile of the project APE between 1979 and 2014 (Table 2). Fifteen of these previous studies include portions of the APE. In addition, Dokken Engineering recently conducted a cultural resource assessment of portions of the APE north of Avenue 66 for the Phase 1B pipeline extension (Marks 2018). Although this report is not yet on file at the EIC, Woodard & Curran provided Rincon with a copy of the report so their results could be included in the current cultural resource assessment (Appendix C). In total, the previous cultural studies covered approximately 50 percent of the project APE.

Table 2 Previously Conducted Cultural Resources Studies within a 0.5-mile of the APE

Report Number	Author(s)	Year	Title	Relationship to APE
RI-00584	McCarthy, Daniel	1986	<i>Environmental Impact Evaluation: An Archaeological Assessment of Tentative Parcel 21234, South of Indio in Riverside County, California</i>	Outside
RI-00652	Lando, Richard	1979	<i>Cultural Resources Reconnaissance (Stage II) of Flood Control Alternatives for the Whitewater River Basin, Riverside County, California</i>	Within
RI-00661	Napton, L. Kyle, and Elizabeth Greathouse	1979	<i>Archaeological Reconnaissance on the Torres-Martinez Indian Reservation, Riverside County, California</i>	Within
RI-01373	American Pacific Environmental Consultants	1981	<i>A Cultural Resource Survey and Evaluation of the Torres Martinez Indian Reservation, Riverside County, California</i>	Outside
RI-01778	Napton, L. Kyle and Elizabeth Greathouse	1993	<i>Cultural Resources Investigations of the Proposed Indio to Salton Lightguide System Project, AT&T Fiber Optic Route, 46.2 Miles in Riverside and Imperial Counties, California</i>	Within
RI-01923	Rosen, Martin D.	1989	<i>Negative Archaeological Survey Report – Second Addendum</i>	Outside

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Report Number	Author(s)	Year	Title	Relationship to APE
RI-01936	Parr, Robert E.	1989	<i>An Archaeological Assessment of a Proposed Wastewater Treatment Plant Site and Pipeline Alignment, La Quinta Area of Riverside County, California</i>	Outside
RI-02846	White, Robert S.	1990	<i>An Archaeological Assessment of a 340+ Acre Parcel as Shown on TPM 24750 Located Near Mecca, Riverside County, California</i>	Outside
RI-03245	Van Horn, David M., Laurie S. White, and Robert S. White	1990	<i>Cultural Resources Sensitivity Overview for the Coachella Valley Enterprise Zone</i>	Outside
RI-03415	Rosen, Martin	1991	<i>Negative Archaeological Survey Report: Fourth Addendum, 11-RIV-86, PM R2.9-R22.0, 11208, 179800, Vicinity of Avenue 81 to Vicinity of Dillon Road</i>	Outside
RI-03713	Brock, James	1993	<i>A Cultural Resource Assessment of Lots 7 Through 12, Block 25 of the Amended Map of the Mecca Townsite, County of Riverside, California</i>	Outside
RI-04310	White, Robert S., and Laurie White	2000	<i>A Cultural Resource Assessment of the Proposed Arco Travel Center Project (CUP 3309), 37-Acres Located at the Northeast Corner of 66th Avenue and Highway 86 South, Near Mecca, Riverside County</i>	Outside
RI-05115	Brown, Joan C., and Stephen O'Neal	2005	<i>Cultural Resources Reconnaissance of a 440 Acre Parcel for the Kohl Ranch Phase 1 Project, Riverside County, California</i>	Outside
RI-05154	Hudlow, Scott	2004	<i>A Phase 1 Cultural Resource Survey for Global Premiere, Mecca, Riverside County, California</i>	Outside
RI-06229	Hogan, Michael, Bai "Tom" Tang, Miriam Dahdul, and Daniel Ballester	2004	<i>Historical/Archaeological Resources Survey Report: APNs 749-090-006 and -007, Near the Community of Mecca, Riverside County, California</i>	Outside
RI-06551	Tang, Bai, Michael Hogan, Thomas Shackford, and Daniel Ballester	2006	<i>Historical/Archaeological Resources Survey Report: The Vineyard at Oasis Specific Plan, Tentative Tract No. 33956, Near the Community of Mecca, Riverside County, California</i>	Outside
RI-06553	Tang, Bai, Michael Hogan, Clarence Bodmer, Thomas Melzer, and Laura Shaker	2206	<i>Historical/Archaeological Resources Survey Report, Berger 330 Specific Plan, Near the Community of Mecca, Riverside County, California</i>	Outside
RI-07115	Tang, Bai Tom	2007	<i>Letter Report: Addendum to Historical/Archaeological/Paleontological Resources Survey: Berger 330 Specific Plan, Mecca Area, Riverside County, California</i>	Outside

Report Number	Author(s)	Year	Title	Relationship to APE
RI-07319	Bonner, Wayne, and Marnie Aislin-Kay	2006	<i>Cultural Resource Record Search and Site Visit Results for T-Mobile Telecommunications Facility Candidate IE24088A (Mecca), 90-480 66th Avenue, Mecca, Riverside County, California</i>	Outside
RI-07586	Denniston, Elizabeth, Vanessa Mirro, and David Earle	2008	<i>Phase I Cultural Resources Assessment of Approximately 4 Miles for the Mecca Sewer Force Main Project Near the Community of Mecca, Unincorporated Riverside County, California</i>	Outside
RI-07853	Tang, Bai Tom	2008	<i>Letter Report: Addendum to Historical/Archaeological/Paleontological Resources Survey Report Thermal Street, Water, and Sewer Improvements in and near the Community of Thermal, Riverside County, California. CRM Tech Contract #1880/2447</i>	Within
RI-07930	CRM Tech	2008	<i>Phase I Historical/Archaeological Assessment: Mecca Master Plan (SP377), near the Community of Mecca, Riverside County, California</i>	Within
RI-07950	Brock, James	2008	<i>Phase I and Phase II Cultural Resource Assessment for the Off-Site Sewer Line, Mountain View Estates Mobile Home Project, Oasis Area of Unincorporated Riverside County, California</i>	Within
RI-08201	Encarnacion, Diedre, Daniel Ballester, and Laura Hensley Shaker	2009	<i>Identification and Evaluation of Historical Properties: Plaza La Esperanza Project</i>	Outside
RI-08245	Jacquemain, Terri, Daniel Ballester, and Laura Hensley Shaker	2009	<i>Phase I Archaeological Assessment: Thermal Service Station LP, Tentative Parcel map No. 36204, Assessor's Parcel No. 727-100-024/ Case No. CUP03623 Near the Community of Mecca, Riverside County, California</i>	Outside
RI-08325	George, Joan, Vanessa Mirro, and David Earle	2009	<i>Phase I Cultural Resources Assessment for the Mountain View Estates Mobile Home Park Domestic Water and Sewer Project, Unincorporated Riverside County and Torres Martinez Indian Reservation, California</i>	Within
RI-08360	Tang, "Bai" Tang, Deidre Encarnacion, Daniel Ballester, and Laura H. Shaker	2009	<i>Identification and Evaluation of Historic Properties: Agua Azul Project, Assessor's Parcel No. 749-320-002, Mecca Area, Riverside County, California</i>	Within
RI-08386	George, Joan, and Vanessa Mirro	2010	<i>Phase I Cultural Resources Assessment for the Lower Valley Irrigation System Expansion Project near Mecca, Riverside County, California</i>	Outside

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Report Number	Author(s)	Year	Title	Relationship to APE
RI-08434	Smallwood, Josh	2010	<i>Letter Report: Cultural Resources Monitoring at Site CA-RIV-3438H (Historical Waiters/Mecca Railroad Station) for Construction of the Mecca Sewer Force Main Project near Mecca, Riverside County, California</i>	Outside
RI-08494	Mirro, Michael	2010	<i>Letter Report: Cultural Resources Survey of Seven Shot Points for the Salton Seismic Imaging Project (SSIP) on Torres Martinez and BLM Land</i>	Outside
RI-08497	Mirro, Michael, Melinda Horne, Dennis McDougall, and Joan George	2010	<i>Archaeological Survey Report for the Salton Seismic Imaging Project, Imperial, Riverside, San Bernardino, and San Diego Counties, California</i>	Outside
RI-08819	Eddy, John, Michael Mirro, and David Earle	2010	<i>Geophysical Survey and Phase II Testing and Evaluation of Feature 1 (CA-RIV-9027; 33-017371) within the Martinez Historical District (NRD 1292): Mountain View Estates Mobile Home Park Domestic Water and Sewer Project</i>	Within
RI-09111	Tang, Bai "Tom", Deirdre Encarnacion, Harry M. Quinn, and Daniel Ballester	2014	<i>Identification and Evaluation of Historic Properties: San Antonio del Desierto Disadvantaged Communities Sewer Extension, near the Community of Mecca, Riverside County, California</i>	Within
RI-09137	Segovia, Frances	2014	<i>Addendum to Cultural Resources Survey Results for the Mobile Home Park Paving Project in the Coachella Valley in Unincorporated Areas of Riverside County: Project Location #1 (LSA Project No. RCT1306A)</i>	Within
RI-09139	Segovia, Frances	2014	<i>Cultural Resource Survey Results for the Mobile Home Parks Paving Project in the Coachella Valley in Unincorporated Areas of Riverside County, California (LSA Project No. RCT1306)</i>	Within
RI-09766	Dunay, Amy	2015	<i>Supplemental Historic Property Survey Report for the Avenue 66 Grade Separation Project</i>	Outside
RI-09992	Mirro, Vanessa, and Dennis McDougall	2014	<i>Cultural Resource Monitoring for the Mountain View Estates Mobile Home Park Domestic Water and Sewer Project, Unincorporated Riverside County and Torres Martinez Desert Cahuilla Indian Reservation, California</i>	Within
RI-10374	George, Joan, and Vanessa Mirro	2013	<i>Phase 1 Cultural Resources Assessment for the Coachella Valley Water District's Whitewater River – Coachella Valley Stormwater Channel Project, Riverside County, California</i>	Within
RI-10406	Mirro, Michael	2012	<i>Archaeological Sensitivity Model for the Whitewater River Storm Channel, Riverside County, California</i>	Within

Source: Eastern Information Center 2019

Eighteen cultural resources have been documented within a 0.5-mile radius of the project APE (Table 3). These include nine historic period structures (Union Pacific Railway, Coachella Valley Stormwater Channel, a utility line, and six road segments), one district (Martinez Historical District), four historic period archaeological sites (Mecca Railroad Station, the U.S. Experimental Date Station, Edna Cast Date Farm Complex, and a refuse scatter), one multi-component archaeological site (prehistoric and historic period artifact scatter), one prehistoric site (artifact scatter), and two prehistoric artifacts (isolated ceramic sherds). Two of these previously recorded resources, Avenue 66 (P-33-020844) and Lincoln Street (P-33-020839), intersect the project APE. A significance evaluation conducted in 2016 found Avenue 66 ineligible for listing on the NRHP and CRHR (George and Mirro 2016). Lincoln Street has not been evaluated for listing on either the NRHP or the CRHR.

The Martinez Historic District (P-33-001292) is situated approximately 0.4 mile south of the APE on the Torres Martinez Indian Reservation. The district contains several historic period Indian Agency buildings, a palm tree, and a multi-component archaeological site (P-33-009462), the latter of which consists of an artifact scatter composed of prehistoric (ceramics and flaked stone artifacts) and historic period (glass, metal, and ceramics) materials. The Martinez Historic District was listed on the NRHP in 1973.

Three additional prehistoric archaeological resources have been recorded south of the APE on the Torres Martinez Indian Reservation. P-33-017371 consists of a surface scatter of ceramic and flaked stone artifacts and a buried subsurface feature located 0.2 mile from the APE. A Phase II evaluation of P-33-017371 determined the resource was individually ineligible for listing on the NRHP or CRHR and was not a contributing component to the Martinez Historical District (Eddy and Mirro 2010). Two isolated artifact finds (P-33-017372 and P-33-017761), both of which consist of a small number of ceramic sherds, have also been recorded within 0.5 mile of the APE.

Two other prehistoric archaeological resources of note were documented just outside of the record search area on the Torres Martinez Indian Reservation (Mirro and McDougall 2014). These include a prehistoric cobble concentration (P-33-023959) and an early historic period Native American inhumation (P-33-023960) located 0.7 mile and 0.9 mile, respectively, south of the APE. The deeply buried archaeological features were uncovered six to eight feet below the ground surface during monitoring for the installation of water and sewer pipelines (Mirro and McDougall 2014).

Table 3 Previously Identified Cultural Resources within a 0.5-mile of the APE

Resource Number	Resource Type	Description	Recorder(s) and Year(s)	NRHP/CRHR Status	Relationship to APE ¹
P-33-001292; CA-RIV-1292/H	District	Martinez Historical District	Pigniolo 1999	Listed on the NRHP and CRHR	Adjacent
P-33-003438; CA-RIV-3438H	Historic Site	Mecca Railway Station	Bouscaren 2008	Not evaluated for NRHP or CRHR	Outside
P-33-005699	Historic Site	U.S. Experimental Date Station	George 2009	Not evaluated for NRHP or CRHR; California Point of Historical Interest #43	Outside

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Resource Number	Resource Type	Description	Recorder(s) and Year(s)	NRHP/CRHR Status	Relationship to APE ¹
P-33-009462; CA-RIV-6377/H	Multi-component site	Artifact scatter containing prehistoric and historic period artifacts	Pigniolo 1999	Not individually evaluated for NRHP or CRHR (contributor to the Martinez Historical District)	Outside
P-33-009498; CA-RIV-6381H	Historic Structure	Union Pacific Railroad	Baurley and Sanka 2015	Recommended ineligible for listing on the NRHP and CRHR	Adjacent
P-33-014739	Historic Site	Refuse Deposit	O'Neil and Miller 2005	Not evaluated for NRHP or CRHR	Outside
P-33-017259; CA-RIV-10847	Historic Structure	Coachella Valley Stormwater Channel	Moslek 2017	Ineligible for NRHP and CRHR	Adjacent ²
P-33-017371; CA-RIV-9027	Prehistoric Site	Small sparse ceramic and lithic scatter	Harmon 1983	Determined ineligible for listing on the NRHP and CRHR	Outside
P-33-017372	Prehistoric isolated Artifact	Two ceramic sherds	J. Brock 2008	Not evaluated for NRHP or CRHR	Outside
P-33-017761	Prehistoric isolated Artifact	Four ceramic sherds from one vessel	McDougall and Gothar 2009	Not evaluated for NRHP or CRHR	Adjacent
P-33-020028; CA-RIV-10172	Historic Structure	Martinez Road	Eddy 2012	Recommended ineligible for the NRHP or CRHR	Outside
P-33-020837; CA-RIV-10761	Historic Structure	Buchanan Street	Stanton 2012	Not evaluated for NRHP or CRHR	Outside
P-33-020839; CA-RIV-10763	Historic Structure	Lincoln Avenue	Stanton 2012	Not evaluated for NRHP or CRHR	Within
P-33-020844; CA-RIV-10768	Historic Structure	Avenue 66	Stanton 2012	Ineligible for listing on the NRHP and CRHR	Within
P-33-020845; CA-RIV-10769	Historic Structure	Pierce Road	Stanton 2012	Not evaluated for NRHP or CRHR	Adjacent
P-33-020919; CA-RIV-10844	Historic Structure	Utility Line and Two Utility Poles	Stanton 2012	Not evaluated for NRHP or CRHR	Adjacent
P-33-020920; CA-RIV-10845	Historic Structure	4 th Street	Stanton 2012	Not evaluated for NRHP or CRHR	Outside

Resource Number	Resource Type	Description	Recorder(s) and Year(s)	NRHP/CRHR Status	Relationship to APE ¹
P-33-026685; CA-RIV-12576	Historic Site	Edna Cast Date Farm Complex	Smallwood 2014	Ineligible for listing on the NRHP and CRHR	Adjacent

¹Adjacent resources are located within 500 feet of the Project APE. Source: Eastern Information Center January 2019

² The pipeline will be constructed under the Coachella Valley Stormwater Channel using jack and boring or HDD technology. As such, the Coachella Valley Stormwater Channel is considered adjacent to, but outside, of the project APE.

4.2 Native American Outreach

Rincon contacted the Native American Heritage Commission (NAHC) on January 15, 2019 to request a Sacred Lands File search of the APE and a 0.5-mile radius surrounding it. As part of this request, Rincon asked the NAHC to provide a list of Native American groups and/or individuals culturally affiliated with the area who may have knowledge of cultural resources within the APE. The NAHC responded on January 17, 2019, stating the results of the Sacred Lands File search were positive and recommended the Torres Martinez Desert Cahuilla Indians be contacted (see Appendix D). The NAHC also provided a list of 19 Native American contacts who may have knowledge of cultural resources of Native American origin at the project site. Rincon prepared and mailed letters to each of these groups on January 22, 2019. An example of the letter sent to the Native American contacts is in Appendix D.

Rincon followed up with the Native American contacts who had not yet replied on February 20 and 22, 2019. This outreach effort resulted in twelve responses. A summary of each response follows. A copy of all non-confidential Native American correspondence, including a summary table, is provided in Appendix D.

On January 25, 2019, Rincon received a letter from Lacy Padilla, Archaeological Technician for the Agua Caliente Band of Cahuilla Indians Tribal Historic Preservation Office (THPO). The letter stated the project is not located in the boundaries of the ACBCI Reservation but is in the Tribe's Traditional Use Area. The Tribe's THPO deferred to Torres Martinez Desert Cahuilla Indians and stated they were concluding their consultation efforts for the project.

On February 4, 2019, Rincon received a letter from Travis Armstrong, THPO for the Morongo Band of Mission Indians, who stated the Tribe has no additional information to provide at this time. He stated the Morongo Band of Mission Indians would defer to other tribes in the area once formal consultation is initiated by the lead agency for the project.

On February 20, 2019, Rincon spoke on the phone with Anthony Madrigal, THPO, and Sarah Bliss, Cultural Resources Manager, of the Twenty-Nine Palms Band of Mission Indians THPO. Following these phone conversations, Rincon received an email stating that the tribe was not aware of any additional cultural resource or cultural properties within the project area. The THPO did not have any additional concerns and deferred to the comments of Torres Martinez Desert Cahuilla Indians.

On February 20, 2019, Rincon spoke on the phone to Amanda Vance, Chairperson of the Augustine Band of Cahuilla Indians, who stated the Tribe did not have any specific information on cultural resources in the project area. She encouraged Rincon to contact other tribes in the area for information and to contract a monitor qualified in Native American cultural resources identification to be present on the site during ground-disturbing activities.

On February 20, 2019, Rincon spoke on the phone to Bobby Ray, the Cultural Director for the Cahuilla Band of Indians. He stated he had no specific knowledge of cultural resources in the area. He deferred to Torres Martinez Desert Cahuilla Indians.

On February 20, 2019, Rincon had a phone call with Joseph Ontiveros, the Cultural Director for the Soboba Band of Luiseño Indians. Mr. Ontiveros stated that the Tribe would defer to Torres Martinez Desert Cahuilla Indians.

On February 22, 2019, Rincon spoke on the phone with Steven Estrada, Chairperson for the Santa Rosa Band of Mission Indians. Mr. Estrada stated the Tribe would defer further consultation and any monitoring efforts to Torres Martinez Band of Cahuilla Indians.

On February 22, 2019, Rincon spoke on the phone to Charles Wood, Chairperson for the Chemehuevi Indian Reservation. Mr. Wood stated the Tribe did not have any specific information or concerns and would like to defer to Tribes closer to the project area.

On February 22, 2019, Rincon corresponded via phone and email with Michael Mirelez, Cultural Resource Coordinator for the Torres Martinez Desert Cahuilla Indians. Mr. Mirelez stated the project is both on and outside of the Tribe's Reservation and within the Tribe's Traditional Use Area. The Tribe has concerns regarding inadvertent discoveries during construction. Mr. Mirelez requested copies of all cultural reports, formal government-to-government consultation, and Tribal monitoring during all initial ground-disturbing activities, including survey and testing.

On February 26, 2019, Rincon received an email from Dorothy Willis of the Los Coyotes Band of Mission Indians. Ms. Willis stated that she had discussed the project with Jacob Norte, the Tribe's Environmental Programs Director, and he had no comments on the project.

In a letter dated February 26, 2019, Judy Stapp, Director of Cultural Affairs for the Cabazon Band of Mission Indians, stated the project site is outside of the Tribe's current reservation boundaries. The Tribe had no specific information on the project area to indicate it may be a sacred/religious site or other site of Native American traditional cultural value.

In a letter dated March 5, 2019, the Colorado River Indian Tribe's (CRIT) THPO requested that all prehistoric cultural resources, including both known and yet-to-be-discovered sites, be avoided. If avoidance of the site is infeasible, then the THPO requested the resources be left *in situ* or reburied in a nearby area after consultation. In addition, they requested that the CRIT THPO be notified within 48 hours of discovering any human remains or objects subject to provision of the Native American Graves Protection and Repatriation Act, or cultural resources such as sites, trials, and artifacts.

4.3 Local Historic Group Consultation

Rincon contacted the Riverside County Historical Commission, the Palm Springs Historical Society, the Coachella Valley Archaeological Society, the Coachella Valley Historical Society, and the Historic Society of Palm Desert, to request information regarding historical resources in the proposed project APE. Rincon prepared and mailed letters to each of these groups on January 22, 2019; follow-up phone calls were conducted on February 15 and 22, 2019 (Appendix E).

Two responses were received from the historical society consultation. In a phone call on February 15, 2019, Harry Quinn of the Historical Society of Palm Desert stated that the project site is located within an area that has the potential for both prehistoric and historic period archaeological remains. Mr. Quinn provided a historical overview of the area stating that Mecca was originally known as

“Walters” which was frequented by miners and wagon parties traveling through the area. In addition, the area was used during the late ninetieth and early twentieth century for ranching and may contain historic period archaeological deposits. On February 15, 2019, Renee Brown of the Palm Springs Historical Society called and stated that their organization is specific to the Palm Springs area and, therefore, did not have specific information regarding the project APE. A summary of the historical society consultation efforts is provided in Appendix E.

4.4 Historical Imagery Review

A review of historical maps and aerial photographs of the APE indicates the current Avenue 66 alignment was constructed by at least 1909 (Bureau of Land Management 2019). The 1944 USGS *Coachella, CA* 15-minute topographic quadrangle depicts several roadways in the area, including Avenue 66 and Lincoln Street. Other features on the map are the Torres Martinez Indian Reservation, the Coachella Valley Stormwater Channel, and the Union Pacific Railroad. A 1953 aerial photograph shows the area surrounding the project APE is characterized primarily by undeveloped desert scrubland with scattered agricultural fields (NETRonline 2019). The Manuela Garcia and Saint Anthony MHPs were constructed sometime between 1972 and 1996; the Seferino Huerta MHP was built between 2002 and 2005.

5 Field Survey

5.1 Methods

On February 12 and 13, 2019, and April 18, 2019, Rincon Staff Archaeologist Lindsay Porras performed a cultural resources field survey of the APE. Developed portions of the pipeline alignment along Avenue 66 and Lincoln Street were surveyed via a windshield survey. A pedestrian survey was conducted for those portions of the APE not located within the paved roadway. During the pedestrian survey, the archaeologist walked a series of transects spaced at no more than 10 meters (33 feet) apart. Due to access issues, the portion of the APE within the Manuela Garcia MHP was surveyed from the public ROW. A review of Google Earth imagery indicates that much of APE within this MHP runs along a paved access road. Exceptions to this include a landscaped area in the northwest portion of the MHP. As this area lies less than 70 feet (21 meters) from the edge of property boundary, the archaeologist was able to thoroughly examine the ground surface in this portion of the APE from the public ROW. Rincon also did not survey the portion of the APE that encompasses the Phase 1B pipeline extension north of Avenue 66 because Dokken Engineering had previously surveyed this area in March 2018 (see Appendix C).

All exposed areas of ground surface were carefully inspected for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), ecofacts (marine shell and bone), soil discolorations that might indicate the presence of cultural midden, soil depressions, and features indicative of the former presence of structures of buildings (e.g., standing exterior walls, postholes, foundations) or historic debris (e.g., metal, glass, ceramics). Ground disturbances such as burrows and road cuts were also visually inspected. As part of the field effort, the current condition of the two previously recorded historic period cultural resources (Avenue 66 and Lincoln Street) were assessed and documented. All field notes were recorded using Rincon field forms and a digital camera. Copies of the field notes and photographs are maintained at Rincon's Redlands office.

5.2 Results

Results of the field survey indicate large portions of the APE are developed with pavement covering much of the proposed pipeline alignment. Although some of the shoulder areas along Avenue 66 and Lincoln Street have had gravel applied, areas of exposed ground surface were noted within the APE (Figure 3). Ground visibility in these areas was excellent (close to 100 percent). Within the MHPs, exposed ground was visible along portions of the alignment located in open areas and along unpaved residential access roads. Visibility in these latter areas was obscured by ornamental planting, landscaping, and residential structures (visibility reduced to 10 to 60 percent) (Figure 4). An examination of areas of exposed ground surface indicates native sediments throughout the APE consist of loosely consolidated sand. Surficial sediments appear extensively disturbed by road construction and maintenance activities, as well as by the development of the MHPs.

Only two cultural resources, the previously documented segments of Avenue 66 (P-33-020844) and Lincoln Street (P-33-020839), were located within the APE. No other cultural resources were identified during the current survey or the previous field effort conducted by Dokken Engineering in March 2018. Descriptions of the two historic period roadways, along with significant evaluations, are provided below. Department of Parks and Recreation (DPR) 523 forms are included in Appendix F.

Figure 3 Portion of Avenue 66 located within APE, Facing East



Figure 4 Overview of Saferino Huerta MHP, Facing West



5.2.1 Avenue 66 (P-33-020844)

Avenue 66 (P-33-020844) consists of a 26-foot-wide, two-lane, asphalt-paved roadway flanked by gravel and dirt shoulders that measure as much as 15 feet in width (Figure 3). The appearance of the road remains largely unchanged since its original recordation (Stanton 2012a). Given no significant alterations have occurred to P-33-020844 since its original documentation, the previous evaluation of Avenue 66 appears to remain valid; the resource is ineligible for listing on the NRHP and CRHR.

5.2.2 Lincoln Street (P-33-020839)

A 100-foot-long segment of Lincoln Street (P-33-020839) south of Avenue 66 was originally recorded by Stanton (2012b). The current study expanded the boundary of P-33-020839 to encompass an almost one-mile-long section of the road between Avenue 66 and Avenue 68. The recorded road consists of a 27-foot-wide paved asphalt surface flanked by 12.5-foot-wide earthen shoulders, giving the ROW a total width of approximately 52 feet (Figure 5). The paved surface is essentially flush with the unimproved shoulders. Although the portion of the roadway approaching the intersection with Avenue 66 is delineated as a two-lane road, the remainder is unmarked.

Although an exact date of construction could not be ascertained, the road was likely built in the context of the Mecca area's development as an agricultural settlement. Lincoln Street first appears on a 1932 aerial photograph as part of a limited network of roads that conform to the survey grid; it is unclear whether the road was paved at this time (NETRonline 2019). By 1941, Lincoln Street is depicted as an improved paved roadway. Historical aerial photographs suggest that no significant improvements to the road have occurred since the early 1940s; these images indicate that the area surrounding Lincoln Street has remained largely agricultural (NETRonline 2019).

An assessment of significance indicates Lincoln Street is not eligible for listing on the NRHP or the CRHR. The segment of the road presently under evaluation is likely associated with agricultural development on the outskirts of the community of Mecca, but, due to its comparatively recent construction date, is not linked to the early establishment of Mecca. The road also does not appear to have achieved significance in later years. Research for this study did not suggest it played a role in any other historical events or with any individuals known to have made important historical contributions (Criteria A/1 and B/2). Additionally, the subject road segment is of a ubiquitous type and does not represent a distinctive engineering design or method of construction (Criteria C/3). Finally, it has not yielded and is unlikely to yield important prehistoric or historical information (Criteria D/4). Therefore, Lincoln Street does not meet any of the criteria for listing on the NRHP or the CRHR.

Figure 5 Portion of Lincoln Street in APE, Facing South



6 Findings and Recommendations

The results of the cultural resource records search, Native American and historical society outreach, historical imagery review, and field survey identified two known cultural resources, Avenue 66 (P-33-020844) and Lincoln Street (P-33-020839), in the project APE. Neither resource meets the criteria to be considered a historic property under NHPA nor a historical resource under CEQA. The study did not identify any other cultural resources in the project APE.

The lack of surface evidence of archaeological remains does not preclude their subsurface existence. The multiple prehistoric archaeological resources documented on the adjacent Torres Martinez Indian Reservation, some of which contain buried cultural deposits, suggest that the western portion of the project APE has a moderate to high sensitivity for prehistoric archaeological remains. The results of the field survey revealed surficial deposits throughout much of the APE have been disturbed by the construction and maintenance of roadways and the MHPs. These previous ground-disturbing activities are expected to be limited to the upper few feet of sediment. Given the depth of ground disturbance in this portion of the APE will extend up to eight feet below the current ground surface, it is anticipated the water pipeline installation will extend into undisturbed native sediments. These excavations have the potential to impact buried prehistoric or early historic period archaeological resources potentially present along Avenue 66 and the portion of the APE extending onto the Torres Martinez Indian Reservation.

Based on the results of the current study, Rincon recommends a finding of ***less than significant impact to cultural resources with mitigation incorporated*** under CEQA and ***no effect to historic properties*** under Section 106 of NHPA with adherence to the following measures. The project is also required to adhere to regulations regarding the unanticipated discovery of human remains, detailed below.

Initial Monitoring of Archaeological Resources

Initial project-related ground-disturbing activities conducted along Avenue 66 and the Manuela Garcia MHP adjacent to and within the Torres Martinez Indian Reservation shall be observed by an archaeological and Native American monitor. The archaeological monitor shall be under the direction of a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for prehistoric archaeology (National Park Service 1983). If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall halt and the find shall be evaluated for CRHR and/or NRHP eligibility. Archaeological monitoring may be reduced or halted at the discretion of the qualified archaeologist as warranted by conditions such as encountering bedrock, sediments being excavated are fill materials, or negative findings during initial ground-disturbing activities. If monitoring is reduced, spot-checking shall occur when ground-disturbance moves to a new location or when ground disturbance will extend to depths not previously reached (unless those depths are within bedrock).

Unanticipated Discovery of Cultural Resources

If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) should be contacted immediately to evaluate the find. If the discovery proves to be significant under NHPA and/or CEQA, additional work such as data recovery excavation and Native American consultation may be warranted to mitigate any significant impacts.

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.

7 References

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Appendix A

Resumes

EDUCATION

Ph.D., Anthropology, Arizona State University, Tempe 2003

M.A., Anthropology (emphasis Bioarchaeology), Arizona State University, Tempe 1997

B.A., Biology, Occidental College, 1992

CERTIFICATIONS/ REGISTRATIONS

Register of Professional Archaeologists (ID#989197)

California BLM Permit, Principal Investigator, Statewide

EXPERIENCE

Rincon Consultants, Inc. (April 2018 – present)

Applied EarthWorks, Inc. (2013-April 2018)

Sapphos Environmental (2011-2013)

Cotsen Institute of Archaeology, University of California, Los Angeles (2008-2009)

Desert Archaeology, Inc. (2000-2007)

Tiffany C. Clark, PhD, RPA

SENIOR ARCHAEOLOGIST/PRINCIPAL INVESTIGATOR

Tiffany Clark is a Senior Archaeologist/Project Manager with Rincon Consultants. She has over 20 years of experience in cultural resource management in California, Arizona, and New Mexico. Her professional experience includes all phases of survey, excavation, laboratory analysis, research design, report preparation, construction monitoring, Native American consultation, and project management. She has prepared numerous technical reports and environmental documents for compliance with the National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and Section 106 and 110 of the National Historic Preservation Act (NHPA). Dr. Clark is a member of the Register of Professional Archaeologists and exceeds the Secretary of Interior's Professional Qualifications Standards in Archaeology.

PROJECT EXPERIENCE

TRANSPORTATION PROJECTS

- San Bernardino County Transportation Authority (SBCTA) – Interstate 10 Eastbound Truck Climbing Lane Improvement Project, San Bernardino and Riverside Counties, California (2017-2018)
- City of Coachella and California Department of Transportation, District 8 – State Route 86/Avenue 50 New Interchange Project, City of Coachella, Riverside County, California (2015–2018)
- San Bernardino County Transportation Authority (SBCTA) – Interstate 215 / University Parkway Interchange Project, City of San Bernardino, San Bernardino County, California (2017-2018)
- City of Riverside – Sidewalk Improvement Projects, City of Riverside, Riverside County, California (2016-2017)
- California Department of Transportation, District 8 – On-Call Cultural Resources Services, San Bernardino and Riverside Counties, California (2013-2018)
- California Department of Transportation, Interstate-10 Corridor Project, Los Angeles and San Bernardino Counties, California (2014-2016)
- County of Inyo and City of Bishop – ATV Adventure Trails of the Eastern Sierra Program, Inyo County, California (2013-2014)

INFRASTRUCTURE PROJECTS

- City of Pasadena Water and Power – Azusa Hydroelectric Project, City of Azusa, Los Angeles County, California (2016-2018)
- Metropolitan Water District – Orange County Distribution System Infrastructure Protection Program, Orange, Riverside, and San Bernardino Counties, California (2016-2017)
- California Energy Commission – Amended Carlsbad Energy Center Project, City of Carlsbad, San Diego County, California (2015)
- Los Angeles World Airport – Los Angeles International Airport Runway 6L-24R Safety Area and Associated Improvements Project, Los Angeles County, California (2012-2013)



PROJECT EXPERIENCE, CONT'D

- Salt River Project – Palo Verde to Pinal West 500kV Transmission Line, Maricopa and Pinal Counties, Arizona (2006-2007)
- Salt River Project – Browning to Dinosaur 500/230kV Transmission Line, Pinal County, Arizona (2006-2007)
- Salt River Project – Pinal West-Browning 230/500kV Transmission Line, Maricopa and Pinal Counties, Arizona (2006-2007)
- Salt River Project – Damage Assessment of AZ T:9:5 (ASM), Maricopa County, Arizona (2007)
- Salt River Project – Dinosaur to Hunt 12/69KV Transmission Line, Maricopa County, Arizona (2006-2007)
- City of Phoenix – Phoenix Sky Harbor International Airport Runway Expansion Project, City of Phoenix, Maricopa County, Arizona (2000-2004)

DEVELOPMENT PROJECTS

- City of Los Angeles Department of Public Works and Bureau of Engineering – Sixth Street Park, Arts, River & Connectivity Improvements Project, City of Los Angeles, Los Angeles County, California (2017-2018)
- California Army National Guard – Los Alamitos Joint Forces Training Base Buried Site Testing Program, Orange County, California (2017-2018)
- Hillwood Investment Properties – Sycamore Canyon Business Park Buildings 1 and 2, City of Riverside, Riverside County, California (2016-2018)
- Terra Verde Group – Tapestry Specific Plan Project, City of Hesperia, San Bernardino County, California (2013-2018)
- California Department of Conservation – Analysis of Oil and Gas Well Stimulation Treatments in California Environmental Impact Report, California (Statewide) (2014-2015)
- Avalon Wind, LLC – Avalon Wind Energy Project, Kern County, California (2011-2013)
- enXco – Catalina Renewable Energy Project, Kern County, California (2011-2013)



EDUCATION

M.A., Applied Archaeology,
California State University San
Bernardino (2017)

B.A. Anthropology, University
of Nevada Reno (2004)

Archaeological Field School,
University of Nevada Reno
(2003)

CERTIFICATIONS/ REGISTRATIONS

Registered Professional
Archaeologist (ID 17082)

Society for California
Archaeology

EXPERIENCE

Rincon Consultants, Inc. (2017
–present)

Cogstone Resource
Management, Inc. (2009–2017)

Pechanga Band of Luiseño
Indians Cultural Resources
Intern (2016)

Statistical Research, Inc. (2008;
2010)

Garcia and Associates (2008)
Tetra Tech EC, Inc. (2008)

University of Nevada, Reno
(2003–2004)

Lindsay Porras, MA, RPA

ASSOCIATE ARCHAEOLOGIST

Lindsay Porras is an Associate Archaeologist with Rincon Consultants. Ms. Porras is a qualified archaeologist and cross-trained paleontologist with over nine years of professional and academic experience in research, field, and laboratory procedures throughout Southern California. Her experience includes research, technical report preparation within the framework of the NHPA and CEQA, survey, site evaluation, and mitigation through data recovery and monitoring. Ms. Porras has considerable experience working independently as well as part of productive teams and has acted as field lead on multiple CRM projects in Southern California. Ms. Porras completed her M. A. in Applied Archaeology from California State University, San Bernardino, which included the completion of a master's thesis involving comparative analysis of late prehistoric resource use in the Salton Basin of the Colorado Desert. Ms. Porras has presented the results of her master's thesis to academic audiences including the annual 2017 conference of the Society for California Archaeology. Ms. Porras is a Registered Professional Archaeologist 17082 and a member of the Society for California Archaeology

PROJECT EXPERIENCE

Associate Archaeologist and Field Director: Riverside University Health Services (RUHS), Riverside County, CA 2018. Conducted archaeological monitoring spot checks of ground disturbing construction activities associated with RUHS expansion and upgrades.

Associate Archaeologist and Field Director: Downtown Perris Training Center, Riverside County, CA 2018. Performed a cultural resources records search and pedestrian survey of two parcels in downtown Perris, CA. *Client: City of Perris (3 days)*

Associate Archaeologist and Field Director: Archaeological Monitoring for Street Widening at 32151 Del Obispo Street, Orange County, CA 2017-2018. Conducted archaeological monitoring and co-authored a letter report summarizing the results and recommendations of the cultural resources monitoring effort during ground disturbing activities associated with potholing for utilities and trenching for pipeline relocation for the road widening of Del Obispo Street in San Juan Capistrano, CA. *Client: SoCalGas (1 week.)*

Associate Archaeologist: El Horno Street Project, Orange County, CA 2018. Co-authored a letter report summarizing the results and recommendations of the cultural resources monitoring efforts associated with pipeline repairs in the City of San Juan Capistrano, CA. *Client: SoCalGas (1 week)*

Associate Archaeologist: Archaeological Monitoring for Line 3000, San Bernardino County, CA 2017-2018. Associate Archaeologist. Co-authored a letter report summarizing the results and recommendations of the cultural resources monitoring effort for multiple pipeline repairs within the right-of-way of Line 3000 on Bureau of Land Management managed land near Needles, CA. Completed DPR forms associated with the recordation of a historic site. *Client: SoCalGas, Bureau of Land Management. (1 month)*



PROJECT EXPERIENCE

Associate Archaeologist: 1530 West Cameron, Los Angeles County, CA 2018. Performed a cultural resources records search, Native American scoping, and summarized the results in the cultural resources section of the Initial Study Mitigated Negative Declaration. *Client: City of West Covina, CA. (1 month)*

Associate Archaeologist: 780-808 Francesca Drive Residential Project, Los Angeles County, CA 2018. Conducted a cultural resources records search and initiated a Sacred Lands File (SLF) search through the Native American Heritage Commission. Prepared draft consultation letters and instructions and provided them to the City for use in consultation in accordance with SB 18 and AB 52. *Client: City of Walnut, CA. (2 weeks)*

Associate Archaeologist: SL 42 46-Inch relocate and Replacement Project, Orange County, CA 2018. Co-authored a letter report summarizing the results of archaeological and Native American monitoring efforts associated with the relocation of pipeline prior to the larger San Diego Freeway (Interstate 405 [I-405] Improvement Project. *Client: The Southern California Gas Company, City of Seal Beach, CA. (2 weeks)*

Associate Archaeologist: Tentative Tract 5961 Voelker Subdivision, Ventura County, CA 2018. Performed a cultural resources records search, prepared draft consultation letters and instruction for meaningful consultation in accordance with SB 18 and AB 52 and provided them to the City of use in government to government consultation.

Associate Archaeologist: Moorpark Rail Depot, Ventura County, CA 2018. Performed a cultural resources records search of the project site and vicinity and initiated a Sacred Lands File (SLF) search through the Native American Heritage Commission. Prepared draft consultation letters and instructions and provided them to the City for use in consultation in accordance with AB 52. *Client: City of Moorpark, CA (1 month)*

Associate Archaeologist and Field Director: Perris Valley Pipeline Extension, Riverside County, CA 2018. Performed a cultural resources records search and pedestrian survey. *Client: Metropolitan Water District of Southern California, City of Perris, CA. (1 week)*

Associate Archaeologist and Field Director: Nuevo Road Bridge Crossing, Riverside County, CA 2018. Performed a cultural resources records search, Native American scoping, a pedestrian survey, recordation of historic resources, and co-authored a technical report summarizing the results and recommendations. *Client: City of Perris, CA. (3 months)*

Associate Archaeologist and Field Director: Alabassi Commercial Center, Riverside County, CA 2018. Performed archaeological and paleontological monitoring during ground disturbing activities associated with construction of a commercial center. *Client: Alabassi Construction, City of Perris, CA. (3 days)*

Associate Archaeologist and Field Director: Trumble Road Open Pit Restoration Project, Riverside County, CA 2018. Performed a cultural resources records search of the project site and conducted an archaeological walk through of the 9-acre project site. *Client: North Pacific Developments, Inc., City of Menifee, CA. (1 week)*

Associate Archaeologist and Field Director: Proposed Perris Mobile Home Park, Riverside County, CA 2018. Performed a cultural resources records search, initial Native American scoping, a pedestrian survey, and co-authored a technical report summarizing the results and recommendations. *Client: Maria Jimenez; City of Perris, CA. (1 month)*

Associate Archaeologist: Cabazon Solar Energy Center Project, unincorporated Riverside County, CA 2018. Performed a cultural resources records search and initiated a Sacred Lands File (SLF) search through the Native American Heritage Commission and summarized the results in a cultural resources constraints analysis. *Client: Cabazon Solar Energy Center, LLC, Cabazon, CA. (1 week)*

Associate Archaeologist and Field Director: Rice Construction Coachella Brands, Riverside County, CA 2018. Provided a proposal for scope of work associated with a cultural resources site assessment, conducted a pedestrian survey, and summarized the results and recommendations in a letter report. *Client: Rice Construction, Inc., City of Coachella, CA. (1 week)*

Associate Archaeologist and Field Director: New Non-Potable Water Connections, Riverside County, CA 2017-2018. Conducted a cultural resources records search, Native American consultation, a pedestrian survey, and co-authored a



technical report summarizing the results and recommendations. *Client: Coachella Valley Water District, City of Palm Desert, CA. (6 months)*

Associate Archaeologist: Palos Verdes Reservoir Upgrades Project, Los Angeles County, 2017. Co-authored a letter report summarizing the results and recommendations of the cultural resources monitoring effort in a Negative Findings Memorandum for the Palos Verdes Reservoir Upgrades in the City of Rolling Hills Estates in Los Angeles County. *Client: Metropolitan Water District of Southern California. (1 week)*

Associate Archaeologist and Field Director: Coachella Brands Project, Riverside County, CA 2017. Performed a cultural resources records search, initial Native American scoping, a pedestrian survey, and co-authored a technical report summarizing the results and recommendations. *Client: Coachella Brands Inc., City of Coachella, CA. (1 month)*

Associate Archaeologist and Field Director: Wyndham Hill Project, Riverside County, CA 2017. Performed a cultural resources records search, initial Native American scoping, a pedestrian survey, and co-authored a technical report summarizing the results and recommendations. *Client: Jim and Debbie Guthrie; City of Riverside, CA. (6 weeks)*

Associate Archaeologist and Field Director: Goddard School Project, San Bernardino County, CA 2017. Performed a cultural resources records search, initial Native American scoping, a pedestrian survey, and co-authored a technical report summarizing the results and recommendations. *Client: City of Chino Hills, CA. (1 month)*

Associate Archaeologist and Field Director: Sierra Altas Project KKG, Euclid and 8th San Bernardino County, CA 2017. Performed archaeological and paleontological monitoring and regular spot checks of ground disturbing activities associated with construction activities. *Client: City of Upland, CA. (3 months)*

Volunteer Archaeological Crew Member: The Agua Santa Project: Socio-Political Development on the California Channel Islands, Santa Cruz Island, Ventura County, CA, 2016. Participated in site survey and mapping using a Trimble Global Positioning System (GPS), performed archaeological excavations for the collection of contextual and chronological data suitable for AMS dating, processed column samples using flotation methods for the collection of small and fragile material, and maintained detailed field notes. Work conducted as part of the academic research directed by Dr. Amy Gusick, Director of the Applied Archaeology Graduate Program at California State University San Bernardino (CSUSB). Funded by the Department of Anthropology at CSUSB. *(1 week)*

Cultural Resources Intern: Pechanga Band of Luiseño Indians, Riverside County, CA, 2016: Reviewed reports for proposed projects; assisted ongoing research through academic literature review; sorted and identified artifacts for curation using *Past Perfect* electronic cataloging procedures (9 months).

Lead Archaeological Field Technician: Chuckwalla Guest Ranch Project, Riverside County, CA, 2016. Performed archaeological survey, assessment and recording of historical archaeological features associated with the area's use as the Desert Training Center during World War II. *Client: Chuckwalla Raceway. (1 week)*

Lead Archaeological and Paleontological Monitor: Perris Valley Line, Metrolink, Riverside County Transportation Commission, Riverside County, CA, 2013-2016. Conducted paleontological and archaeological monitoring for construction of four new stations, upgrading associated track and utility relocations for the 24-mile extension of the Metrolink 91 Line to extend the Metrolink connection from Riverside through Moreno Valley to Perris. *Client: Subcontractor to HDR Engineering. (12+ months)*

Lead Archaeological/ Paleontological Monitor: Sentinel Power Plant, Southern California Edison, Riverside County, CA, 2013. Performed archaeological and paleontological monitoring services during ground disturbing activities north of the City of Palm Springs. *Client: Southern California Edison. (2 weeks)*

Lead Archaeological Monitor: Devers-Mirage 115-KV System Split Project, Southern California Edison, Riverside County, CA, 2011. Performed cultural resources mitigation monitoring during ground disturbing activities for electrical systems upgrade in Cathedral City, Indian Wells, Palm Desert, Palm Springs, Rancho Mirage, Thousand Palms and unincorporated Riverside County. *Client: Southern California Edison. (1 week)*

Lead Archaeological and Paleontological Monitor: Fogarty Substation, Southern California Edison, Riverside County, CA, 2010-2011. Performed cultural paleontological resources mitigation monitoring during ground disturbing activities



in Lake Elsinore. Independently recovered fossils in the field and attended daily construction meetings. *Client Southern California Edison. (7 months)*

Lead Archaeological/Paleontological Monitor: Equinox DSP Rush Project, Southern California Edison, Riverside County, CA, 2011. Performed cultural resources mitigation monitoring during ground disturbing activities during ground disturbing activities associated with construction of a power pole line near Menifee. *Client: Southern California Edison. (3 weeks)*

Lead Archaeological/Paleontological Monitor: Doble 33-kV Transmission Line Emergency Repair, Southern California Edison, San Bernardino National Forest, CA, 2011. Independently performed emergency, on-call archaeological and paleontological monitoring of ground disturbing activities in the San Bernardino National Forest. *Client: Southern California Edison. (1 week)*

Archaeological/Paleontological Monitor: Daggett II, Southern California Edison, San Bernardino County, CA, 2011. Performed archaeological, and paleontological, monitoring during ground disturbing activities for the 225-acre Human External Cargo Helicopter Training Facilities Project in Daggett. *Client: Southern California Edison. (1 week)*

Lead Archaeological Field Technician: Leatherneck Substation Project, Southern California Edison, San Bernardino County, CA, 2012. Independently performed an intensive cultural resources survey of pulling stations near Twenty-Nine Palms. *Client: Southern California Edison. (1 week)*

Lead Archaeological Field Technician: Falcon Ridge Substation and Transmission Lines, Southern California Edison, San Bernardino County, CA, 2010. Performed archaeological survey, assessment and recording of historical archaeological features on 287 acres in Fontana and Rialto. *Client: Southern California Edison. (2 weeks)*

Lead Archaeological and Paleontological Monitor: Tehachapi Renewable Transmission Project, Segments 1- 3, Southern California Edison, Los Angeles and Kern Counties, CA, 2008-2009. Independently performed paleontological monitoring during ground disturbing activities and attended daily safety meetings. Performed supplemental surveys and site recordation. *Client: Southern California Edison. (10 months)*

Archaeological Crew Member: Playa Vista Archaeological and Historical Project, Los Angeles County, CA, (2008). Sorted and cataloged archaeological artifacts for curation and repatriation. *(3 months)*.

Senior Archaeological Field Technician: San Bernardino National Forest (SBNF) near Big Bear, CA, San Bernardino County, CA, (2008). Conducted pedestrian survey of controlled burn areas; identified and recorded historic and prehistoric cultural resources using standardized forms; photographed cultural resources and maintained detailed field notes. *Client: San Bernardino National Forest. (2 weeks)*

Senior Field Technician: Genesis Solar Project, near Ford Dry Lake, CA, Riverside County, CA, (2007). Conducted intensive pedestrian survey; identified and recorded cultural resources using standardized forms. *Client: Genesis Solar. (2 weeks)*

Undergraduate Research Assistant for Dr. Catherine Fowler: Department of Anthropology, University of Nevada Reno, NV, (2003-2004). Compiled an ethno-botanical database using university and online resources; facilitated database sharing between university professors; digitized hand written field notes. *Client: University of Nevada Reno (8 months)*

PUBLICATIONS/PRESENTATIONS

- Presenter at the Society for California Archaeology 2017 Annual Meeting; Symposium 9; *Environmental Diversity and Resource Use in the Salton Basin*
- Porras, Lindsay A.,
2017 *Environmental Diversity and Resource Use in the Salton Basin Of The Colorado Desert" Electronic Theses, Projects, and Dissertations. 526.*
<http://scholarworks.lib.csusb.edu/etd/526>



Appendix B

Record Search Results (Confidential)

Appendix C

Dokken Engineering Cultural Resources Memorandum

CULTURAL RESOURCES MEMORANDUM
for the
Avenue 66 Domestic Water Transmission Main

Company: Coachella Valley Water District

Attention: Dan Ruiz, Engineering Manager

From: Brian Marks, Environmental Planner/Archaeologist, Dokken Engineering

Subject: Cultural Resources Memorandum, Avenue 66 Domestic Water Transmission Main (DW1617)

Date: December 26, 2018

Dokken Engineering has conducted an assessment of cultural resources associated with the Avenue 66 Domestic Water Transmission Main, located along Avenue 66 from State Route 86 to Lincoln Street, in the unincorporated community of Mecca, Riverside County, California (see **Figures 1 and 2**). Coachella Valley Water District (CVWD) is proposing to construct a domestic water transmission main. Funding for this project will be from the Clean Water State Revolving Fund (CWSRF) in accordance with the Operating Agreement with the U.S. Environmental Protection Agency (EPA), and requires approval under the California Environmental Quality Act (CEQA) and compliance with the National Environmental Policy Act (NEPA). CDVW requested environmental documentation to determine whether the Project Area contains sensitive cultural resources. In order to comply with Section 106, Dokken Engineering, on behalf of the Coachella Valley Water District, conducted a records search, archival research, Native American scoping, and a field survey in an effort to identify historic properties which may be affected by the proposed project.

Project Description

The proposed Avenue 66 Domestic Water Transmission Main will provide the community of Mecca and Eastern Coachella Valley with a secondary source water supply by installing a 30-inch-diameter transmission pipeline. The proposed alignment of the pipeline parallels Avenue 66 (State Route 111) along the north shoulder from west of State Route 86 to just west of Lincoln Street. At the intersection of Avenue 66 and State Route 111, the proposed pipeline alignment will traverse the boundaries of the Mecca Travel Center to avoid boring under the Arco Gas Station. CVWD will obtain a 20-foot-strip easement for the pipeline from property owners north of Avenue 66. Pipeline construction may consist of both open trench and subsurface boring.

The proposed 30-inch-diameter pipeline is approximately 1 mile long and will connect from a proposed 30 inch diameter pipeline constructed as part of the Avenue 66 Grade Separation Project to a future 30 inch diameter pipeline located on the west side of Highway 86 at Buchanan

Street. The proposed project is part of a Strategic Initiative project that will eventually construct a 3 mile long critical pipeline from Polk Street for CVWD's customers in the Mecca area.

The pipeline will be installed with a minimum of four feet of earthen cover. Vertical deflections and restrained joints will be installed where the proposed pipeline crosses any other utilities including irrigation mains, agricultural drain lines, storm drain culverts, and buried telephone lines. The pipeline will be placed in polyethylene wrap to protect the pipeline from the mildly corrosive soils.

Regulatory Context

The NHPA of 1966 is the primary Federal legislation which outlines the Federal government's responsibility to cultural resources. More specifically, Section 106 of the NHPA and its implementing regulations located at 36 CFR Part 800, outline the Federal government's responsibility in identifying and evaluating cultural resources. Other applicable Federal cultural resources laws and regulations that could apply include, but are not limited to, the Native American Graves Protection and Repatriation Act (NAGPRA), and the Archaeological Resources Protection Act (ARPA).

Section 106 of the NHPA requires the Federal government to take into account the effects of an undertaking on cultural resources listed on or eligible for listing on the National Register of Historic Places (National Register) and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. Those resources that are on or eligible for inclusion in the National Register are referred to as historic properties. The 36 CFR Part 800 regulations describe the Section 106 process. They outline the steps the Federal agency takes to identify cultural resources and the level of effect that the proposed undertaking would have on historic properties.

It is the initiating of an undertaking that begins the Section 106 process. Once an undertaking is initiated, the Federal agency must first determine if the action is the type of action that has the potential to affect historic properties, should such properties be present. If the action is the type of action that has the potential to affect historic properties, the Federal agency must; 1) identify the APE, 2) determine if historic properties are present within that APE, 3) determine the effect that the undertaking would have on historic properties, and 4) consult with the California State Historic Preservation Office (SHPO) to seek concurrence on Federal agencies findings. In addition, the Federal agency is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance, and to consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties. If the undertaking would result in adverse effects to historic properties, these adverse effects must be resolved in consultation with the SHPO and other parties identified during the Section 106 process before the undertaking can proceed to implementation.

As the proposed project requires the compliance with NEPA, the project is subject to Section 106 of the National Historic Preservation Act (NHPA).

Description of the Area of Potential Effects

The area of potential effects (APE) consists of 44 acres of largely undeveloped lands. The APE was established as the area that might be subject to ground-disturbing activities associated with construction of the proposed project. The APE extends adjacent to State Route 111/Avenue 66,

where the west end of the APE is located at Buchanan Street, and the east end of the APE is located roughly 400 feet east of Lincoln Street. All proposed domestic water transmission main work, including cut and fill limits and staging areas, would take place within the APE boundary, as depicted on Figure 2.

The vertical APE varies according to the location and proposed work within the various areas of the APE. Along the State Route 111/Avenue 66, the vertical APE extends approximately 3-5 feet below ground to accommodate the trenching, and 8-10 feet where the waterline crosses under State Route 86 with subsurface borings.

Records Search

A records search was conducted at the Eastern Information Center (EIC) located at the Department of Anthropology, University of California, Riverside, on December 14, 2018, by Dokken Engineering Archaeologist Brian Marks. The EIC is the local branch of the California Historical Resources Information System (CHRIS). Cultural resource maps at the EIC were checked for possible prehistoric and historic resources previously recorded within and adjacent to the project area. To supplement the CHRIS data, a review was conducted of the National Register of Historic Places Index, Office of Historic Preservation Directory of Properties, and historic USGS topographic maps. BLM GLO Land Patent records were also examined.

A number of cultural resources have been recorded within a half-mile of the APE; however, no cultural resources have been recorded within the APE.

Native American Consultation

Consultation with the Native American Heritage Commission and Native American Tribal Governments regarding the different alignment associated with this current project was conducted. Letters were sent to the following Tribal Governments:

- Agua Caliente Band of Cahuilla Indians
- Augustine Band of Cahuilla Mission Indians
- Cabazon Band of Mission Indians
- Cahuilla Band of Indians
- Los Coyotes Band of Cahuilla and Cupeno Indians
- Morongo Band of Mission Indians
- Ramona Band of Mission Indians
- Santa Rosa Band of Mission Indians
- Torres-Martinez Desert Cahuilla Indians

To date, no response from any of the tribes has been received.

Field Methods and Results

A pedestrian inspection survey was conducted at the project site on March 26, 2018 within the APE. A visual inspection of the exposed soils was also conducted to determine the likelihood of buried cultural resources within the APE. No evidence of cultural resources within the APE was discovered during the pedestrian surveys.

Detailed Conclusion

Based on the field survey and research, it is not anticipated that the proposed Project will result in any impacts to cultural resources. The field survey did not identify any potential cultural resources and the record search did not reveal any previously recorded cultural resources within the APE; therefore, no further investigations or mitigation are recommended for the proposed project. However, if any cultural resources are identified during grading activities, a qualified archaeologist should be retained to assess the significance of the find, pursuant to 36 CFR §800.13.

If human remains, funerary objects, sacred objects, or objects of cultural patrimony are found, all project work will cease and a BIA archaeologist and the Morongo Band of Mission Indians will be notified immediately. Following the federal provisions outlined under 43 CFR §10.4(b) and (e) regarding inadvertent discoveries on tribal lands, within three days of notification, the BIA and the Morongo Band of Mission Indians will 1) certify receipt of the notification; 2) take immediate steps to secure and protect inadvertently discovered human remains, funerary objects, sacred objects, or objects of cultural patrimony, including, as appropriate, stabilization or covering; 3) if the human remains, funerary objects, sacred objects, or objects of cultural patrimony must be excavated or removed, follow the requirements and procedures in 43 CFR §10.3(b); and 4) ensure that disposition of all inadvertently discovered human remains, funerary objects, sacred objects, or objects of cultural patrimony is carried out following 43 CFR §10.6.

Attachments:

Figure 1: Project Vicinity

Figure 2: Area of Potential Effects



V:\2450-CVWD Pipeline Ave 66\F1 - ProjectVicinity_CVWD_Ave66.mxd

Source: ESRI 2008; Dokken Engineering 1/8/2019; Created By: zachl

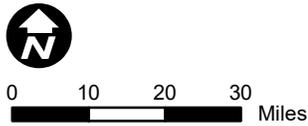
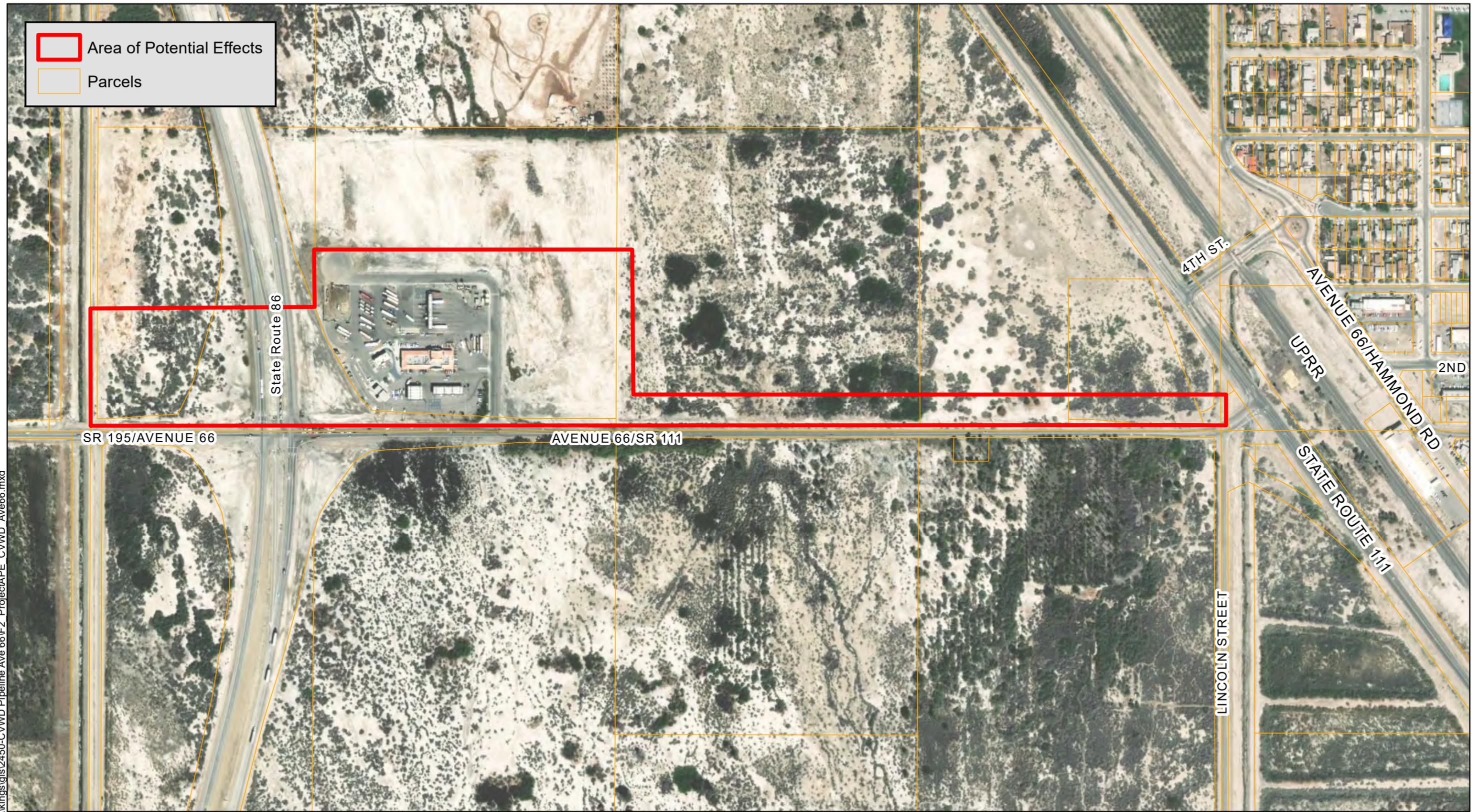


FIGURE 1
Project Vicinity
 Avenue 66 Domestic Water Transmission Main
 Community of Mecca, Riverside County, California



Area of Potential Effects
 Parcels

\\kings\gis\2450-CVWD Pipeline Ave 66\F2_ProjectAPE_CVWD_Ave66.mxd

Source: ArcGIS 10; Dokken Engineering 1/8/2019; Created By: zachl



 0 250 500 750 1,000 Feet

FIGURE 2
Area of Potential Effects
 Avenue 66 Domestic Water Transmission Main
 Community of Mecca, Riverside County, California

Appendix D

Native American Consultation



Native American Contact Table
CVWD ECVWSP St. Anthony, 18-067901, Mecca, Riverside County, California

Native American Contact	Tribal Affiliation	Mailing Address	Phone Number	Date and Method of Initial Contact	Date and Method of Follow Up Contact	Results
Jeff Grubbe, Chairperson	Agua Caliente Band of Cahuilla Indians (ACBCI)	5401 Dinah Shore Drive Palm Springs, CA 92264	760-699-6800	1/22/2019; letter	N/A	1/25/19 Rincon received a letter from Lacy Padilla, Archaeological Technician for the ACBCI Tribal Historic Preservation Office (THPO), stating the project is not located in the boundaries of the ACBCI Reservation but is in the Tribe's Traditional Use Area. ACBCI THPO requests to defer to Torres Martinez and concluding the consultation efforts.
Patricia Garcia-Plotkin, Director	Agua Caliente Band of Cahuilla Indians	5401 Dinah Shore Drive Palm Springs, CA, 92264	760-699-6907	1/22/2019; letter	N/A	1/25/19 Rincon received a letter from Lacy Padilla, Archaeological Technician for the ACBCI Tribal Historic Preservation Office (THPO), stating the project is not located in the boundaries of the ACBCI Reservation but is in the Tribe's Traditional Use Area. ACBCI THPO requests to defer to Torres Martinez and concluding the consultation efforts.
Amanda Vance, Chairperson	Augustine Band of Cahuilla Indians	P.O. Box 846 Coachella, Ca 92236	760-398-4722	1/22/2019; letter	2/20/2019; phone call	2/20/2019 Ms. Vance responded stating the Tribe did not have any specific information on cultural resources in the project area and encouraged Rincon contact other Tribes in the area for info and to contract with a monitor who is qualified in Native American cultural resources identification to be present onsite.



Native American Contact	Tribal Affiliation	Mailing Address	Phone Number	Date and Method of Initial Contact	Date and Method of Follow Up Contact	Results
Doug Welmas, Chairperson	Cabazon Band of Mission Indians	84-245 Indio Springs Parkway Indio, CA 92203	760-342-2593	1/22/2019; letter	2/20/2019; phone call 2/22/2019; phone call	2/20/2019 Rincon left a voice message (no response) 2/22/2019 Rincon left a voice message (no response) 2/28/2019 Received letter from Judy Stapp, Director of Cultural Affairs for the Cabazon Band of Mission Indians, stated that the project is outside of the Tribe's current reservation boundaries. The Tribe had no specific information on the project area to indicate it may be a sacred/religious site or other site of Native American traditional cultural value.
Daniel Salgado, Chairperson	Cahuilla Band of Indians	52701 U.S. Highway 371 Anza, CA 92539	951-763-5549	1/22/2019; letter	2/20/2019; phone call	2/20/2019 Transferred to cultural director Bobby Ray who stated that he did not have any specific knowledge of cultural resources in the area and would like to defer to Torres Martinez.
Charles Wood, Chairperson	Chemehuevi Indian Reservation	P.O. Box 1976 1990 Palo Verde Drive, Havasu Lake, CA, 92363	760-858-4219	1/22/2019; letter	2/20/2019; phone call 2/22/2019; phone call	2/20/2019 Rincon was unable to leave a voice message with the number provided. 2/22/2019 Mr. Wood stated that the Tribe did not have any specific information or concerns and would like to defer to Tribes closer to the project area.



Native American Contact	Tribal Affiliation	Mailing Address	Phone Number	Date and Method of Initial Contact	Date and Method of Follow Up Contact	Results
Dennis Patch, Chairman	Colorado River Indian Tribes	26600 Mojave Road, Parker, AZ, 85344	928-669-9211	1/22/2019; letter	2/20/2019; phone call 2/22/2019; phone call	2/20/2019 Rincon left a voice message (no response) 2/22/2019 Rincon left a voice message (no response) 3/5/2019 Received letter from the Colorado River Indian Tribe's (CRIT) THPO requested that all prehistoric cultural resources, including both known and yet-to-be-discovered sites, be avoided. If avoidance of the site is infeasible, then the THPO requested the resources be left <i>in situ</i> or reburied in a nearby area after consultation. In addition, they requested that the CRIT THPO be notified within 48 hours of discovering any human remains or objects subject to provision of the Native American Graves Protection and Repatriation Act, or cultural resources such as sites, trials, and artifacts.



Native American Contact	Tribal Affiliation	Mailing Address	Phone Number	Date and Method of Initial Contact	Date and Method of Follow Up Contact	Results
Shane Chapparosa, Chairperson	Los Coyotes Band of Mission Indians	P. O. Box 189 Warner Springs, CA, 92086	760-782-0711	1/22/2019 Rincon sent a letter	2/20/2019 phone call 2/22/2019 phone call and email 2/25/2019; email 2/26/2019; email	2/20/2019 Rincon spoke with the receptionist who said Shane Chapparosa is no longer a chairperson and provided the email address for the new Director, Jacob Norte, dwillisloscoyoteseпа@gmail.com She requested that Rincon forward a copy of the letter the email address. Rincon sent the letter to the provided address. 2/22/2019 Rincon was unable to leave a voice message; sent a follow-up email to the address provided. 2/26/2019 Rincon received email response from Dorothy Willis, Los Coyotes Environmental, who stated that she had discussed the project with Jacob Norte and he had no comments on the project.
John Perada, Environmental Director	Los Coyotes Band of Mission Indians	P. O. Box 189 Warner Springs, CA, 92086	760-782- 0712	1/22/2019; letter	2/20/2019;phone call and email 2/22/2019; phone call 2/25/2019; email 2/26/2019; email	2/20/2019 Rincon spoke with the receptionist who said John Perada is no longer the Environmental Director and provided the email address for the new Director, Jacob Norte, dwillisloscoyoteseпа@gmail.com She requested that Rincon forward a copy of the letter the email address. Rincon sent the letter to the provided address. 2/22/2019 Rincon was unable to leave a voice message; sent a follow-up email to the address provided 2/26/2019 Rincon received email response from Dorothy Willis, Los Coyotes Environmental, who stated that she had discussed the project with Jacob Norte and he had no comments on the project.



Native American Contact	Tribal Affiliation	Mailing Address	Phone Number	Date and Method of Initial Contact	Date and Method of Follow Up Contact	Results
Denisa Torres, Cultural Resources Manager	Morongo Band of Mission Indians	12700 Pumarra Road Banning, CA, 92220	951-849-8807	1/22/2019; letter	N/A	2/4/2019 Rincon received a letter from Travis Armstrong, Tribal Historic Preservation Officer, who stated that the Tribe has no additional information to provide at this time and will likely defer to other tribes in the area once formal government-to-government consultation is initiated by the lead agency for the project.
Robert Martin, Chairperson	Morongo Band of Mission Indians	12700 Pumarra Road Banning, CA 92220	951-849-8807	1/22/2019; letter	N/A	2/4/2019 Rincon received a letter from Travis Armstrong, Tribal Historic Preservation Officer, who stated that the Tribe has no additional information to provide at this time and will likely defer to other tribes in the area once formal government-to-government consultation is initiated by the lead agency for the project.
Joseph Hamilton	Ramona Band of Cahuilla Mission Indians	P.O. Box 391670 Anza, CA, 92539	951-763-4105	1/22/2019; letter	2/20/2019; phone call 2/22/2019; phone call and email	2/20/2019 Rincon spoke with the receptionist who stated that she would like us to forward a copy of the letter to the jgomez@ramona-nsn.gov . Rincon sent an email to the provided address. 2/22/2019 Rincon left a voice message and sent a follow-up email (no response).
John Gomez, Environmental Coordinator	Ramona Band of Cahuilla Mission Indians	P. O. Box 391670 Anza, CA, 92539	951-763-4105	1/22/2019; letter	2/20/2019; phone call 2/22/2019; phone call and email	2/20/2019 Rincon spoke with the receptionist who stated that she would like us to forward a copy of the letter to the jgomez@ramona-nsn.gov . Rincon sent an email to the provided address. 2/22/2019 Rincon left a voice message and sent a follow-up email (no response)



Native American Contact	Tribal Affiliation	Mailing Address	Phone Number	Date and Method of Initial Contact	Date and Method of Follow Up Contact	Results
Steven Estrada, Chairperson	Santa Rosa Band of Mission Indians	P.O. Box 391820 Anza, CA 92539	951-659-2700	1/22/2019; letter	2/20/2019; phone call 2/22/2019; phone call and email	2/20/2019 Rincon spoke to the receptionist who requested that we send a copy of the letter to sestrada@santarosacahuilla-nsn.gov and also cc: tribal administrator vminopt@santarosacahuilla-nsn.gov Rincon sent an email to the provided addresses 2/22/2019 Rincon left a message and sent a follow up email (no response)
Scott Cozart, Chairperson	Soboba Band of Luiseño Indians	P.O. Box 487 San Jacinto, CA, 92583	951-654-2765	1/22/2019; letter	2/20/2019; phone call	2/20/2019 Rincon left a voice message (no response) 2/20/2019 Mr. Ontiveros replied stating the Tribe would like to defer to Torres-Martinez.
Joseph Ontiveros, Cultural Resource Department	Soboba Band of Luiseño Indians	P.O. Box 487 San Jacinto, CA, 92583	951-663-5279	1/22/2019; letter	2/20/2019; phone call	2/20/2019 Mr. Ontiveros replied stating the Tribe would like to defer to Torres-Martinez.
Michael Mirelez, Cultural Resource Coordinator	Torres-Martinez Desert Cahuilla Indians	P.O. Box 1160 Thermal, CA 92274	760-399-0022	1/22/2019; letter	2/20/2019; phone call 2/22/2019; email	2/20/2019 Rincon spoke with Michael Mirelez who stated he was away from the office and would call back in about an hour. 2/20/2019 Michael Mirelez called back and requested that Rincon send a copy of the letter via email. Rincon sent a copy of the letter to the email address provided. 2/22/2019 Mr. Mirelez replied via email stating that the project is within and outside of their reservation and in their Tribal Traditional Use Area. The Tribe has a high concern for inadvertent discoveries and request copies of all cultural reports, formal consultation, and Tribal monitoring during all initial ground disturbance including survey and testing.



Native American Contact	Tribal Affiliation	Mailing Address	Phone Number	Date and Method of Initial Contact	Date and Method of Follow Up Contact	Results
Darrell Mike, Chairperson	Twenty-Nine Palms Band of Mission Indians	46-200 Harrison Place Coachella, CA 92236	760-863-2444	1/22/2019; letter	2/20/2019; phone call 2/22/2019; email (Confidential Response)	2/20/2019 Rincon spoke with Anthony Madrigal and Sarah Bliss who stated that they were going thru the correspondence and said they had already provided a response and would forward that response again. Rincon received an email from Sarah Bliss, Cultural Resources Manager, on 2/22/2019 stating that the THPO was not aware of any cultural resources or any cultural properties within the project area. The THPO had no additional concerns and derred to the comments of the Torres Martinez Desert Cahuilla Indians.
Anthony Madrigal, Tribal Historic Preservation Officer	Twenty-Nine Palms Band of Mission Indians	46-200 Harrison Place Coachella, CA 92236	760-775-3259	1/22/2019; letter	2/20/2019; phone call	2/20/2019 Rincon spoke with Anthony Madrigal and Sarah Bliss who stated that they were going thru the correspondence and said they had already provided a response and would forward that response again. Rincon received a letter from Sarah Bliss, Cultural Resources Manager, who stated that though the THPO is not aware of specific cultural resources in the project area, the project is in the Chemehuevi Traditional Use Area and recorded resources are in the vicinity of the project. The THPO requests the completed report from the Lead Agency for evaluation.

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd, Suite 100
Sacramento, CA 95814
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Saint Anthony's Small Water System Project

County: Riverside County

USGS Quadrangle Name: Valerie, CA and Mecca, CA

Township: 7S Range: 8E Section(s): 9-16

Township: 7S, Range: 9E Section(s): 7, 8, 17-20

Company/Firm/Agency: Rincon Consultants, Inc.

Contact Person: Tiffany Clark

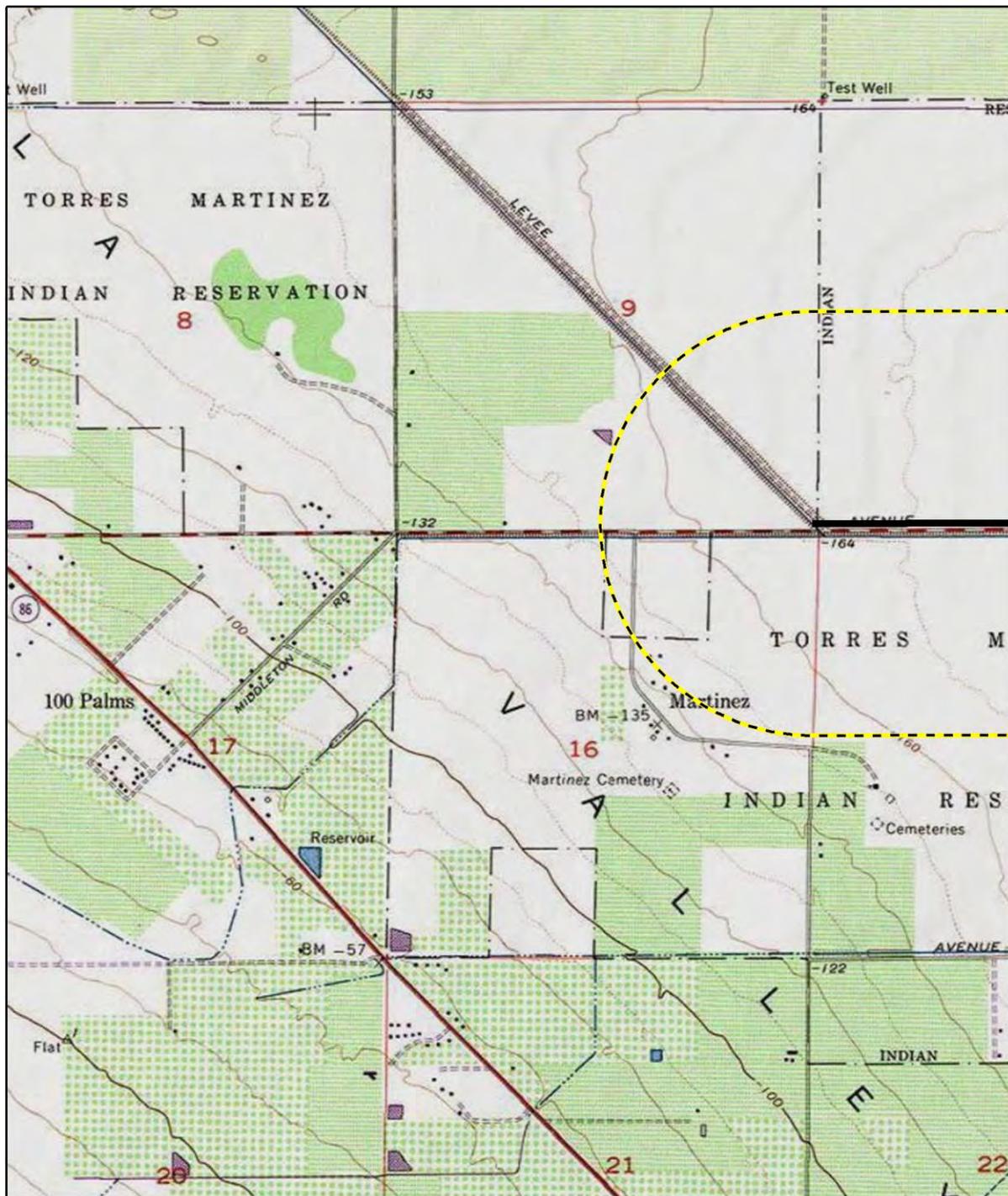
Street Address: 250 East 1st Street, Suite 301

City: Los Angeles, CA Zip: 90012

Phone: (213)357-5105

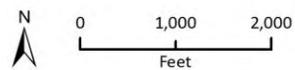
Email: tclark@rinconconsultants.com

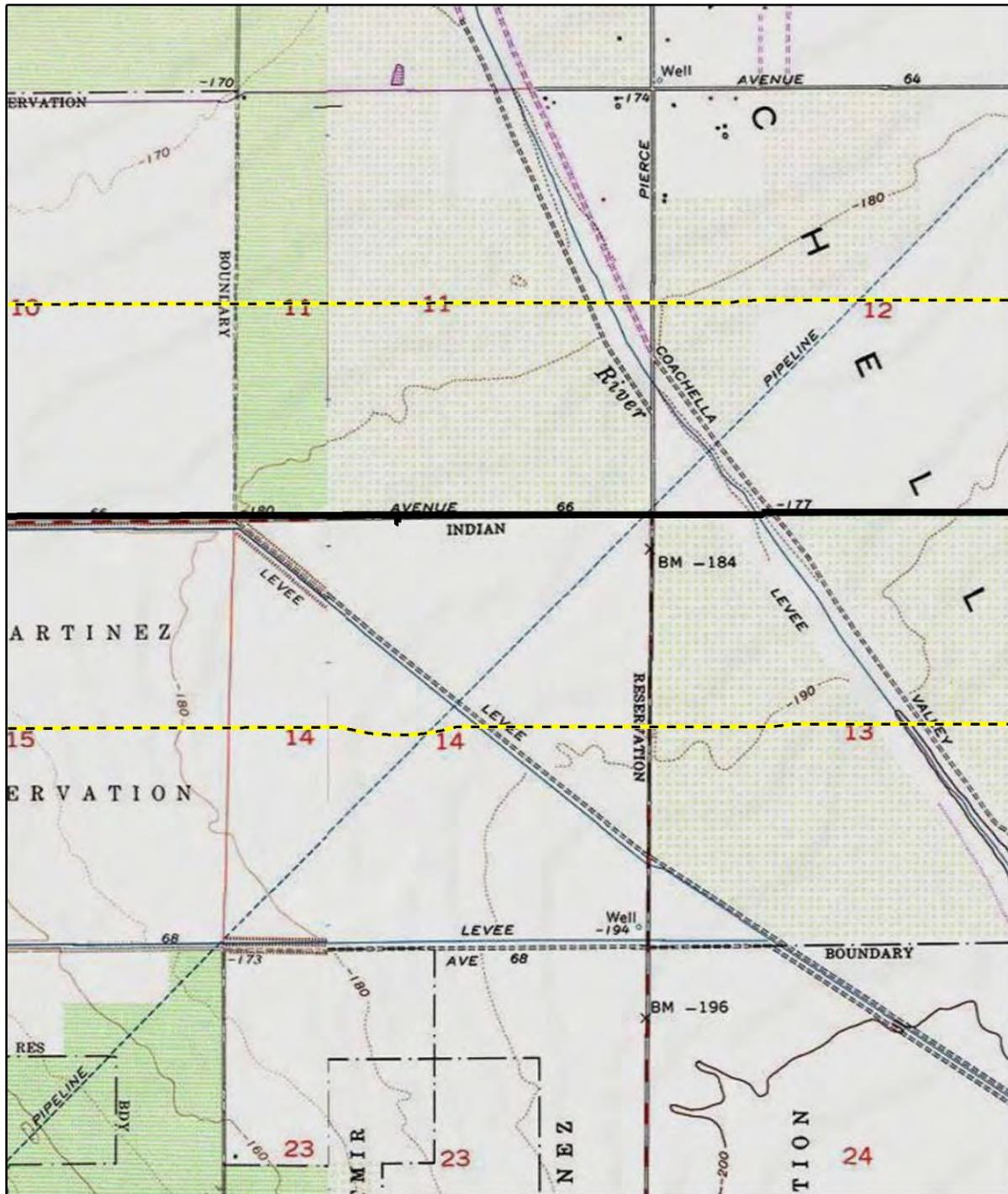
Project Description: The proposed project consists of infrastructural improvements to the small water systems associated with the Saint Anthony's mobile home community that includes eight mobile home parks near Mecca, California. The project proposes consolidating and connecting the mobile home parks to the Coachella Valley Water District's potable system. A cultural resource study is being undertaken by Rincon Consultants, Inc. There will be ground disturbance associated with the project.



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 Valerie, Mecca Quadrangles. T07S R08E S09-16, T07S R09E S07,08,17-20. 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.

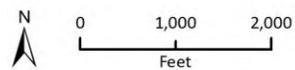
-  Area of Potential Effects
-  Half-Mile Buffer

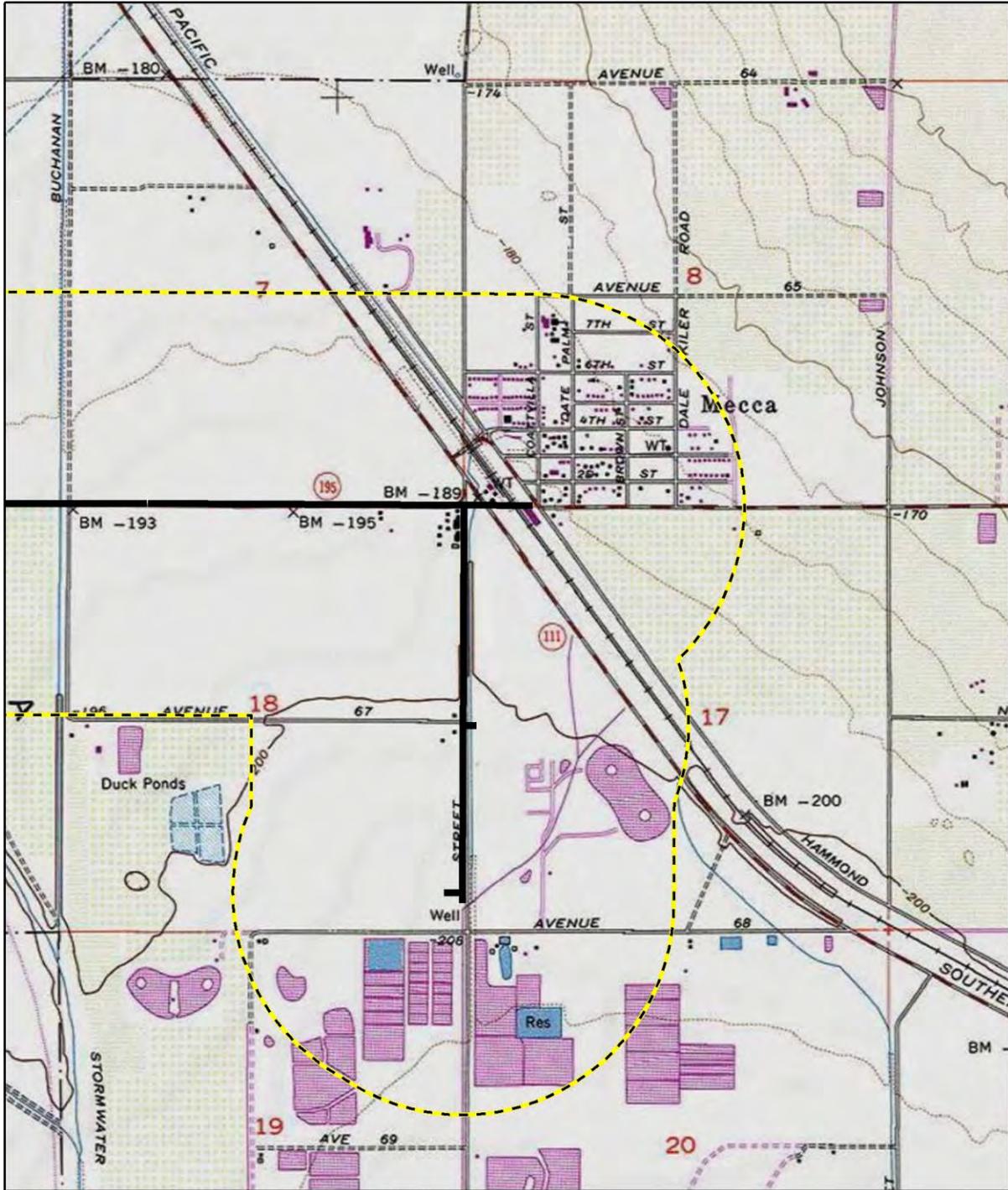




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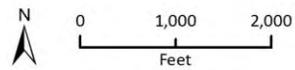
- Area of Potential Effects
- Half-Mile Buffer





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- Area of Potential Effects
- Half-Mile Buffer



**Native American Heritage Commission
Native American Contact List
Riverside County
1/17/2019**

Agua Caliente Band of Cahuilla Indians

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

Cahuilla
Luiseno

Chemehuevi Indian Reservation

Charles Wood, Chairperson
P.O. Box 1976 1990 Palo Verde Drive
Havasu Lake, CA, 92363
Phone: (760) 858 - 4219
Fax: (760) 858-5400
chairman@cit-nsn.gov

Chemehuevi

Agua Caliente Band of Cahuilla Indians

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

Cahuilla
Luiseno

Colorado River Indian Tribes

Dennis Patch, Chairman
26600 Mojave Road
Parker, AZ, 85344
Phone: (928) 669 - 9211
Fax: (928) 669-1925
amanda.barrera@crit-nsn.gov

Chemehuevi
Mojave

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

Cahuilla

Los Coyotes Band of Cahuilla and Cupeño Indians

John Perada, Environmental Director
P. O. Box 189
Warner Springs, CA, 92086
Phone: (760) 782 - 0712
Fax: (760) 782-2730

Cahuilla

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

Cahuilla

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
Chapparosa@msn.com

Cahuilla

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

Cahuilla

Morongo Band of Mission Indians

Robert Martin, Chairperson
12700 Pumarra Road
Banning, CA, 92220
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Cahuilla
Serrano

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 Saint Anthony's Small Water System Project, Riverside County.

**Native American Heritage Commission
Native American Contact List
Riverside County
1/17/2019**

Morongo Band of Mission Indians

Denisa Torres, Cultural Resources Manager
12700 Pumarra Rroad Cahuilla
Banning, CA, 92220 Serrano
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-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@ramonatribe.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@ramonatribe.com

Santa Rosa Band of Cahuilla Indians

Steven Estrada, Chairperson
P.O. Box 391820 Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
mflaxbeard@santarosacahuilla-nsn.gov

Soboba Band of Luiseno Indians

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

Soboba Band of Luiseno Indians

Scott Cozart, Chairperson
P. O. Box 487 Cahuilla
San Jacinto, CA, 92583 Luiseno
Phone: (951) 654 - 2765
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Torres-Martinez Desert Cahuilla Indians

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

Twenty-Nine Palms Band of Mission Indians

Darrell Mike, Chairperson
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 863 - 2444
Fax: (760) 863-2449
29chairman@29palmsbomi-nsn.gov

Twenty-Nine Palms Band of Mission Indians

Anthony Madrigal, Tribal Historic Preservation Officer
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 775 - 3259
amadrigal@29palmsbomi-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 Saint Anthony's Small Water System Project, Riverside County.



Rincon Consultants, Inc.

3600 Lime Street, Suite 226
Riverside, California 92501

951 782 0061 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

January 22, 2019

John Perada, Environmental Director
Los Coyotes Band of Cahuilla and Cupeño Indians
P.O. Box 189
Warner Springs, CA 92086

Subject: Cultural Resources Assessment for Saint Anthony's Small Water System Project, Near the Community of Mecca, Riverside County, California

Dear Mr. Perada,

Rincon Consultants, Inc. (Rincon) has been retained to conduct a cultural resources assessment for the Saint Anthony's Small Water System Project (project). The proposed project involves the infrastructural improvements to three mobile home parks located near the community of Mecca in Riverside County. (see attached Project Location Map). The existing water systems associated with each of the mobile home parks will be consolidated and connected to the Coachella Valley Water District potable system.

The purpose of this letter is to inquire about your knowledge of potential cultural resources within the vicinity that may be impacted by project development. Rincon contacted the Native American Heritage Commission to request a Sacred Lands File (SLF) search of the project area that was returned with positive results. A records search performed of the California Historical Resources Information System identified a total of three historic-period cultural resources within the project's Area of Potential Effect. These include the Coachella Valley Stormwater Channel, the Southern Pacific Railroad, and the archaeological remains of the Mecca Railroad Station. Although no known prehistoric archaeological resources have been recorded within the APE, we are aware that the results of the record search are not exhaustive and that additional cultural resources may exist within the area.

This project may involve federal funding; thus, this cultural resources study is being prepared in conformance with the National Environmental Policy Act and Section 106 of the National Historic Preservation Act (NHPA). Rincon is assisting in the Section 106 consultation effort and we are writing to provide you with an opportunity to be involved in the Section 106 consultation process. If you or your organization has any knowledge or specific concerns regarding cultural resources in the project area, please respond by telephone at (213) 788-4842 extension 149, or by email at tclark@rinconconsultants.com. Please respond within 30 days of receipt of this letter if you are interested in consultation.

Sincerely,

Rincon Consultants, Inc.

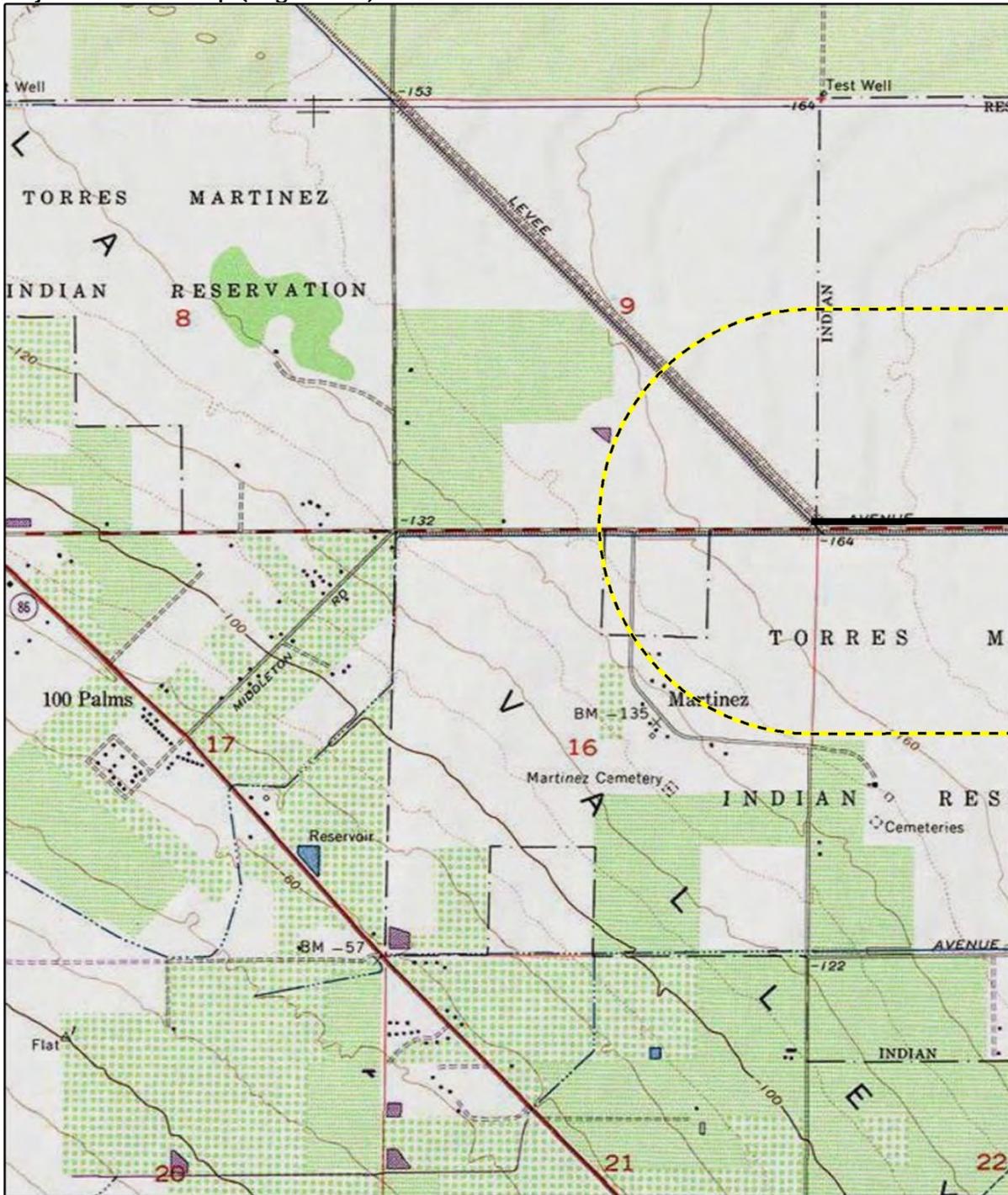
A handwritten signature in black ink that reads "Tiffany Clark".

Tiffany Clark, PhD, RPA
Senior Archaeologist

Attached: Project Location Map

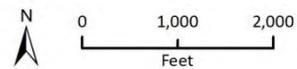


Project Location Map (Page 1 of 3)



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Valerie, Mecca Quadrangles. T07S R08E S09-16, T07S R09E S07,08,17-20. 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.

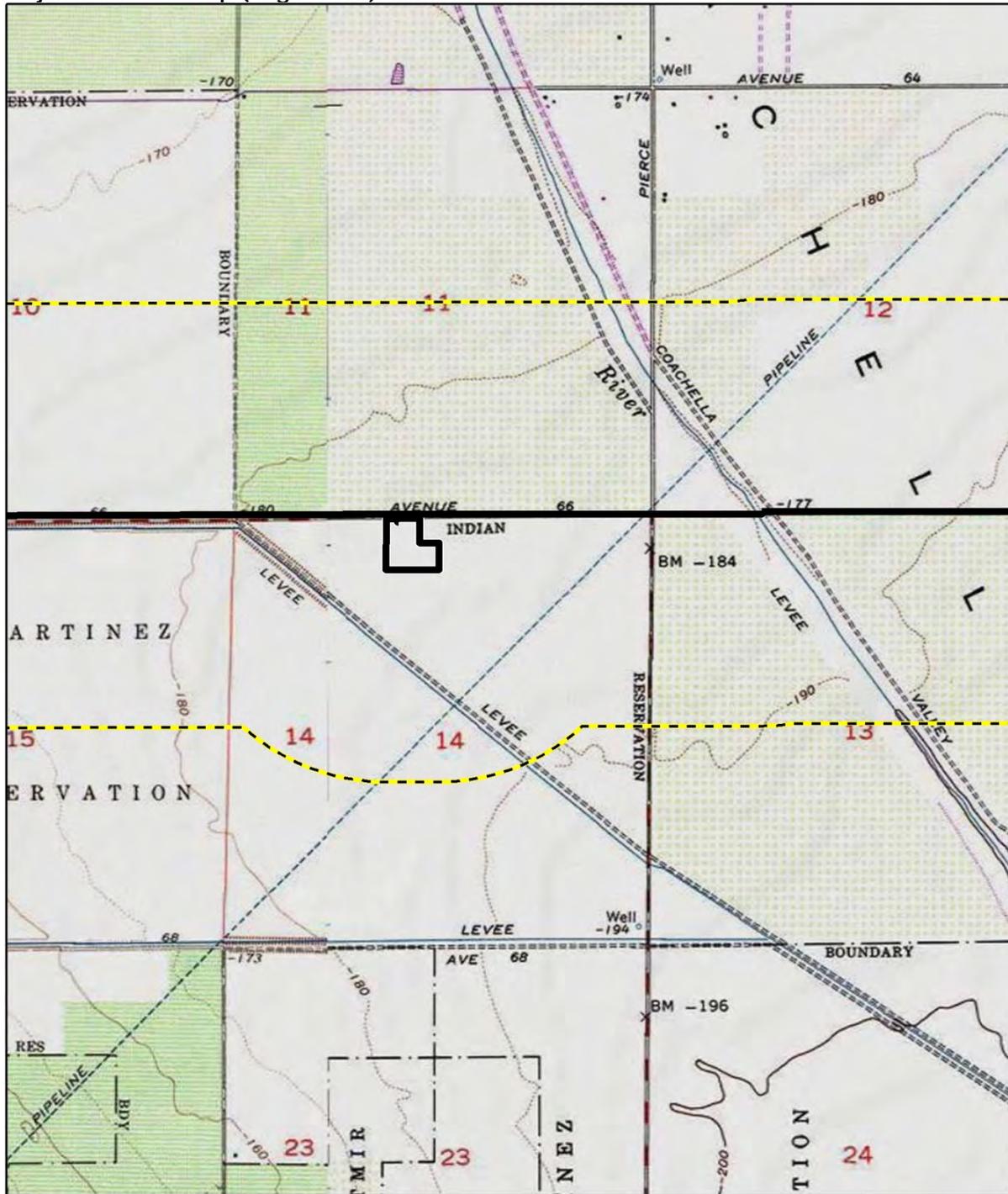
-  Area of Potential Effects
-  Half-Mile Buffer



©Harrisville Search Map Stationary

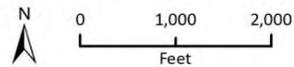


Project Location Map (Page 2 of 3)



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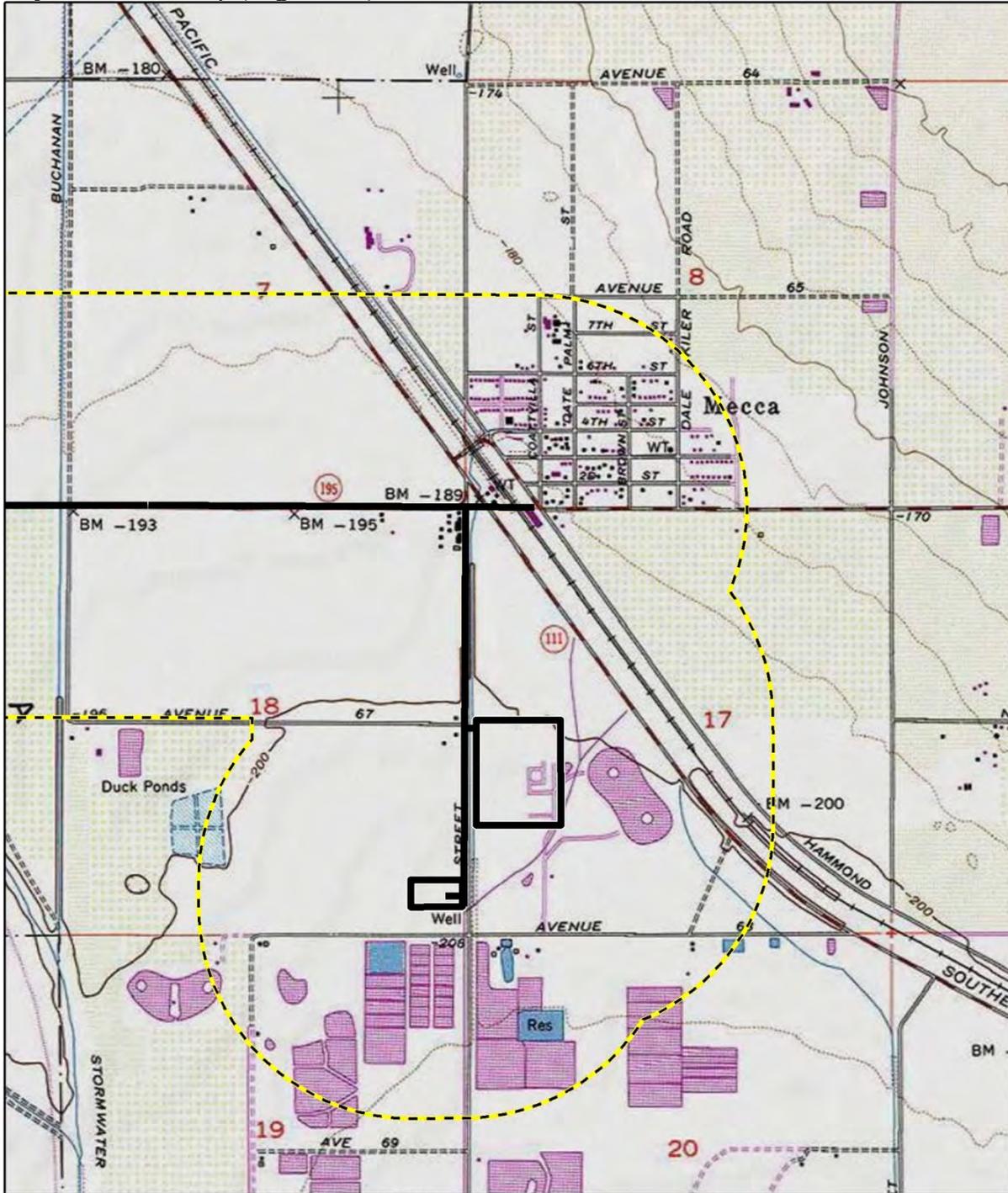
-  Area of Potential Effects
-  Half-Mile Buffer



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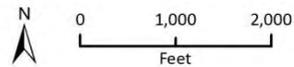


Project Location Map (Page 3 of 3)



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Valerie, Mecca Quadrangles. T07S R08E S09-16, T07S R09E S07,08,17-20. 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.

-  Area of Potential Effects
-  Half-Mile Buffer



© Woodard & Curran, Mecca, CA



TORRES MARTINEZ DESERT CAHUILLA INDIANS

P.O. Box 1160
Thermal, CA 92274
(760) 397-0300 – FAX (760) 397-8146

February 22, 2019

Attn: **Lindsay A. Porras, MA, RPA, Associate Archaeologist**
Rincon Consultants, Inc.

Re: St. Anthony Small Water System Project
Mecca CA Riverside County

Torres Martinez Desert Cahuilla Indians appreciates your concern for cultural resource preservation in your project. We have reviewed the information and found that the project is located both within and outside the existing reservation, the location does fall within our Tribal Traditional Use Area. Therefore the concern for inadvertent discoveries is high for the Torres Martinez Desert Cahuilla Indians. As a result, we are requesting the following:

Torres Martinez Desert Cahuilla Indians is requesting the following:

- Copies of all Cultural reports
- Formal Government to Government Consultation.
- Tribal Monitoring for all initial ground disturbing activities by a designated tribal monitor from the Torres Martinez Desert Cahuilla Indians. The monitor shall be present during any ground disturbing proceedings including surveys and archaeological testing.

Please feel free contact me at your earliest convenience either by email or phone in order to make arrangements.

Respectfully,

Michael Mirelez
Cultural Resource Coordinator
Torres-Martinez Desert Cahuilla Indians
Office: 760-397-0300 Ext: 1213
Cell: 760-399-0022
Email: mmirelez@tmdci.org



01-002-2004-004

January 25, 2019

[VIA EMAIL TO:tclark@rinconconsultants.com]
Rincon Consultants, Inc.
Ms. Tiffany Clark
250 East 1st Street, Suite 201
Los Angeles, CA 90012

Re: Saint Anthony's Small Water System

Dear Ms. Tiffany Clark,

The Agua Caliente Band of Cahuilla Indians (ACBCI) appreciates your efforts to include the Tribal Historic Preservation Office (THPO) in the Project 1305 (APN 749-090-031) 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:

*At this time ACBCI defers to Torres Martinez. This letter shall conclude our consultation efforts.

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
Archaeological Technician
Tribal Historic Preservation Office
AGUA CALIENTE BAND
OF CAHUILLA INDIANS

Tiffany Clark

From: Tribal Historic Preservation Office <thpo@morongo-nsn.gov>
Sent: Monday, February 04, 2019 10:51 AM
To: Tiffany Clark
Subject: St. Anthony's Small Water Project

Follow Up Flag: Follow up
Flag Status: Flagged

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,

Thank you for your letter regarding this project.

We have no additional information to provide at this time and will likely defer to other tribes in the area once formal government-to-government consultation is initiated by the lead agency for this project.

Thank you for reaching out to our office.

Sincerely,

Travis Armstrong
Tribal Historic Preservation Officer
Morongo Band of Mission Indians
951-755-5259
Email: thpo@morongo-nsn.gov



From: [Steven Estrada](#)
To: [Lindsay Porras](#)
Subject: Re: Cultural Resources Studies for CVWD St. Anthony and Valley View Water Supply Consolidation Projects
Date: Friday, February 22, 2019 3:07:16 PM
Attachments: [image001.png](#)

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 .

Thank you. We defer further consultation and any monitoring efforts to Torres Martinez.

From: Lindsay Porras <lporras@rinconconsultants.com>
Date: Friday, February 22, 2019 at 1:00 PM
To: Steven Estrada <SEstrada@santarosacahuilla-nsn.gov>
Subject: RE: Cultural Resources Studies for CVWD St. Anthony and Valley View Water Supply Consolidation Projects

Dear Mr. Estrada,

I wanted to follow up to see if you have received the letters for the CVWD East Coachella Valley Water Supply Consolidation Projects for the Saint Anthony and Valley View Mobile Home Parks. Please reach out if you have any questions or comments regarding the proposed projects or if you have information on cultural resources in the project areas. I can be reached at 909-435-0978 or via email at lporras@rinconconsultants.com.

I appreciate your time.
Best,

Lindsay A. Porras, MA, RPA, Associate Archaeologist

Rincon Consultants, Inc.
Environmental Scientists | Planners | Engineers
805-644-4455 x9981
909-362-3706 Mobile
909-435-0978 Direct
rinconconsultants.com



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From: Lindsay Porras
Sent: Wednesday, February 20, 2019 10:39 AM
To: 'sestrada@santarosacahuilla-nsn.gov'

Cc: 'vminopt@santarosacahuilla-nsn.gov'

Subject: Cultural Resources Studies for CVWD St. Anthony and Valley View Water Supply Consolidation Projects

Dear Mr. Estrada,

I have been conducting follow-up phone calls regarding cultural resources studies. I spoke with your receptionist who requested I send copies of the Section 106 letters to this address for your reference. Please reach out at if you have any questions or comments regarding the proposed projects or if you have information on cultural resources in the project areas. I can be reached at 909-435-0978 or via email at lpurras@rinconconsultants.com.

I appreciate your time.

Best,

Lindsay A. Porras, MA, RPA, Associate Archaeologist

Rincon Consultants, Inc.

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909-362-3706 Mobile

909-435-0978 Direct

rinconconsultants.com



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Tiffany Clark

From: Lindsay Porras
Sent: Tuesday, February 26, 2019 10:08 AM
To: Tiffany Clark
Subject: Fwd: Cultural Resources Study for CVWD St. Anthony and Valley View Water Supply Consolidation Projects

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Tiffany,

The email below is from Los Coyotes.

Have a good day!

Lindsay A. Porras
Sent from my iPhone

Begin forwarded message:

From: Dorothy Willis <dwillisloscoyoteseпа@gmail.com>
Date: February 26, 2019 at 08:21:55 PST
To: Lindsay Porras <lperras@rinconconsultants.com>
Subject: Re: Cultural Resources Study for CVWD St. Anthony and Valley View Water Supply Consolidation Projects

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 .

Good Morning Ms. Lindsay,
I spoke with Jacob and at this time, he has no comment to add.

Thank you
Dorothy
Los Coyotes Environmental

On Mon, 25 Feb 2019 at 09:39, Lindsay Porras <lperras@rinconconsultants.com> wrote:

Hi Dorothy,

Thank you for the update- have a great day!

Best,

Lindsay A. Porras, MA, RPA, Associate Archaeologist

Rincon Consultants, Inc.

Environmental Scientists | Planners | Engineers

805-644-4455 x9981

909-362-3706 Mobile

909-435-0978 Direct

rinconconsultants.com



Ranked 2018 "Hot Firm List" by Zweig Group

From: Dorothy Willis [mailto:dwillisloscoyoteseпа@gmail.com]

Sent: Monday, February 25, 2019 9:34 AM

To: Lindsay Porras

Subject: Re: Cultural Resources Study for CVWD St. Anthony and Valley View Water Supply Consolidation Projects

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 .

Lindsay,

Just a quick update because our water technician reminded me Jacob is at training until Thursday. my apologies for not remembering earlier - the out of the office thing has thrown my rhythm out of sync. I will still be sending him a follow-up list before the end of the day and I will be sure to include you on it.

Just wanted to keep you in the loop

Thank you Dorothy

Los Coyotes Environmental

On Mon, 25 Feb 2019 at 08:56, Dorothy Willis <dwillisloscoyotesepa@gmail.com> wrote:

Good Morning Ms. Lindsay,

You were already on my follow up list for today, Jacob had various meetings last week, and then we were out of the office on Thursday and Friday due to the amount of snow that we received.

Thank you for following up and I will post you as soon as possible,

Dorothy

Los Coyotes Environmental

On Fri, 22 Feb 2019 at 12:44, Lindsay Porras <lporras@rinconconsultants.com> wrote:

Dear Director Jacob Norte,

I wanted to follow-up to see if you have received the letters regarding the Coachella Valley Water Supply Consolidation Projects for St. Antony Mobile Home Park and Valley View Mobile Home Parks. Please reach out at if you have any questions or comments regarding the proposed projects or if you have information on cultural resources in the project areas. I can be reached at 909-435-0978 or via email at lporras@rinconconsultants.com.

I appreciate your time.

Best,

Lindsay A. Porras, MA, RPA, Associate Archaeologist

Rincon Consultants, Inc.

Environmental Scientists | Planners | Engineers

805-644-4455 x9981

909-362-3706 Mobile

909-435-0978 Direct

rinconconsultants.com



Ranked 2018 "Hot Firm List" by Zweig Group

From: Lindsay Porras
Sent: Wednesday, February 20, 2019 10:25 AM
To: 'dwillisloscoyotesepa@gmail.com'
Subject: Cultural Resources Study for CVWD St. Anthony and Valley View Water Supply Consolidation Projects

Dear Director Jacob Norte,

I have been conducting follow-up phone calls regarding cultural resources studies. I spoke with your receptionist who informed me that John Perada is no longer a Chairperson. She request I send copies of the Section 106 letters to this address for your reference. Please reach out at if you have any questions or comments regarding the proposed projects or if you have information on cultural resources in the project areas. I can be reached at 909-435-0978 or via email at lporras@rinconconsultants.com.

I appreciate your time.

Best,

Lindsay A. Porras, MA, RPA, Associate Archaeologist

Rincon Consultants, Inc.

Environmental Scientists | Planners | Engineers

805-644-4455 x9981

909-362-3706 Mobile

909-435-0978 Direct

rinconconsultants.com



Ranked 2018 "Hot Firm List" by Zweig Group



COLORADO RIVER INDIAN TRIBES

Tribal Historic Preservation Office

26600 Mohave Road

Parker, Arizona 85344

Telephone: (928)-669-5822 Fax: (928) 669-5843

March 5, 2019

Rincon Consultants, Inc.
3600 Lime Street, Suite 226
Riverside, CA 92501

RE: St. Anthony's Small Water System Project

Dear Ms. Tiffany Clark:

The Colorado River Indian Tribes' Tribal Historic Preservation Office ("CRIT THPO") has received your letter dated January 22, 2019, regarding the *Cultural Resources Assessment for Saint Anthony's Small Water System Project, near the community of Mecca, Riverside County, California*.

As a preliminary matter, the Colorado River Indian Tribes are a federally recognized Indian tribe comprised of over 4,200 members belonging to the Mohave, Chemehuevi, Hopi and Navajo Tribes. The almost 300,000-acre Colorado River Indian Reservation sits astride the Colorado River between Blythe, California and Parker, Arizona. The ancestral homelands of the Tribe's members, however, extend far beyond the Reservation boundaries. Significant portions of public and private lands in California, Arizona and Nevada were occupied by the ancestors of the Colorado River Indian Tribes' Mohave and Chemehuevi members since time immemorial. These landscapes remain imbued with substantial cultural, spiritual and religious significance for the Tribes' current members and future generations. For this reason, we have a strong interest in ensuring that potential cultural resource impacts are adequately considered and mitigated.

In particular, the Colorado River Indian Tribes are concerned about the removal of artifacts from this area and corresponding destruction of the Tribes' footprint on this landscape. As such, the Tribes request that all prehistoric cultural resources, including both known and yet-to-be-discovered sites, be avoided if feasible. If avoidance of the site is infeasible, then the Tribes request that the resources be left in-situ or reburied in a nearby area, after consultation. This language should be incorporated into enforceable mitigation measures.

In addition, we respond as follows:

_____ Given the potential impact of the project on important cultural resources, the Colorado River Indian Tribes request in-person government-to-government consultation. Please contact the CRIT THPO to discuss our concerns and schedule a meeting with Tribal Council.

CRIT THPO

Project Name: St. Anthony's Water System Project

Date: March 5, 2019

Page 2

 √ In the event any human remains or objects subject to provision of the Native American Graves Protection and Repatriation Act, or cultural resources such as sites, trails, artifacts are identified during ground disturbance, please contact the CRIT THPO within 48 hours.

 The Colorado River Indian Tribes request tribal monitoring of any ground disturbing activity as a condition of project approval. The Tribes request notification of any opportunities to provide tribal monitoring for the project.

 The Colorado River Indian Tribes do not have any specific comment on the proposed project and instead defer to the comments of other affiliated tribes.

Thank you for your consideration. Please contact the undersigned if you have any questions or concerns.

Sincerely,

**COLORADO RIVER INDIAN TRIBES
TRIBAL HISTORIC PRESERVATION OFFICE**

/s/ Bryan Etsitty, Acting-Director

26600 Mohave Road

Parker, AZ 85344

Phone: (928) 669-5822

E-mail: betsitty@crit-nsn.gov

cc: critthpo@crit-nsn.gov



February 26, 2019

Tiffany Clark, PhD, RPA
Senior Archaeologist
Rincon Consultants, Inc.
3600 Lime Street, Suite 226
Riverside, CA 92501

Re: Cultural Resources Assessment for Saint Anthony's Small Water System Project
Near the Community of Mecca
Riverside County, California

Dear Ms. Clark:

Thank you for contacting the Cabazon Band of Mission Indians concerning cultural resource information relative to the above referenced project.

The project is located outside of the Tribe's current reservation boundaries. The Tribe has no specific archival information on the site indicating that it may be a sacred/religious site or other site of Native American traditional cultural value.

We look forward to continued collaboration in the preservation of cultural resources or areas of traditional cultural importance.

Best regards,

Judy Stapp
Director of Cultural Affairs



Appendix E

Historical Society Consultation



Rincon Consultants, Inc.

301 9th Street, Suite 109
Redlands, California 92374

909 253 0705 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

Historical Society Contact Table

Saint Anthony’s Small Water System Project, Near the Community of Mecca, Riverside County, California

Historical Society Contact	Address	Phone Number	Date and Method of Contact	Results
Coachella Valley Historical Society	82616 Miles Ave, Indio, CA 92201	(760) 342 - 6651	1/22/2019; letter 2/15/2019; phone, 2:15 PM 2/22/2019 ; phone, 3:45 PM	2/15/2019 Left detailed message in the archivist’s voice box about project and provided contact information (no response) 2/22/2019 Left detailed message in the archivist’s voice box about project and provided contact information (no response)
Riverside County Historical Commission	4600 Crestmore Road, Riverside, CA 92509-6858	(714) 275-4310 <i>[number no longer in service]</i> (951) 955-4346	1/22/2019; letter 2/15/2019; phone, 2:30 PM 2/22/2019; phone, 3:45 PM	2/15/2019 Voice recording for number stated that the number is no longer in service; Called Park District Staff who support Historical Commission at (951) 955-4346 and left detailed message about project and provided contact information. 2/22/2019 Spoke with Park District Staff who were unable to connect me
Palm Springs Historical Society	221 South Palm Canyon Drive, Palm Springs, CA 92262	(760) 656-7469	1/22/2019; letter 2/15/2019; phone, 2:30 PM	2/15/2019 Left detailed message about project and provided contact information. 2/15/2019 Renee Brown called back and stated that their organization is specific to the Palms Springs area and did not have any specific information to provide regarding the proposed project.



Rincon Consultants, Inc.

301 9th Street, Suite 109
Redlands, California 92374

909 253 0705 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

Historical Society Contact	Address	Phone Number	Date and Method of Contact	Results
Coachella Valley Archaeological Society	P. O. Box 2344 Palm Springs, CA 92263	(760) 565-1196	1/22/2019; letter 2/15/2019; phone, 2:35 PM 2/22/2019; phone, 3:45 PM	2/15/2019 Left detailed message in Britt Wilson’s voice box about project and provided contact information 2/22/2019 Left detailed message in Britt Wilson’s voice box about project and provided contact information
Historical Society of Palm Desert	P.O. Box 77 Palm Desert, CA 92261-0077	(760) 346-6588	1/22/2019; letter 2/15/2019; phone, 2:40 PM	2/15/2019 Transferred to Harry Quinn who provided a historical overview of the area stating that Mecca was originally known as “Walters” and was the main “hub” for the mines in the Mojave desert and was a stop for wagon parties traveling through the area.



Rincon Consultants, Inc.

301 9th Street, Suite 109
Redlands, California 92374

909 253 0705 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

January 22, 2019

Coachella Valley Archaeological Society
P. O. Box 2344
Palm Springs, CA 92263

**Subject: Cultural Resources Technical Study for the Saint Anthony's Small Water System Project,
Near the Community of Mecca, Riverside County, California**

Coachella Valley Archaeological Society,

Rincon Consultants, Inc. (Rincon) has been retained by Woodard & Curran to conduct a cultural resources assessment for the Saint Anthony's Small Water System Project (Project). The purpose of the Project is to consolidate and connect three mobile home park water systems to the Coachella Valley Water District's water system to allow for safe, reliable domestic water to small disadvantaged communities. The proposed Project is primarily located within public street right-of-way along 66th Avenue and Lincoln Street near the community of Mecca in Riverside County. As indicated on the attached map, it is situated in Township 7 South, Range 8 East, and Sections 9-14 and Township 7 South, Range 9 East, Sections 1,8, 17, and 18, of the United States Geological Survey (USGS) *Valerie* and *Mecca* CA 7.5-minute topographic quadrangles.

The purpose of this letter is to inquire about your knowledge of potential historic-period resources within the vicinity that may be impacted by Project development. This Project may involve federal funding; thus, this cultural resources study is being prepared in conformance with the National Environmental Policy Act and Section 106 of the National Historic Preservation Act (NHPA). Rincon is assisting the CVWD with their Section 106 consultation effort, and we are writing to provide you with an opportunity to be involved in the Section 106 consultation process. If you or your organization has any knowledge or specific concerns regarding historic-period resources in the Project area, please respond by telephone at (213) 788-4842 extension 194, or by email at tclarkl@rinconconsultants.com. Please respond within 30 days of receipt of this letter if you are interested in consultation. Thank you for your assistance.

Sincerely,

Rincon Consultants, Inc.

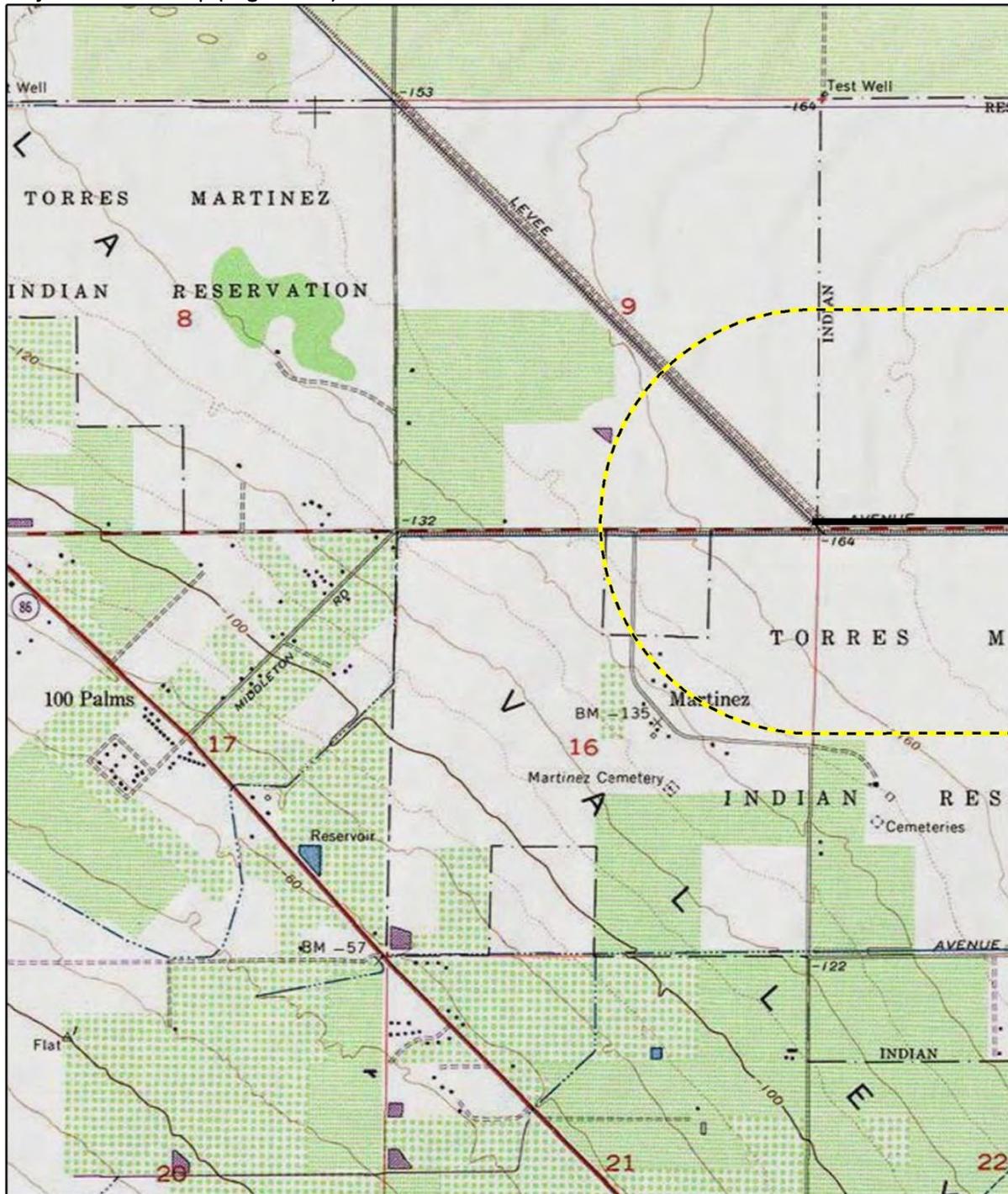
A handwritten signature in black ink that reads "Tiffany Clark". The signature is written in a cursive, flowing style.

Tiffany Clark, PhD, RPA
Senior Archaeologist/ Project Manager

Attached: Project Location Map

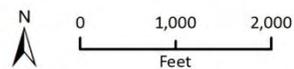


Project Location Map (Page 1 of 3)



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Valerie, Mecca Quadrangles. T07S R08E S09-16, T07S R09E S07,08,17-20. The topographic
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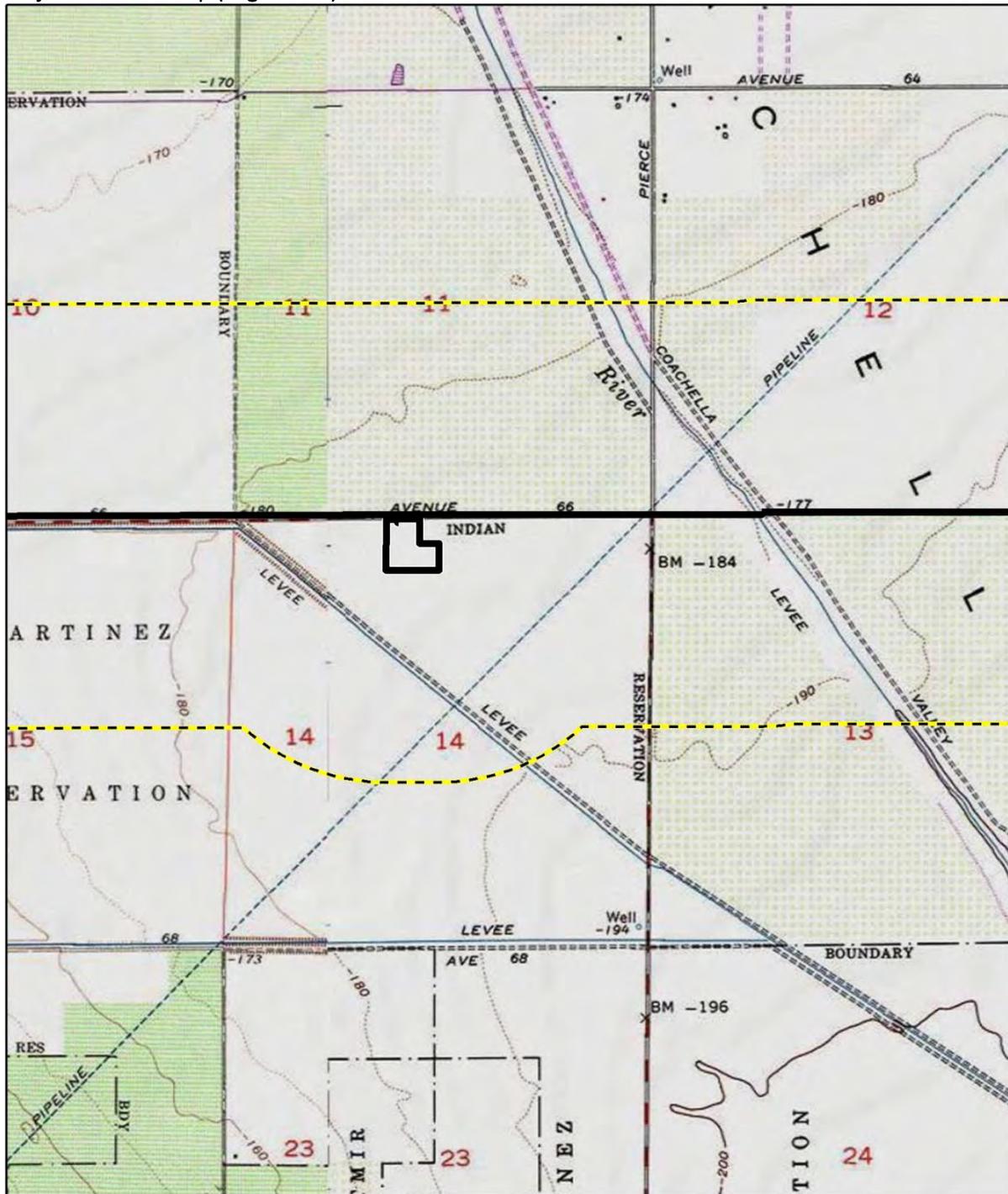
 Area of Potential Effects
 Half-Mile Buffer



CRISearchMap_SaintAnthony

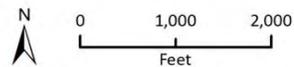


Project Location Map (Page 2 of 3)



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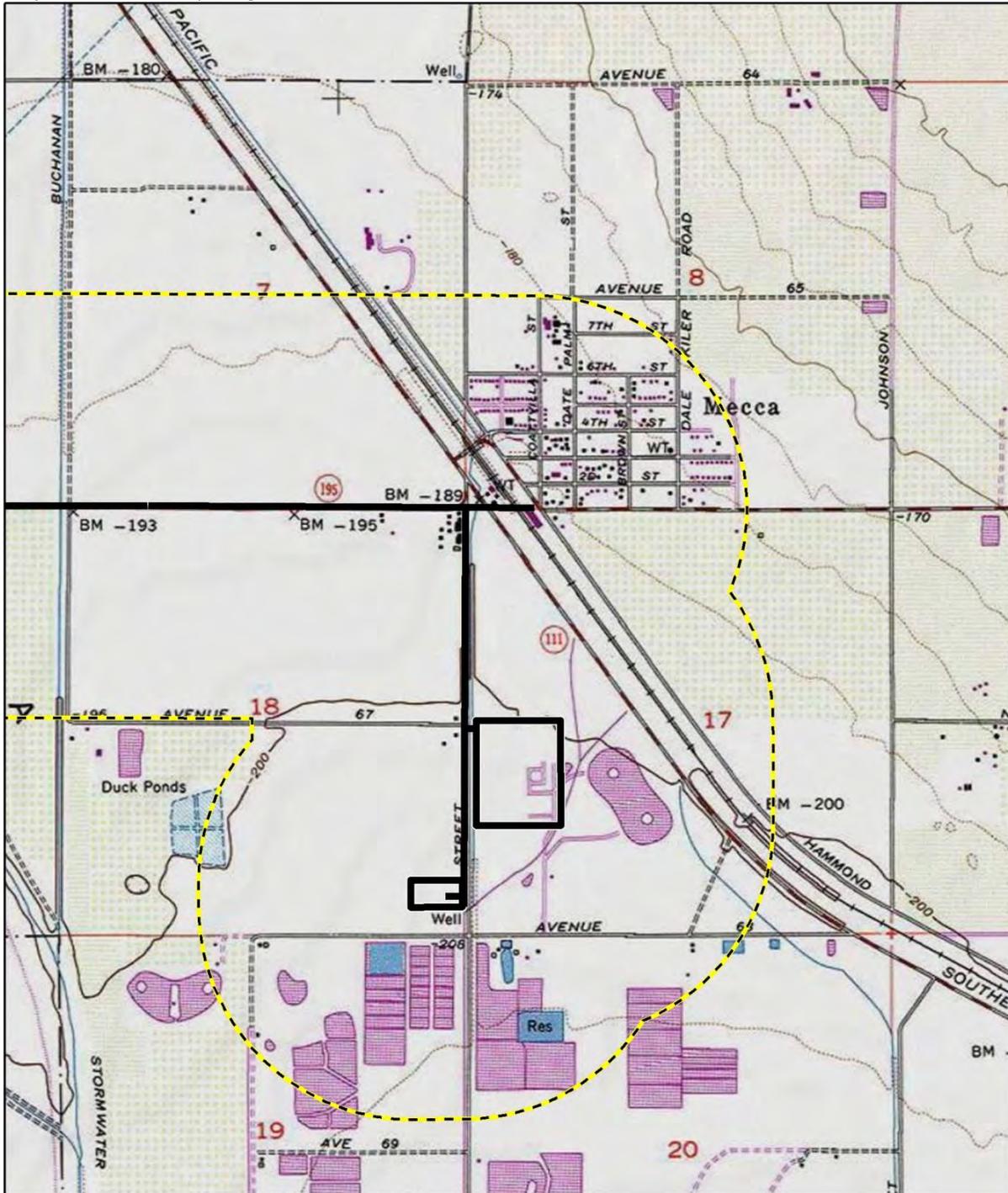
- Area of Potential Effects
- Half-Mile Buffer



CRRecords Search Map, SAAnthony

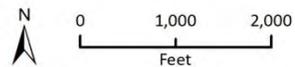


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CityRecords Services, Map_SaintAnthony



Rincon Consultants, Inc.

301 9th Street, Suite 109
Redlands, California 92374

909 253 0705 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

January 22, 2019

Coachella Valley Historical Society
82616 Miles Avenue
Indio, CA 92201

**Subject: Cultural Resources Technical Study for the Saint Anthony's Small Water System Project,
Near the Community of Mecca, Riverside County, California**

Coachella Valley Historical Society,

Rincon Consultants, Inc. (Rincon) has been retained by Woodard & Curran to conduct a cultural resources assessment for the Saint Anthony's Small Water System Project (Project). The purpose of the Project is to consolidate and connect three mobile home park water systems to the Coachella Valley Water District's water system to allow for safe, reliable domestic water to small disadvantaged communities. The proposed Project is primarily located within public street right-of-way along 66th Avenue and Lincoln Street near the community of Mecca in Riverside County. As indicated on the attached map, it is situated in Township 7 South, Range 8 East, and Sections 9-14 and Township 7 South, Range 9 East, Sections 1,8, 17, and 18, of the United States Geological Survey (USGS) *Valerie* and *Mecca* CA 7.5-minute topographic quadrangles.

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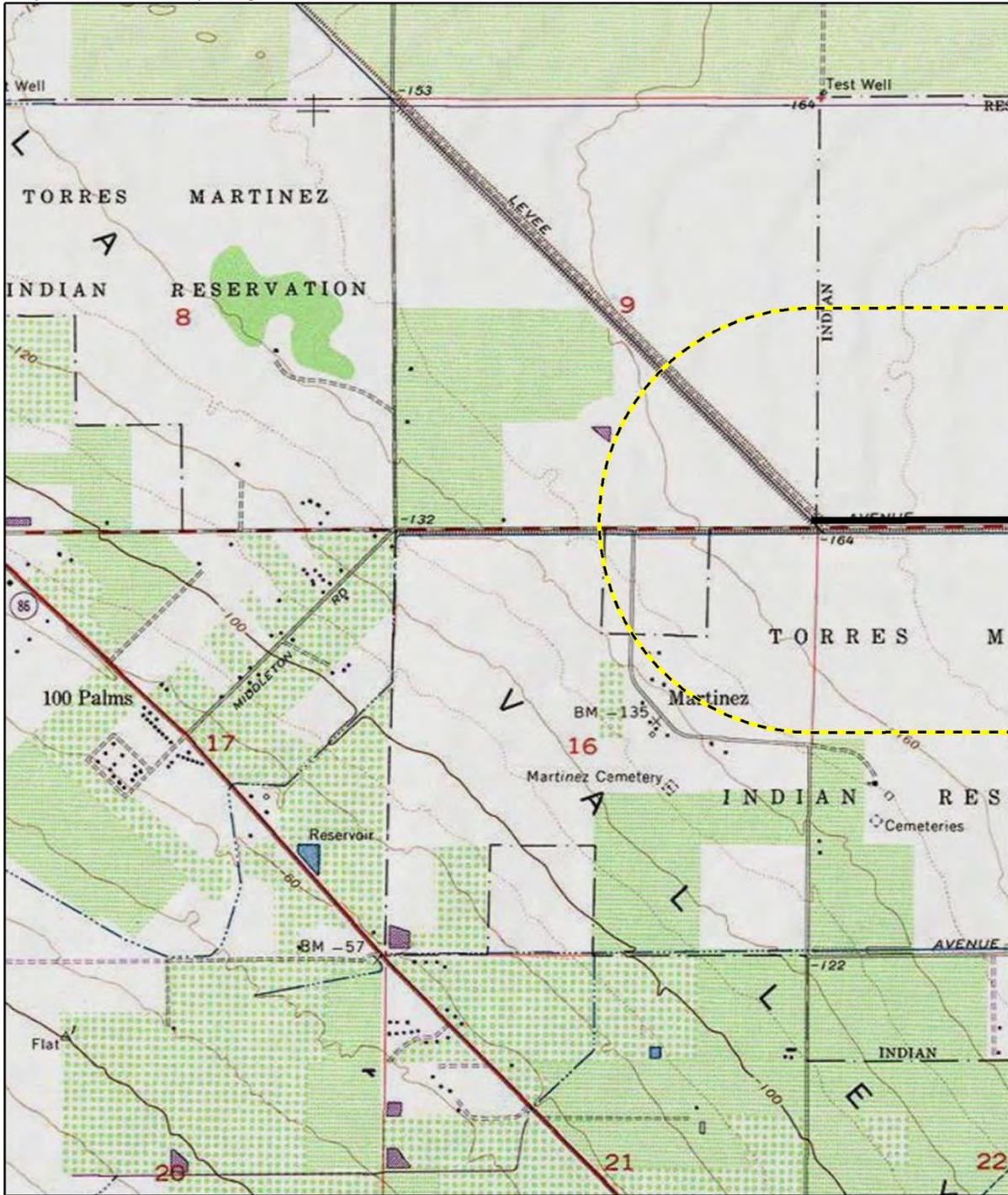
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Tiffany Clark, PhD, RPA
Senior Archaeologist/ Project Manager

Attached: Project Location Map

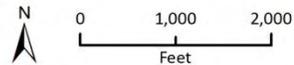


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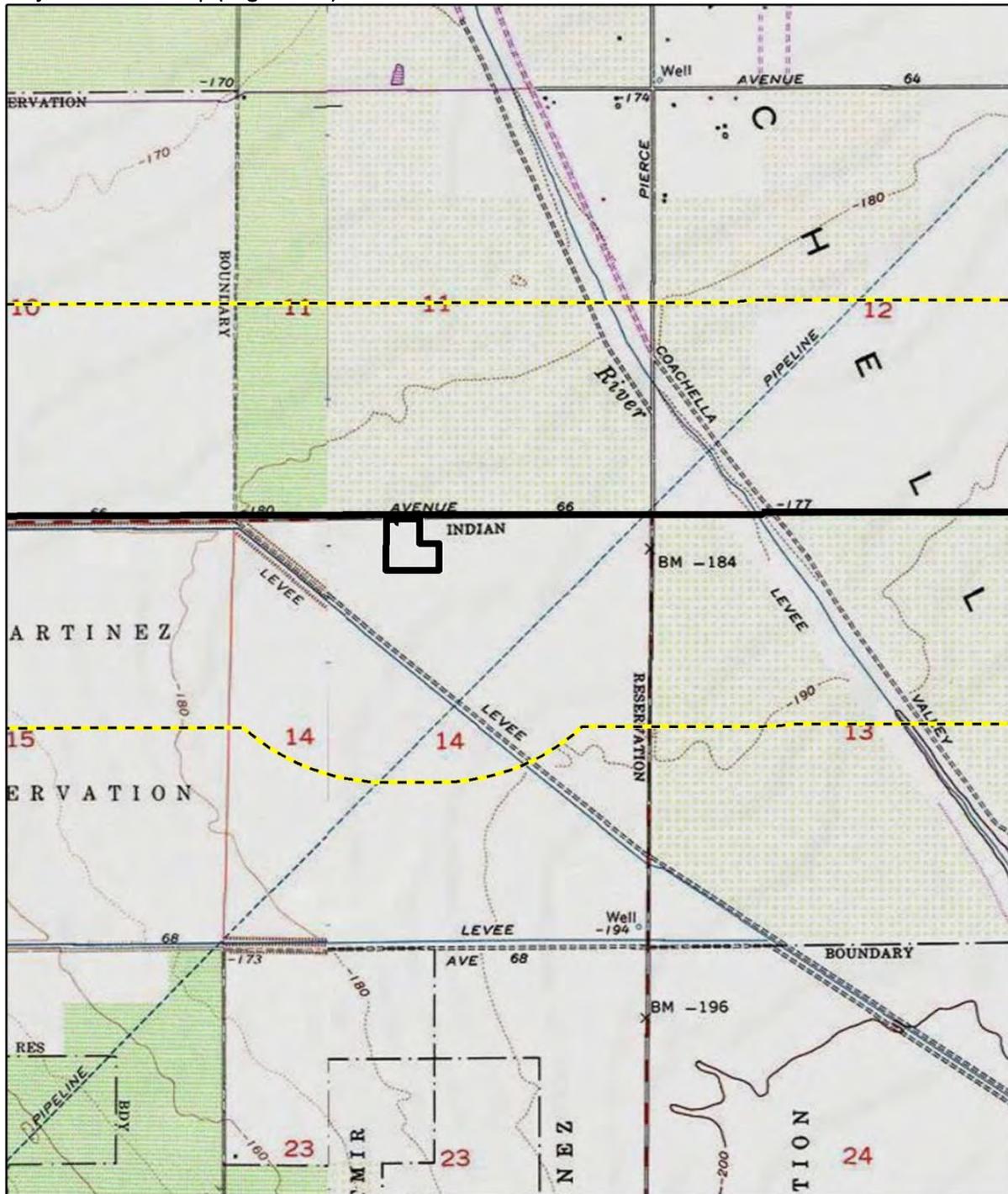
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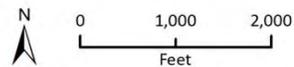


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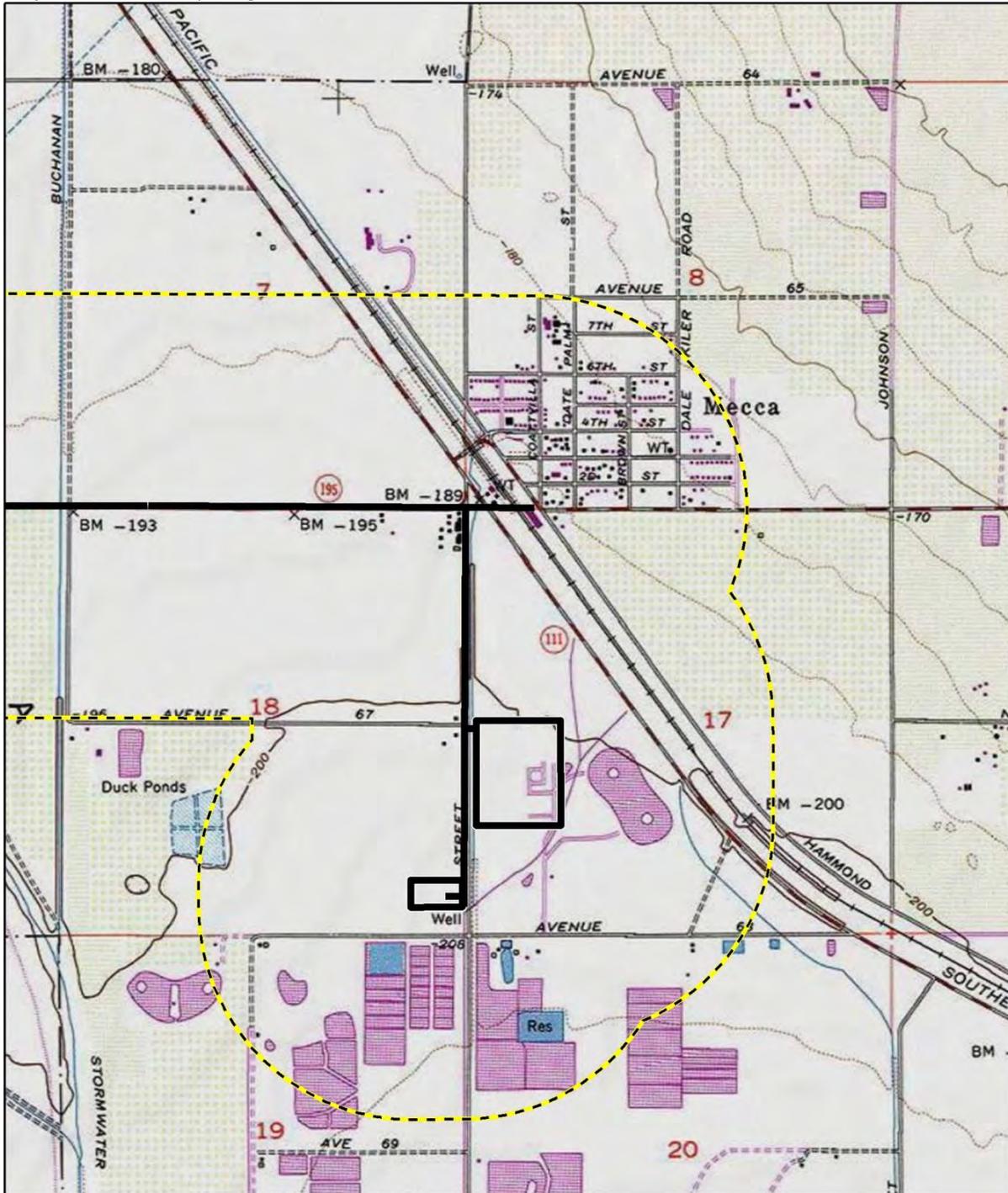
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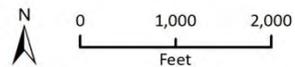


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January 22, 2019

Historical Society of Palm Desert
P.O. Box 77
Palm Desert, CA 92261-0077

**Subject: Cultural Resources Technical Study for the Saint Anthony's Small Water System Project,
Near the Community of Mecca, Riverside County, California**

Historical Society of Palm Desert,

Rincon Consultants, Inc. (Rincon) has been retained by Woodard & Curran to conduct a cultural resources assessment for the Saint Anthony's Small Water System Project (Project). The purpose of the Project is to consolidate and connect three mobile home park water systems to the Coachella Valley Water District's water system to allow for safe, reliable domestic water to small disadvantaged communities. The proposed Project is primarily located within public street right-of-way along 66th Avenue and Lincoln Street near the community of Mecca in Riverside County. As indicated on the attached map, it is situated in Township 7 South, Range 8 East, and Sections 9-14 and Township 7 South, Range 9 East, Sections 1,8, 17, and 18, of the United States Geological Survey (USGS) *Valerie* and *Mecca* CA 7.5-minute topographic quadrangles.

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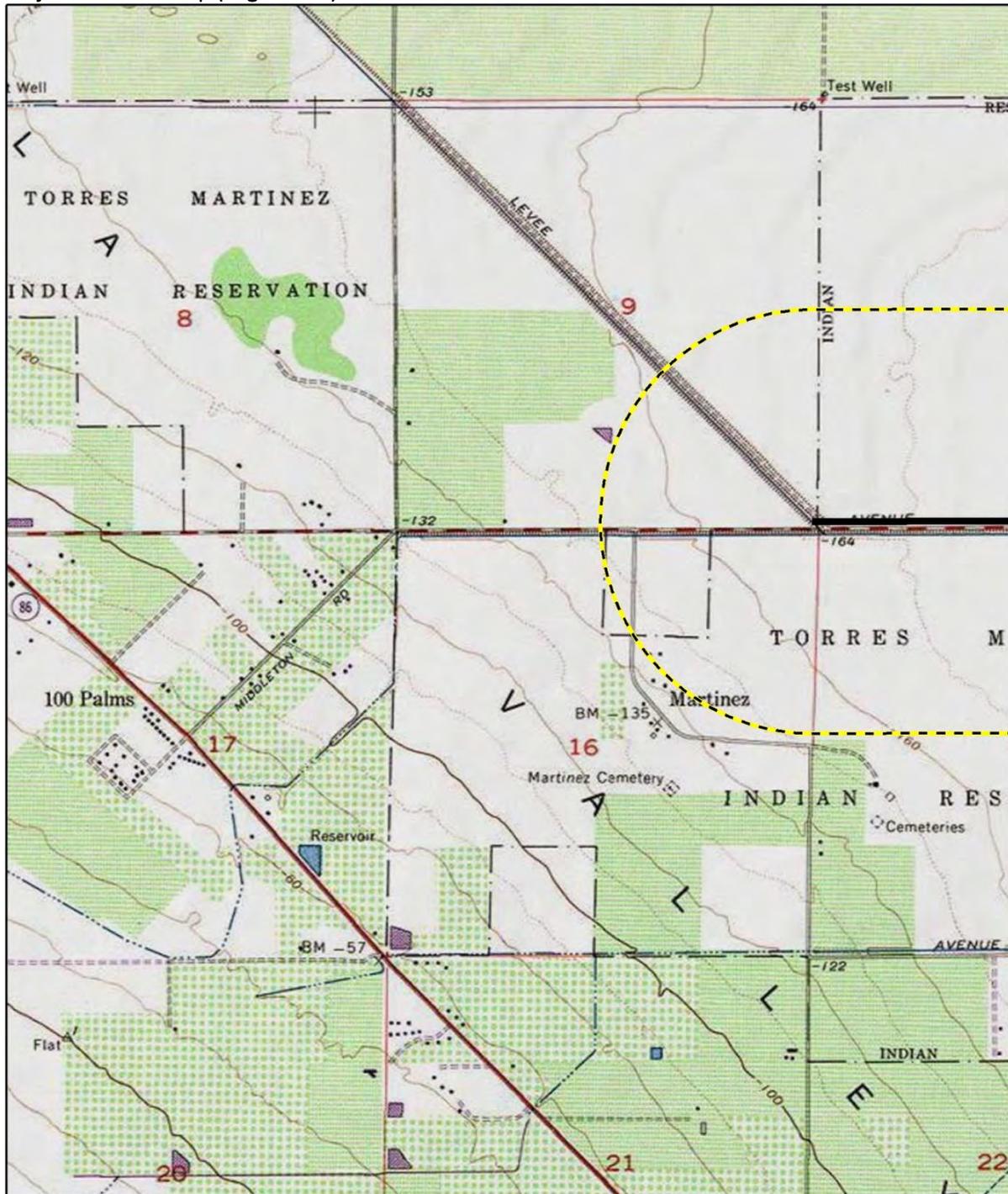
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Tiffany Clark, PhD, RPA
Senior Archaeologist/ Project Manager

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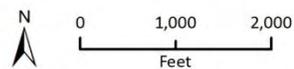


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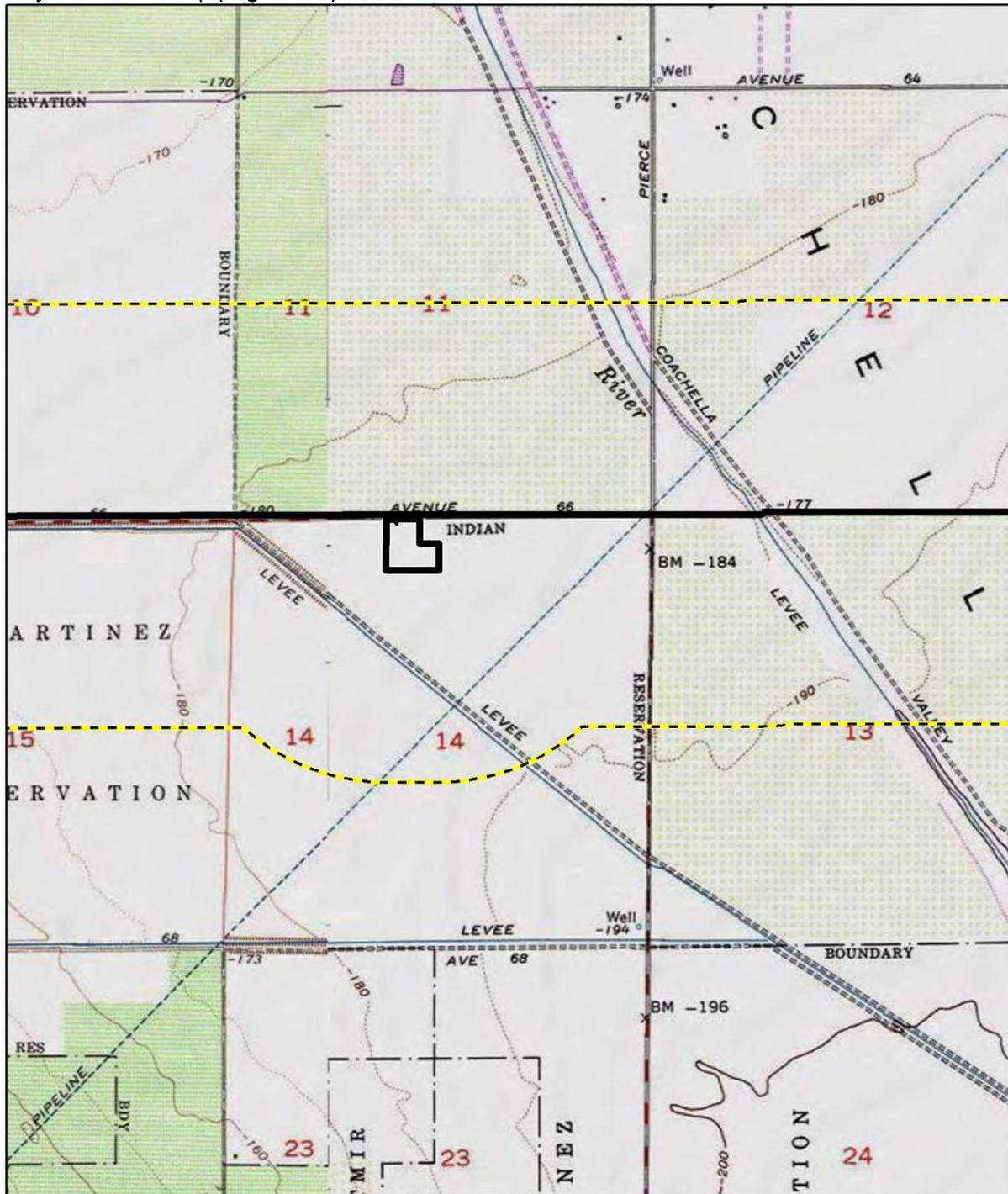
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CRISearchMap_SaintAnthony

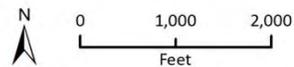


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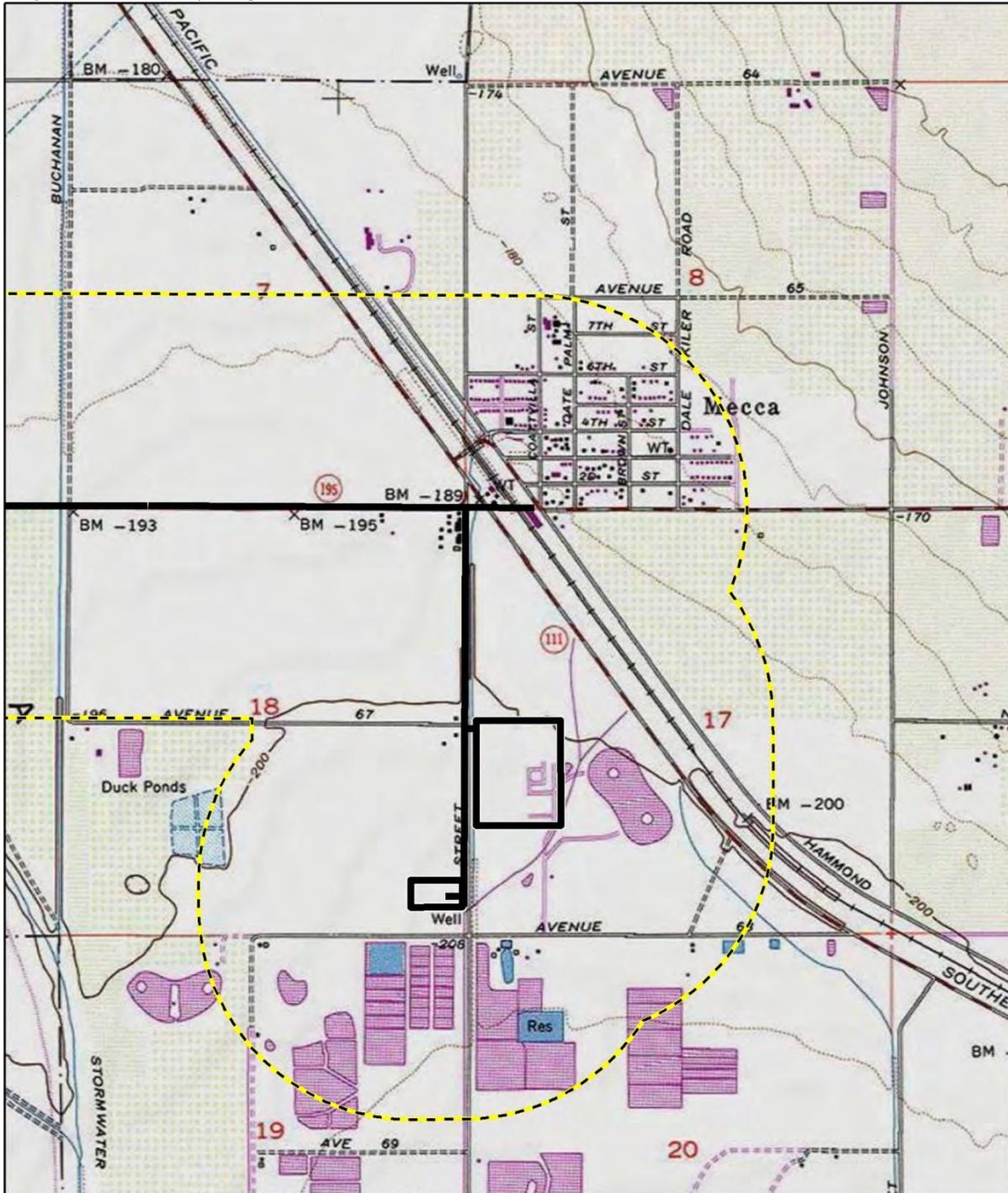
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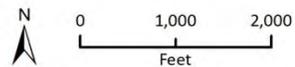


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January 22, 2019

Palm Springs Historical Society
221 South Palm Canyon Drive
Palm Springs, CA 92262

**Subject: Cultural Resources Technical Study for the Saint Anthony's Small Water System Project,
Near the Community of Mecca, Riverside County, California**

Palm Springs Historical Society,

Rincon Consultants, Inc. (Rincon) has been retained by Woodard & Curran to conduct a cultural resources assessment for the Saint Anthony's Small Water System Project (Project). The purpose of the Project is to consolidate and connect three mobile home park water systems to the Coachella Valley Water District's water system to allow for safe, reliable domestic water to small disadvantaged communities. The proposed Project is primarily located within public street right-of-way along 66th Avenue and Lincoln Street near the community of Mecca in Riverside County. As indicated on the attached map, it is situated in Township 7 South, Range 8 East, and Sections 9-14 and Township 7 South, Range 9 East, Sections 1,8, 17, and 18, of the United States Geological Survey (USGS) *Valerie* and *Mecca* CA 7.5-minute topographic quadrangles.

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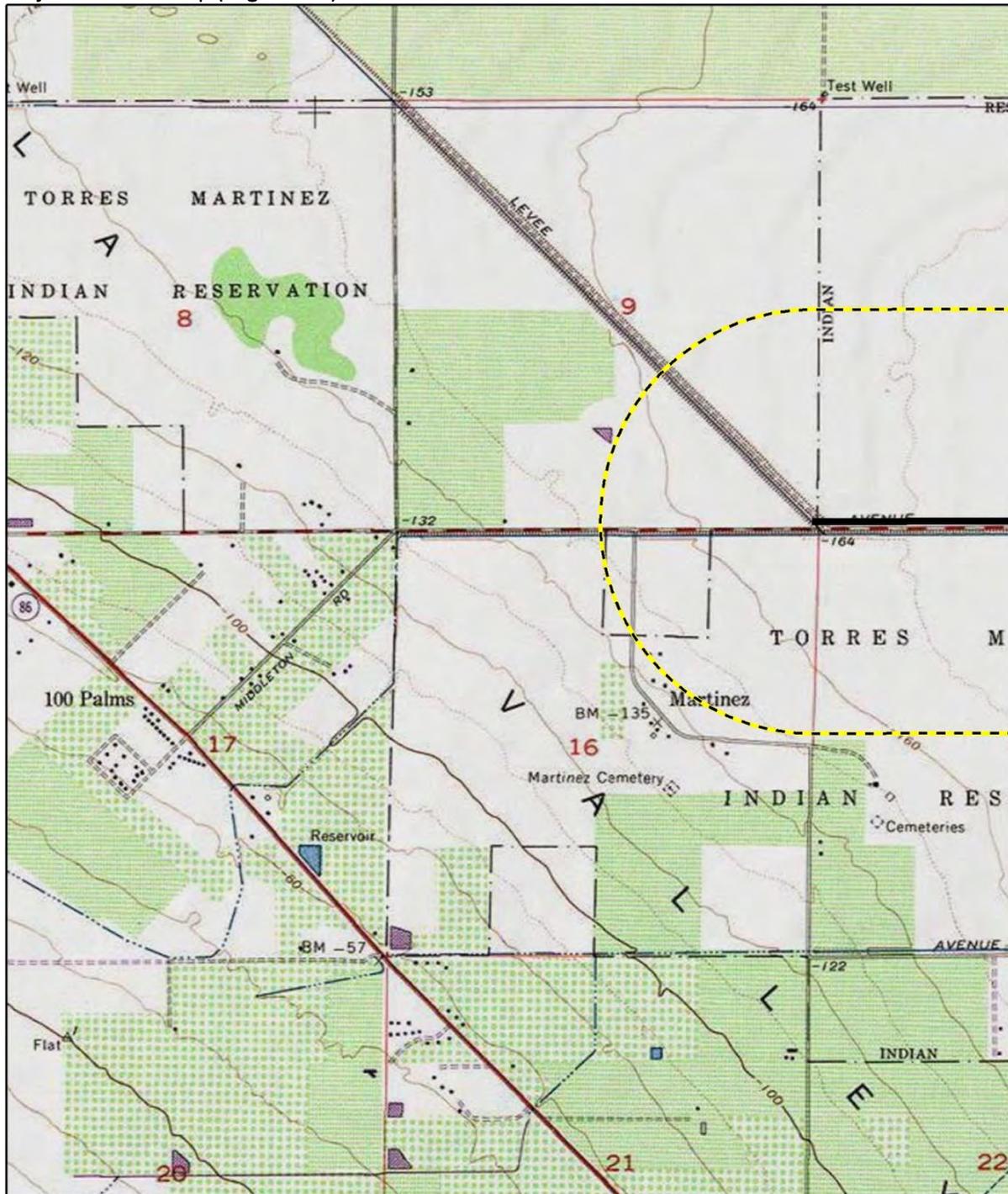
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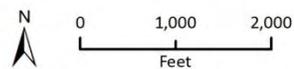


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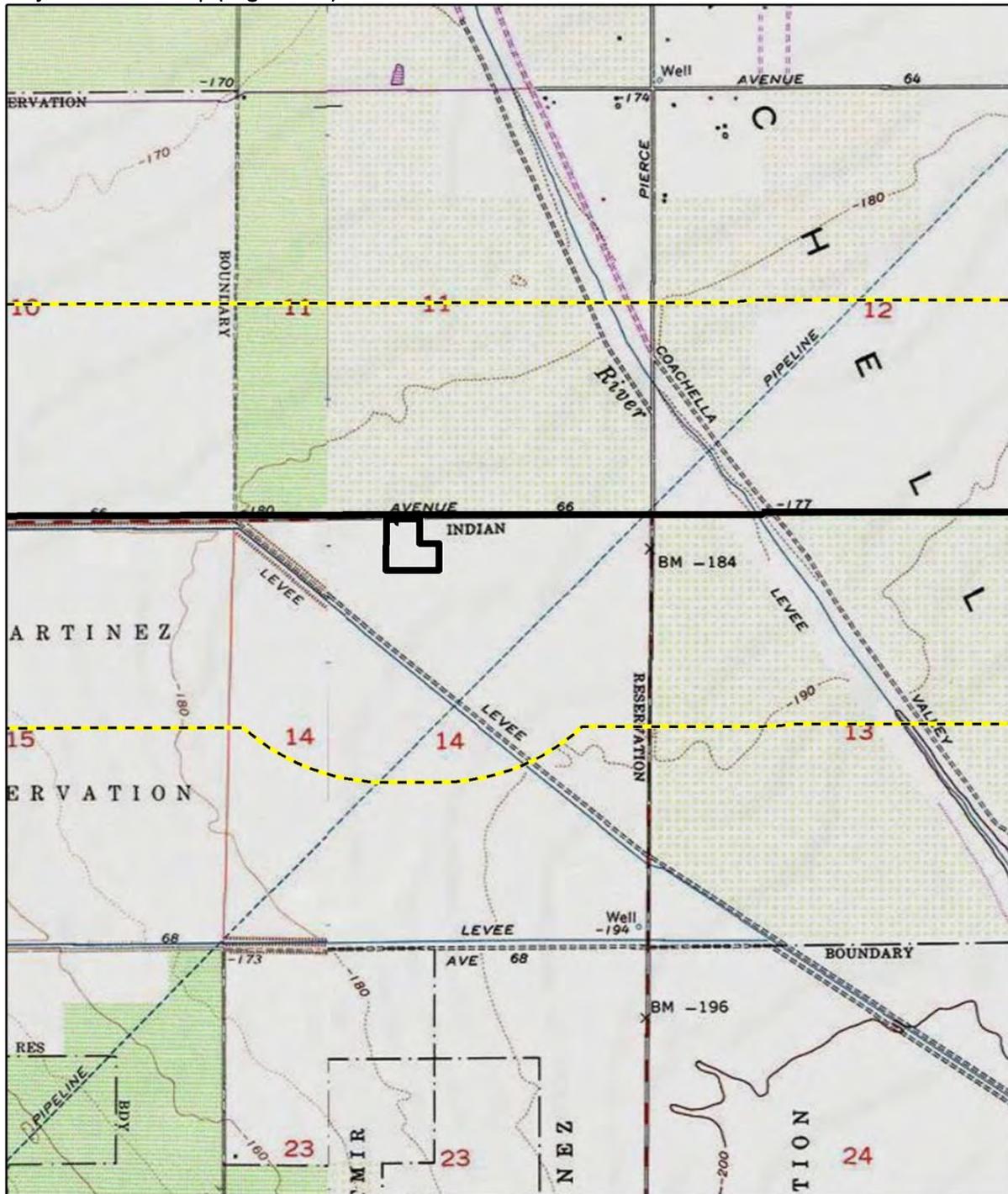
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CRISearchMap_SaintAnthony

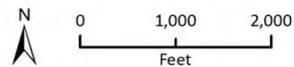


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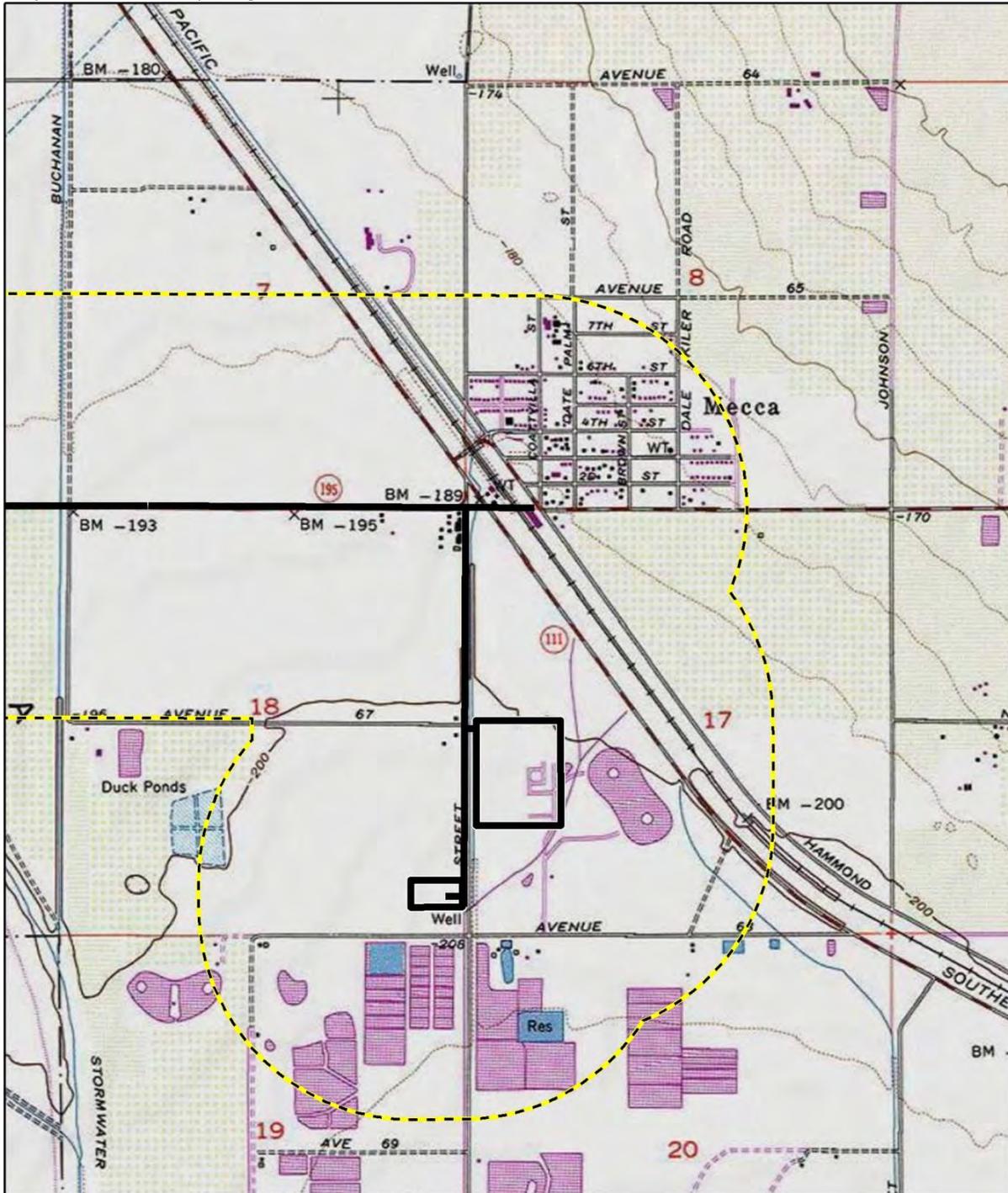
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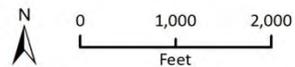


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January 22, 2019

Riverside County Historical Commission
4600 Crestmore Road
Riverside, CA 92509-6858

**Subject: Cultural Resources Technical Study for the Saint Anthony's Small Water System Project,
Near the Community of Mecca, Riverside County, California**

Riverside County Historical Commission,

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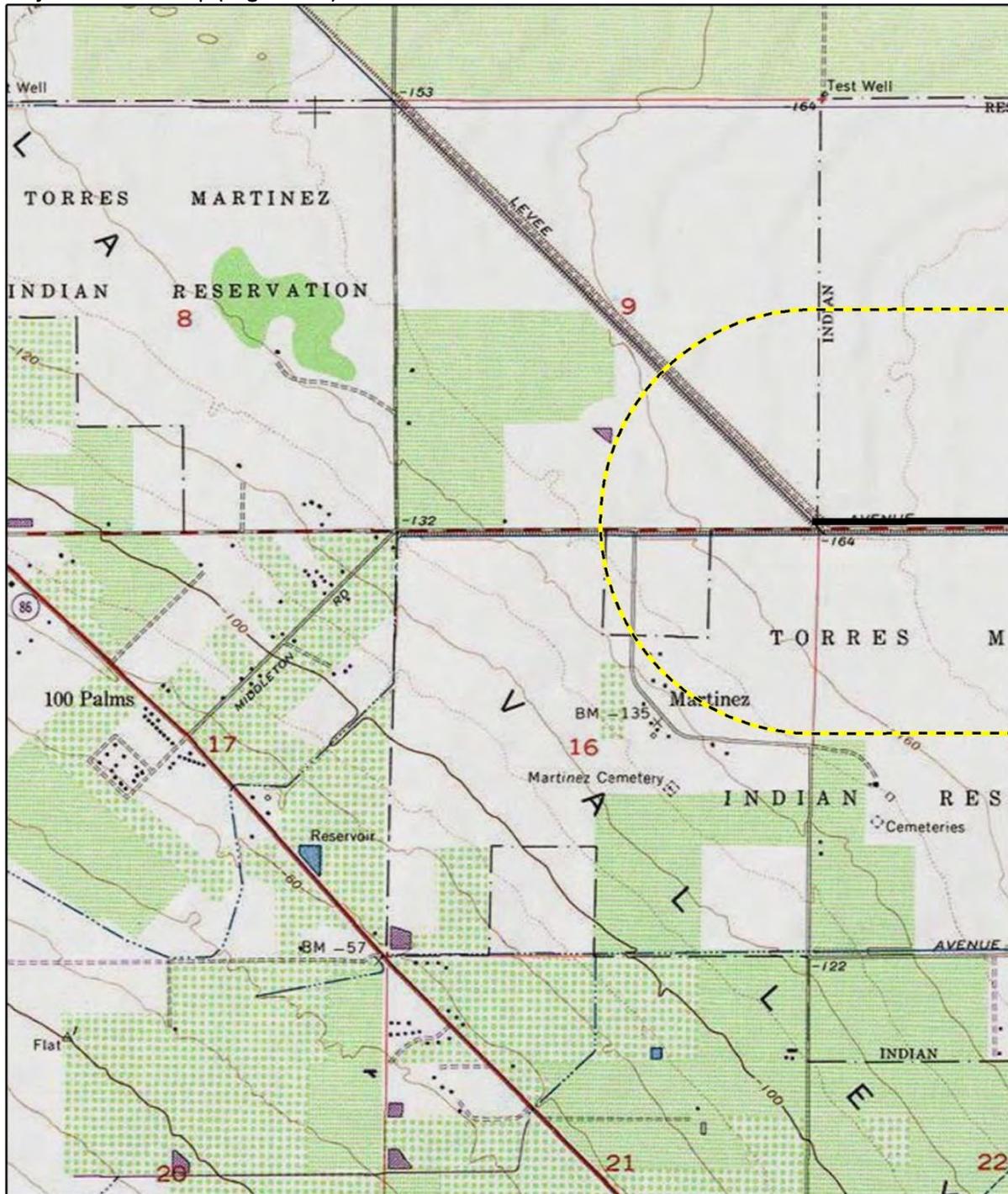
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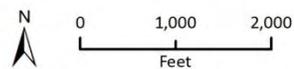


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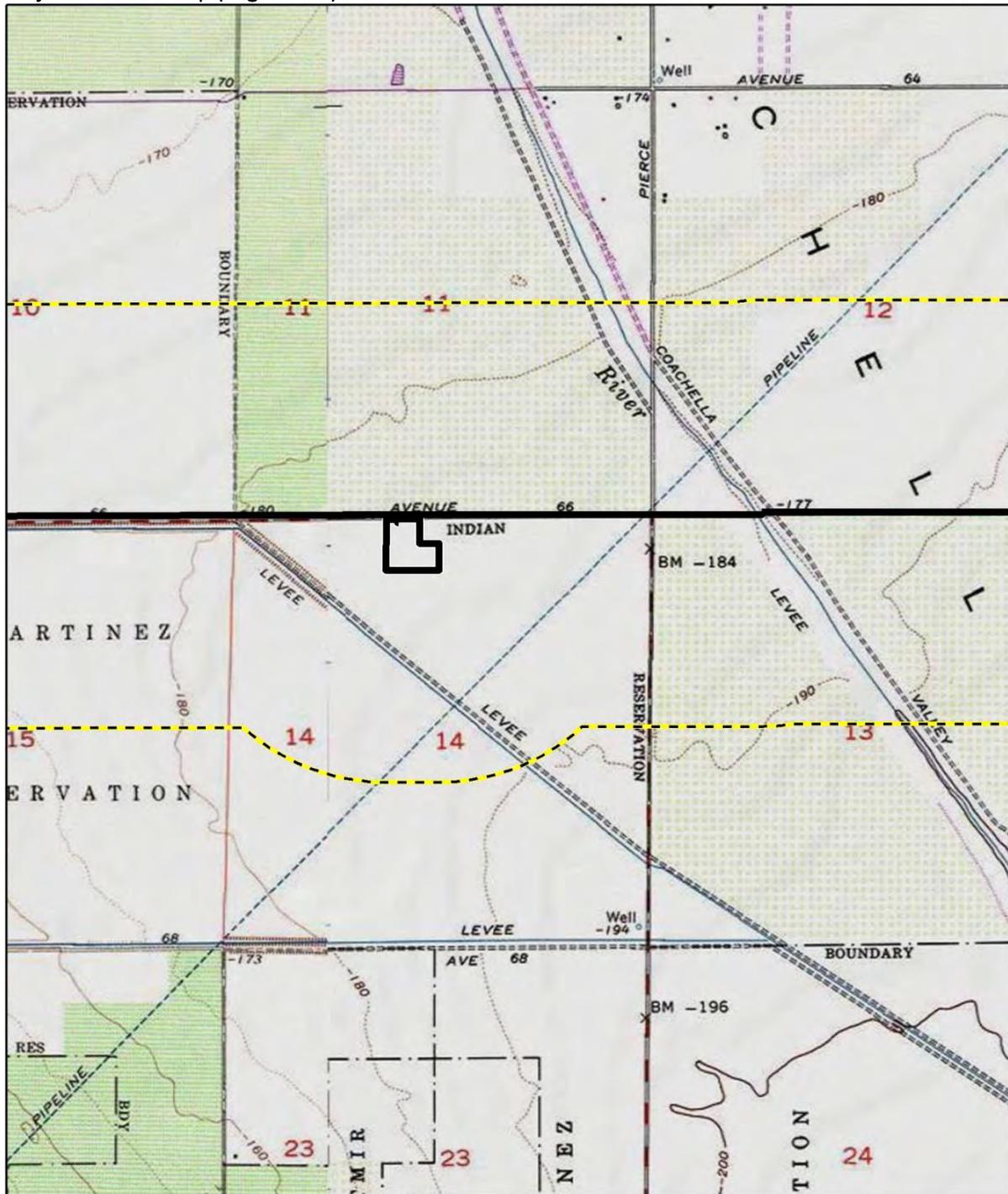
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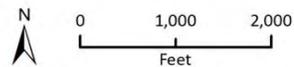


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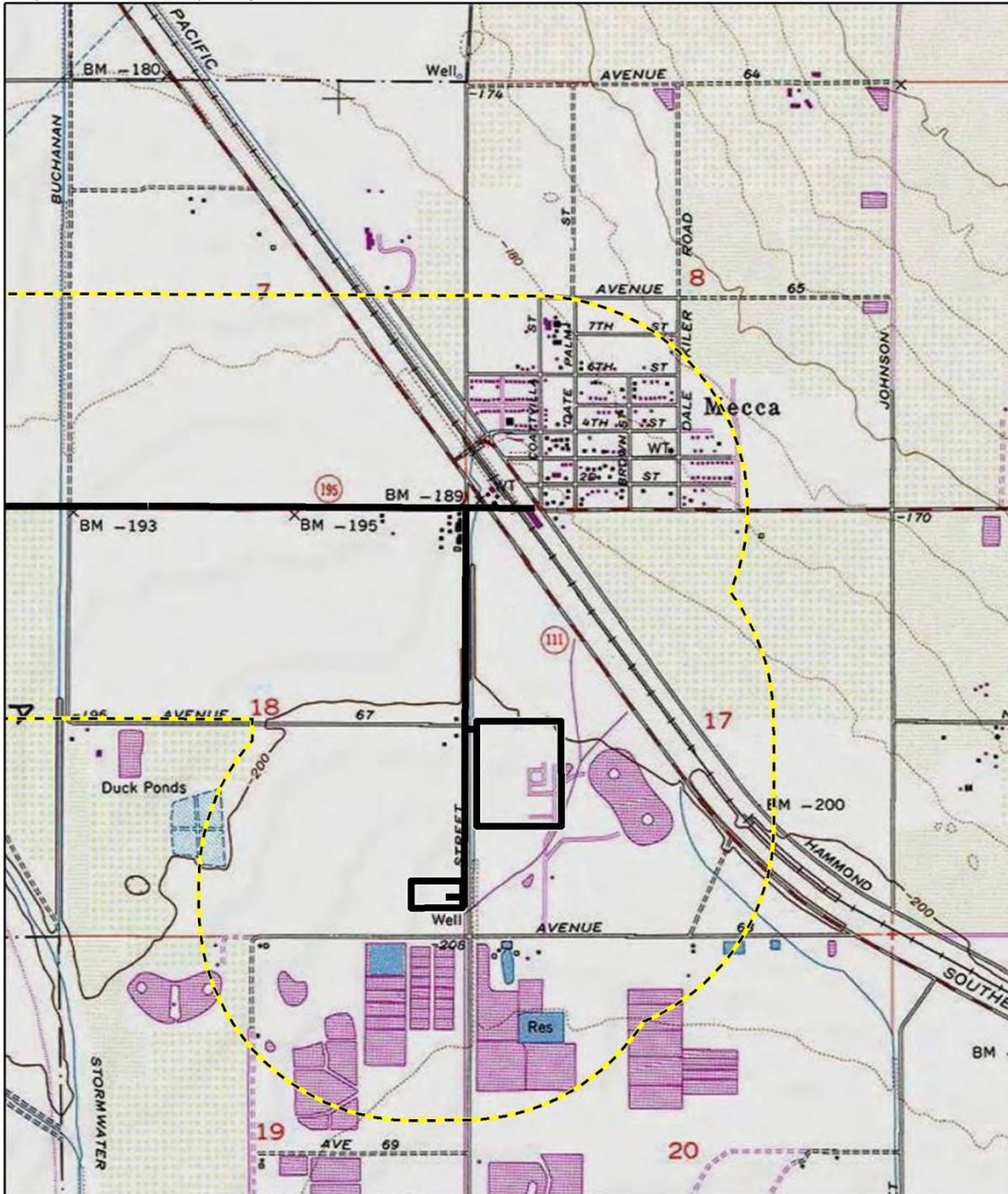
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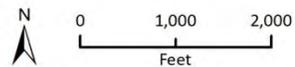


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Appendix F

DPR 523 Forms

CONTINUATION SHEET

*Recorded by: Lindsay Porras, Rincon Consultants

*Date: February 12, 2019

Continuation Update

Avenue 66 (P-33-020844) was revisited by Rincon Consultants on February 12, 2019 as part of the Coachella Valley Water Supply Project, Saint Anthony Mobile Home Park Water Consolidation Project. The resource consists of a 26-foot-wide, two-lane, asphalt-paved roadway flanked by gravel and dirt shoulders that measure as much as 15 feet in width (Figure 3). The appearance of the road remains largely unchanged since Stanton's recordation in 2012. Given no significant alterations have occurred to P-33-020844 since its original documentation, the previous evaluation of Avenue 66 appears to remain valid; the resource is ineligible for listing on the NRHP and CRHR.

State of California – The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P-33-020839 UPDATE
 HRI #
 Trinomial
 NRHP Status Code 6Z

Other Listings
 Review Code

Reviewer

Date

Page 1 of 6

*Resource Name or #: Lincoln Street

P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted *a. County: Riverside

*b. USGS 7.5' Quad: Mecca Date: 1955 Township 7S, Range 9E, Section 17, 18 S.B.B.M.

c. Address: N/A City: Mecca Zip: 92254

d. UTM: Zone: mE/ mN (G.P.S.)

e. Other Locational Data: The subject segment begins at the Lincoln Street/66th Avenue intersection and terminates just north of 68th Avenue.

***P3a. Description:**

The subject resource is a segment of Lincoln Street, a public road located just west of the community of Mecca. Generally straight and oriented directly north-to-south, the subject segment represents one mile of the roadway's approximately 3.5-mile overall course. The segment begins in the north at 66th Avenue and ends just north of 68th Avenue. Its asphalt-paved driving surface measures about 27 feet across and is flanked 12.5-foot earthen shoulders, giving the right-of-way a total width of approximately 52 feet. The paved surface is essentially flush with the unimproved shoulders. Although a short length of the segment approaching the intersection with 66th Avenue is delineated as a two-lane road, the remainder is unmarked. Its surroundings are rural, with agricultural and residential uses predominating on the west side of the street and undetermined uses on the east.

*P3b. Resource Attributes: HP39. Other (road)

*P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)

P5a. Photo or Drawing



P5b. Description of Photo:

Lincoln Road, camera facing south, February 12, 2019.

***P6. Date Constructed/Age and Sources:**

Historic Prehistoric Both

Between 1914 and 1932 (Government Land Office 1914; UCSB Map & Imagery Lab 1932)

***P7. Owner and Address:**

N/A

***P8. Recorded by:**

Lindsay Porras
 Rincon Consultants
 2215 Faraday Avenue, Suite A
 Carlsbad, CA 92008

***P9. Date Recorded:**

February 12, 2019

***P10. Survey Type:**

Intensive

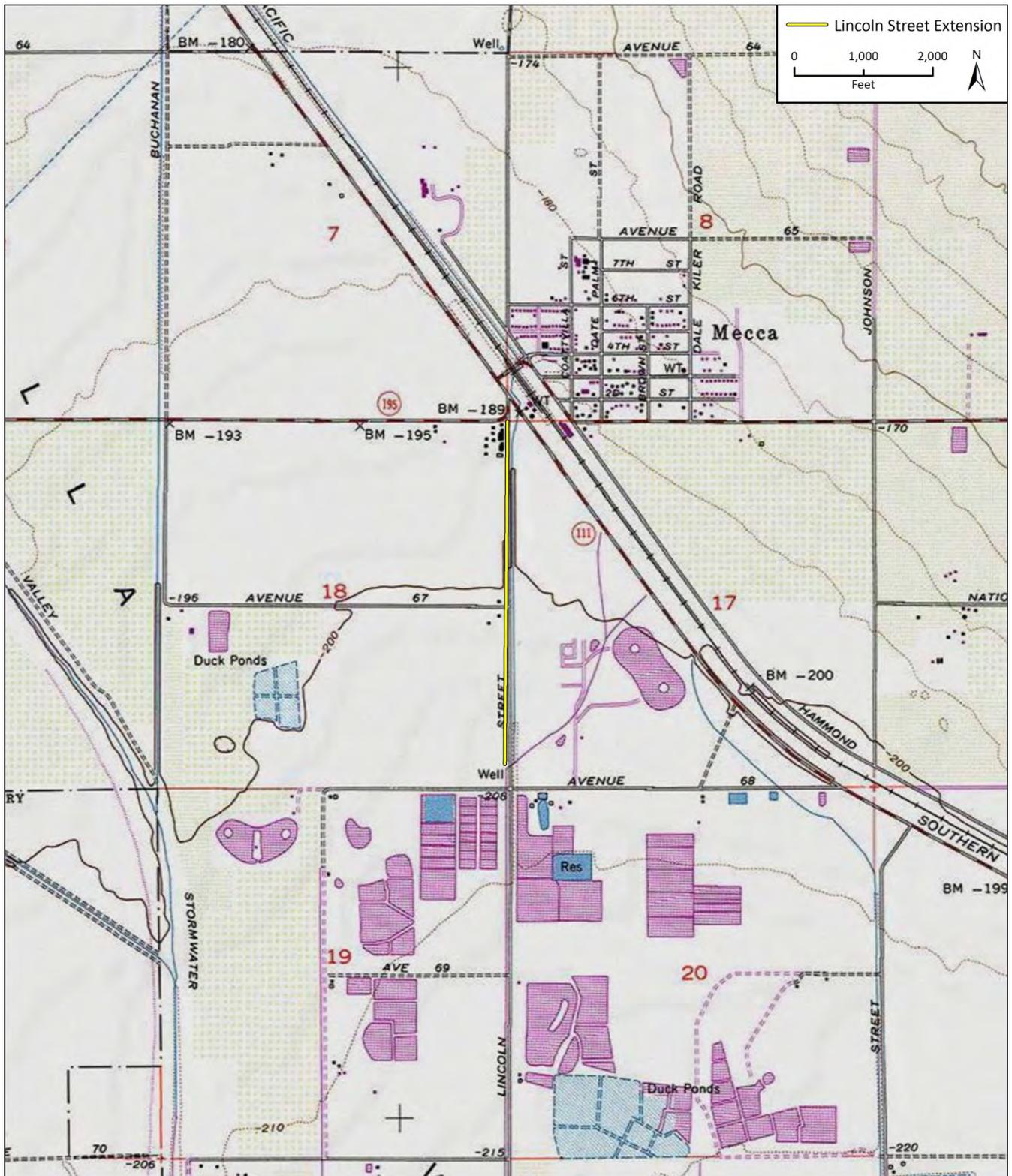
***P11. Report Citation:**

Porras, Lindsay et al. 2019. *East Coachella Valley Water Supply Project, Saint Anthony Mobile Home Park Water Consolidation Project, Community of Mecca, Riverside County, California*. Rincon Consultants Project No. 18-06790. Report on file at the Eastern Information Center, University of California, Riverside.

*Attachments: NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record

Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record

Artifact Record Photograph Record Other (List):



BUILDING, STRUCTURE, AND OBJECT RECORD

*Resource Name or # Lincoln Street

*NRHP Status Code 6Z

Page 3 of 6

B1. Historic Name: N/A

B2. Common Name: N/A

B3. Original Use: Public road

B4. Present Use: Public road

*B5. Architectural Style: N/A

*B6. Construction History:

Historic maps and aerial photos suggest the subject segment of Lincoln Street was completed sometime between 1914 and 1932 (USGS 2019; UCSB Map & Imagery Lab 1932). It is unclear, based on available sources, whether the segment in question was originally paved.

*B7. Moved? No Yes Unknown Date: N/A Original Location: N/A

*B8. Related Features: None

B9a. Architect: Unknown

b. Builder: Unknown

*B10. Significance: Theme N/A

Area N/A

Period of Significance N/A

Property Type N/A

Applicable Criteria N/A

Constructed sometime between 1914 and 1932, the subject resource is an approximately one-mile segment of Lincoln Street located just southwest of the community of Mecca. The resource was previously recorded by Statistical Research, Inc. (SRI) in February 2012. SRI did not evaluate the resource for eligibility for the National Register or the California Register or for designation in Riverside County.

Historic-era settlement of the area surrounding the subject resource began by the late 1870s, when the Southern Pacific Railroad established a depot at what was then called Walters. As late as the mid-1880s, the small community of Walters served as a "provisioning place for miners and prospectors," according to one history of the area. Farming and ranching were practiced in the area by the turn of the twentieth century. Real estate developer R. Holtby Myers of the Mecca Land Company changed the name of the community to Mecca in 1904 as part his firm's campaign sell property in the surrounding countryside to settler-farmers (*Coachella Valley's Golden Years* 1968; Mecca Promotion Company 1904). Date farming became an important enterprise in the area (*Coachella Valley's Golden Years* 1968).

(Continued)

B11. Additional Resource Attributes: N/A

*B12. References:

Bureau of Land Management (BLM). Var. "General Land Office Records." [Online database.] GLO survey records viewed online. <https://glorerecords.blm.gov/search>. Accessed March 2019.

Coachella Valley's Golden Years. 1968. Indio, Calif.: Desert Printing Company. Online at Internet Archive Wayback Machine, https://web.archive.org/web/20150201065734/http://www.cvwd.org/news/publication_docs/coachella_valleys_golden_years.pdf. Accessed March 2019.

Mecca Promotion Committee of Mecca, Cal. 1904. Los Angeles: Baumgardt Publishing Company. Online via Internet Archive, at <https://archive.org/details/meccacalifornia00mecc>. Accessed March 2019.

Netonline. "Historic Aerials." [digital photograph database]. Images of the Project Area viewed online. <https://www.historicaerials.com/viewer>. Accessed March 2019.

Newspapers.com. "Home." [digitized archive]. Newspaper Articles, various by location and date. <https://www.newspapers.com/>. Accessed March 2019.

UCSB Map & Imagery Lab. Various. "FrameFinder" [aerial photograph database]. Aerials of project area viewed online. http://mil.library.ucsb.edu/ap_indexes/FrameFinder/. Accessed March 2019.

(Continued)

See continuation sheet.

(This space reserved for official comments.)

BUILDING, STRUCTURE, AND OBJECT RECORD

*Resource Name or # Lincoln Street

*NRHP Status Code 6Z

Page 4 of 6

B13. Remarks:

*B14. Evaluator: James Williams, Rincon Consultants

*Date of Evaluation: March 20, 2019

See continuation sheet.

(This space reserved for official comments.)

*Recorded by: Lindsay Porras, Rincon Consultants

*Date: February 12, 2019

■ Continuation □ Update

***B10. Significance (continued):**

Although its date of construction remains uncertain, Lincoln Street appears to have been constructed in the context of the Mecca area's development as an agricultural settlement. Maps dating as late as 1914 depict the area's roadways as a limited network of irregular paths (BLM 1914). The earliest available source depicting the subject segment is a 1932 aerial photograph showing it as part of a limited road system that conformed to the survey grid. Although it was later extended, around this the time, the full extent of the road began in the north at Southern Pacific Railroad crossing and terminated in the south near the north bank of the Whitewater River. In the vicinity of the road, land was unevenly developed for farming. It is unclear whether the road, was paved at the time the photo was taken (UCSB Map & Imagery Lab 1932; USGS 1941). However, the 1941 *Coachella* 15-minute topographical map shows that the northern two-thirds of the road (including the subject segment) were paved (USGS 1941). Between 1943 and 1955, the road was extended to the north from Mecca and to the south beyond the Whitewater River (USGS 1943 and 1955). Historic aerial photographs suggest the area surrounding the subject resource has essentially retained the primarily agricultural character it attained by the early 1930s (NETROnline 2019).

The subject resource does not appear eligible for listing in the National Register of Historic Places or the California Register or for local designation in Riverside County. The segment of Lincoln Street presently under evaluation is likely associated with agricultural development on the outskirts of the community of Mecca, but, due to its comparatively recent construction date, is not linked to the early establishment of Mecca. Neither does the road appear to have achieved significance in later years. By all indications, it is a minor, local roadway in an area that is also severed by the larger State Route 111. Research for this study did not suggest it played a role in any other historical events or with any individuals know to have made important historical contributions (Criteria A/1/1 and B/2/2). Additionally, the subject road segment is of a ubiquitous type and does not represent a distinctive engineering design or method of construction (Criteria C/3/3). Further, the subject resource is has not yielded and is unlikely to yield important prehistorical or historical information (Criteria D/4/4). Finally, the subject resource is not a contributor to an existing Historic Preservation District designated by Riverside County and does not merit listing as a contributor to any potential County-designated historic district.

***B12. References (continued):**

United States Geological Survey (USGS). "Get Maps: topoView." [Online database.] *Mecca, Calif.*, 1904 and 1955 and *Coachella, Calif.*, 1941 and 1943 topographic maps viewed online. <https://ngmdb.usgs.gov/topoview/viewer>. Accessed March 2019.

University of California, Riverside, Center for Bibliographical Studies and Research. "California Digital Newspaper Collection." [digitized archive]. Newspaper Articles, Daily Sun and Pacific Rural Press. <https://cdnc.ucr.edu/>. Accessed March 2019.

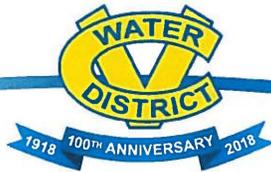
*Recorded by: Lindsay Porras, Rincon Consultants

*Date: February 12, 2019

■ Continuation □ Update

Sketch Map:





COACHELLA VALLEY WATER DISTRICT

Established in 1918 as a public agency

GENERAL MANAGER
Jim Barrett

ASSISTANT GENERAL MANAGER
Robert Cheng

May 17, 2019

«First Name» «Last Name»
«Title»
«Native American Tribe»
«Address»
«City_State_Zip»

Dear «Salutation»«Last_Name»:

Subject: Saint Anthony Mobile Home Park Water Consolidation Project
Formal Notification of Assembly Bill (AB) 52 Consultation regarding Tribal Resources under the California Environmental Quality Act (CEQA) Public Resources Code (PRC) §21080.3.1: AB 52 (Gatto, 2014)

The Coachella Valley Water District (CVWD) is conducting AB52 consultation for the *Saint Anthony Mobile Home Park Water Consolidation Project* (proposed project). Please consider this letter and preliminary project information as the initiation for AB52 Consultation for Tribal Resources under CEQA PRC §21080.3.1; AB 52 (Gatto, 2014).

CVWD's Environmental Services Department staff would like to meet with you at your earliest convenience to discuss the proposed project and AB52 compliance. Please respond within 30 days if you would like to consult on this project.

CVWD understands that Tribal information submitted to our agency shall be kept confidential (PRC §21082.3(c)(1)). The purpose of AB52 consultation is to obtain Tribal expertise on the subject project area (PRC §21080.3.1(a)) via Tribal submittal of comments, information and/or project design measures.

According to the State of California Governor's Office of Planning and Research's *Discussion Draft Technical Advisory: AB 52 and Tribal Cultural Resources in CEQA* report (May 2015), the consultation process shall be considered concluded when either: 1) The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or 2) A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC §21080.3.2(b)).

Included for your information is a brief description of the proposed project and location (figures enclosed), and lead agency contact person pursuant to PRC §21080.3.1(d).

Brief Description of the Proposed Project and Location: The Saint Anthony Mobile Home Park (MHP) Water Consolidation Project consists of the consolidation of three independent, privately owned small water systems (SWSs) into CVWD's potable water system to improve the

reliability and potential safety of water supply to the SWSs of rural disadvantaged communities (DACs). The SWSs include: Manuela Garcia Water, Seferino Huerta, and Saint Anthony MHP.

The project consists of construction of a new 30-inch diameter water main in Avenue 66 , which includes Phase 1a currently underway by the County of Riverside and Caltrans (not included in this proposed project), along with Phases 1b and 2, which would be constructed by CVWD. A new 12-inch diameter water main would be constructed on Lincoln Street, and new 1-inch, 2-inch, and 4-inch diameter water service laterals would connect to the Avenue 66 Phase 2 pipeline and 12-inch diameter water pipeline along Lincoln Street, and extend to the property boundaries of each SWSs. On-property components would include new 2-inch diameter pipelines on SWS property to complete service to the existing SWSs and 6-inch diameter fire service. The fire service pipelines would connect to the Avenue 66 pipeline and 12-inch Lincoln Street transmission pipeline and extend to fire hydrants or backflow preventors to provide fire service to each SWS. See enclosed site map.

Overall, the project would construct a total of approximately 33,000 linear feet of pipeline, four water meters, two fire hydrants, a tee-valve and reducer, a pressure reducing station, and a fire service backflow preventor. An additional 12-inch water main would be constructed in Lincoln Street with connections provided to Saint Anthony SWS and Seferino Huerta SWS. This water main is being designed and constructed by others and not included as part of the project. The project would deliver 106 acre-feet per year (AFY) of potable water to meet a maximum day demand of 65.88 gallons per minute (gpm). CVWD intends to apply for grant funding from California's State Water Resources Control Board's Clean Water State Revolving Fund.

Contact:

If you have any questions regarding the project or content of this letter, please contact Elizabeth Meyerhoff, Environmental Specialist, at (760) 398-2651 extension 2775; or email: Emeyerhoff@cvwd.org

Thank you,



William Patterson
Environmental Supervisor

Enclosures/2/as
File No.



List of Recipients for: Saint Anthony Mobile Home Park Water Consolidation Project Formal Notification of (AB) 52 Consultation regarding Tribal Resources under the California Environmental Quality Act (CEQA) Public Resources Code (PRC) §21080.3.1: AB 52 (Gatto, 2014)

Letter dated May 17, 2019

Agua Caliente Band of Cahuilla Indians
Patricia Garcia-Plotkin
Tribal Historic Preservation Director
5401 Dinah Shore Drive
Palm Springs, CA 92264

Augustine Band of Cahuilla Mission Indians
Amanda Vance
Tribal Chairperson
P.O. Box 846
Coachella, CA 92236

Cabazon Band of Mission Indians
Doug Welmas
Tribal Chairperson
84-245 Indio Springs Parkway
Indio, CA 92203-3499

Morongo Band of Mission Indians
Raymond Huaute
Cultural Resource Specialist
12700 Pumarra Road
Banning, CA 92220

Soboba Band of Luiseno Indians
Joseph Ontiveros
Cultural Resources Director
P.O. Box 487
San Jacinto, CA 92581

Torres Martinez Desert Cahuilla Indians
Mary Resvaloso
Tribal Chairperson
P.O. Box 1160 Thermal, CA 92274

Twenty-Nine Palms Band of Mission Indians
Darrell Mike
Tribal Chairman
46-200 Harrison Place
Coachella, CA 92236

**APPENDIX D: BIOLOGICAL RESOURCES MEMORANDUM FOR THE AVENUE 66
DOMESTIC WATER TRANSMISSION MAIN**

BIOLOGICAL RESOURCES MEMORANDUM
for the
Avenue 66 Domestic Water Transmission Main

Company: Coachella Valley Water District

Attention: Dan Ruiz, Engineering Manager

From: Zach Liptak, Associate Environmental Planner, Dokken Engineering

Subject: Biological Resources Memorandum, Avenue 66 Domestic Water Transmission Main (DW1617)

Date: January 8, 2019

Dokken Engineering has conducted an assessment of potential air quality impacts associated with the Avenue 66 Domestic Water Transmission Main, located along Avenue 66 from State Route 86 to Lincoln Street, in the unincorporated community of Mecca, Riverside County, California (see **Figures 1 and 2**). Coachella Valley Water District (CVWD) is proposing to construct a domestic water transmission main. Funding for this project will be from the Clean Water State Revolving Fund (CWSRF) in accordance with the Operating Agreement with the U.S. Environmental Protection Agency (EPA), and requires approval under the California Environmental Quality Act (CEQA) and compliance with the National Environmental Policy Act (NEPA). CDVW requested environmental documentation to determine whether the Project potentially impacts air quality.

Project Description

The proposed Avenue 66 Domestic Water Transmission Main will provide the community of Mecca and Eastern Coachella Valley with a secondary source water supply by installing a 30-inch-diameter transmission pipeline. The proposed alignment of the pipeline parallels Avenue 66 (State Route 111) along the north shoulder from west of State Route 86 to just west of Lincoln Street. At the intersection of Avenue 66 and State Route 111, the proposed pipeline alignment will traverse the boundaries of the Mecca Travel Center to avoid boring under the Arco Gas Station. CVWD will obtain a 20-foot-strip easement for the pipeline from property owners north of Avenue 66. Pipeline construction may consist of both open trench and subsurface boring.

The proposed 30-inch-diameter pipeline is approximately 1 mile long and will connect from a proposed 30 inch diameter pipeline constructed as part of the Avenue 66 Grade Separation Project to a future 30 inch diameter pipeline located on the west side of Highway 86 at Buchanan Street. The proposed project is part of a Strategic Initiative project that will eventually construct a 3 mile long critical pipeline from Polk Street for CVWD's customers in the Mecca area.

The pipeline will be installed with a minimum of four feet of earthen cover. Vertical deflections and restrained joints will be installed where the proposed pipeline crosses any other utilities including

irrigation mains, agricultural drain lines, storm drain culverts, and buried telephone lines. The pipeline will be placed in polyethylene wrap to protect the pipeline from the mildly corrosive soils.

Regulatory Setting

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 (16 U.S.C. section 1531 et seq.) provides for the conservation of endangered and threatened species listed pursuant to section 4 of the Act (16 U.S.C. section 1533) and the ecosystems upon which they depend. These protected species and resources have been identified by U.S. Fish and Wildlife Service (USFWS) or National Oceanic and Atmospheric Administration (NOAA).

California Endangered Species Act

The California Endangered Species Act (CESA) (CFG Code Section 2050 et seq.) requires the California Department of Fish and Wildlife (CDFW) to establish a list of endangered and threatened species (Section 2070) and to prohibit the incidental taking of any such listed species except as allowed by the Act (Sections 2080-2089). In addition, CESA prohibits take of candidate species (under consideration for listing).

CESA also requires the CDFW to comply with the CEQA (Pub. Resources Code Section 21000 et seq.) when evaluating incidental take permit applications (CFG Code Section 2081(b) and California Code Regulations, Title 14, section 783.0 et seq.), and the impacts the project or activity for which the application was submitted may have on the environment. The CDFW's CEQA obligations include consultation with other public agencies which have jurisdiction over the project or activity (California Code Regulations, Title 14, Section 783.5(d)(3)). CDFW cannot issue an incidental take permit if issuance would jeopardize the continued existence of the species (CFG Code Section 2081(c); California Code Regulations, Title 14, Section 783.4(b)).

Coachella Valley Multiple Species Habitat Conservation Plan

The Coachella Valley Water District is a participant of the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP). The project is located within the regulatory boundary of the CVMSHCP but is completely outside the limits of any designated conservation areas, including the Conservation Area of the CVMSHCP. The CVMSHCP was created to enhance and maintain biological diversity and ecosystem processes while allowing future economic growth. The CVMSHCP provides comprehensive compliance with Federal and State endangered species laws and standardizes 27 Covered Species mitigation/compensation measures for a streamlined regulatory process. To mitigate take of Covered Species, the CVMSHCP protects and manages desired habitats within designated Conservation Areas. Coordination with regulatory agencies including the Coachella Valley Conservation Commission (CVCC), CDFW, USFWS, and USACE ensure that regional impacts to the Conservation Areas are minimized or mitigated for, as appropriate.

The project is considered a covered project under the CVMSHCP pursuant to Section 7.1 Covered Activities Outside of Conservation Areas under "*Public facility construction, operations (not including groundwater withdrawal), and maintenance and safety activities by the Permittees for existing and future facilities, including both on and off site activities*" because 1) all project impacts would occur outside of Conservation Areas and 2) the project's is a public facility

construction. While the project is adjacent to the Stormwater Channel and Delta Conservation Area; the project has been designed to ensure all project impacts will be outside the limits of this Conservation Area. As the project will completely avoid the Stormwater Channel and Delta Conservation Area, a Joint Project Review is not required. As a fully covered project under Section 7.1, no additional fees are required of CVWD.

Methodology

Prior to field work, literature research was conducted through the United States Fish and Wildlife Service (USFWS) *Information for Planning and Conservation* (IPaC), the California Department of Fish and Wildlife (CDFW) *California Natural Diversity Database* (CNDDDB), the California Native Plant Society (CNPS) *Electronic Inventory of Rare and Endangered Plants*, and the National Marine Fisheries Service (NMFS) species list to identify habitats and special-status species having the potential to occur within the project area. No quadrangles with potential NMFS species were located in the project vicinity during the NMFS species list query.

Field surveys were conducted on December 4, 2018 to document existing biological resources, detect jurisdictional waters of the United States (U.S.) and State, and search for suitable habitat and presence of Federal and State protected species. Impacts to resources were analyzed based on the project design and ecological resources identified in the field surveys. T

Existing Conditions

The project is located outside the Community of Mecca, in Riverside County, in the Desert Province, Sonoran Desert region and Colorado Desert Section, ecological subsection 322Ca (Coachella Valley) of California. The project area encompasses roughly 44 acres and encompasses developed/ruderal lands and mixed saltbrush scrub.

Developed/Ruderal

A large portion of the project area contains disturbed developed/ruderal areas. The disturbed habitat within the BSA occurs as a result of past disturbance and compaction of soils due to commercial, pedestrian use (walking/cycling trails), habitation by transients, and maintenance of the State Route 111, Avenue 66, State Route 86, and utility corridors. These disturbed non-native ruderal areas make up the majority of the habitat present within the project limits and offer little or no habitat value to surrounding wildlife and vegetation. The Mecca Travel Center is the only development within the project area and is entirely paved, providing no potential habitat value.

Mixed Saltbush Scrub

A portion of the project area contains mixed saltbush scrub. The mixed saltbush community scrub often occurs in bajadas, flats, lower slopes, playas and valleys in areas where fine-textured, poorly drained soils with high salinity and/or alkalinity occur; soils may also be carbonate-rich. Mixed saltbush scrub is often considered part of the chenopod or saltbush scrub communities and inhabits elevations from -246 to 8,202 feet. Common species dominating in this community include four-wing saltbush (*Atriplex canescens*), shadscale (*Atriplex confertifolia*), big saltbush (*Atriplex lentiformis*), allscale (*Atriplex polycarpa*) and mesquite (*Prosopis glandulosa*). Within the project area, big saltbush dominates the mixed saltbush community interspersed with tamarisk, mesquite, desert isocoma (*Isocoma acradenia* var. *eremophila*) and arrowweed. The mixed

saltbush scrub habitat onsite closely integrates with an arrowweed community; therefore, habitat was considered to be the mixed saltbush community when a saltbush rather than arrowweed was the dominant species.

Detailed Results

Based on the field survey, there is no potential for federal threatened, endangered or candidate species to occur within the project limits. The USFWS has provided the participants of the CVMSHCP with a FESA Section 10(a)(1)(B) Incidental take permit for the CVMSHCP area, File # R8-AES. No effect to FESA listed species will occur as a result of the project. To be in compliance with the above USFWS Section 10(a)(1)(B) Incidental take permit, the project shall implement all applicable CVMSHCP approved minimization, avoidance and mitigation measures, including preconstruction clearance and avoidance surveys. As the project shall be in full compliance with the CVMSHCP, and no effect to federal threatened, endangered or Candidate species is likely, further consultation under FESA is not required.

Further, no jurisdictional waters of either the U.S. or State were observed within the project area.

Native birds, protected under the MBTA and similar provisions under CDFW code, could nest within the project area during construction. During the biological surveys, evidence of suitable nesting habitat was observed within the shrubs and trees adjacent to the project area. The measure below shall be implemented to ensure protection of migratory nesting birds.

- If the construction contractor needs to remove vegetation (shrubs or trees) during the migratory bird breeding season (February 15th – September 1st), a pre-construction nesting bird survey must be conducted within 7 days prior to vegetation removal. Within 2 weeks of the nesting bird survey, all vegetation cleared by the project biologist must be removed by the contractor.

A minimum 100 foot no-disturbance buffer must be established around any active nest to limit the impacts of construction activities. The contractor must immediately stop work in the nesting area until the appropriate buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the project biologist and in coordination with wildlife agencies) in the buffer area until the project biologist determines the young have fledged.

Detailed Conclusion

Based on the field survey and research, it is not anticipated that the proposed project will result in any impacts to sensitive species. The field survey did not identify any potential sensitive habitat or plant or animal species within the Project Area. Based on the field survey results, no jurisdictional waters were identified. It has been determined that sensitive biological species will not be impacted as a result of the Avenue 66 Domestic Water Transmission Main with implementation of the measure for nesting birds recommended above.

Attachments:

Figure 1: Project Vicinity

Figure 2: Project Area

Sensitive Species Lists



V:\2450-CVWD Pipeline Ave 66\F1 - ProjectVicinity_CVWD_Ave66.mxd

Source: ESRI 2008; Dokken Engineering 1/8/2019; Created By: zachl

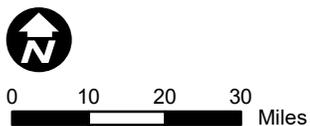
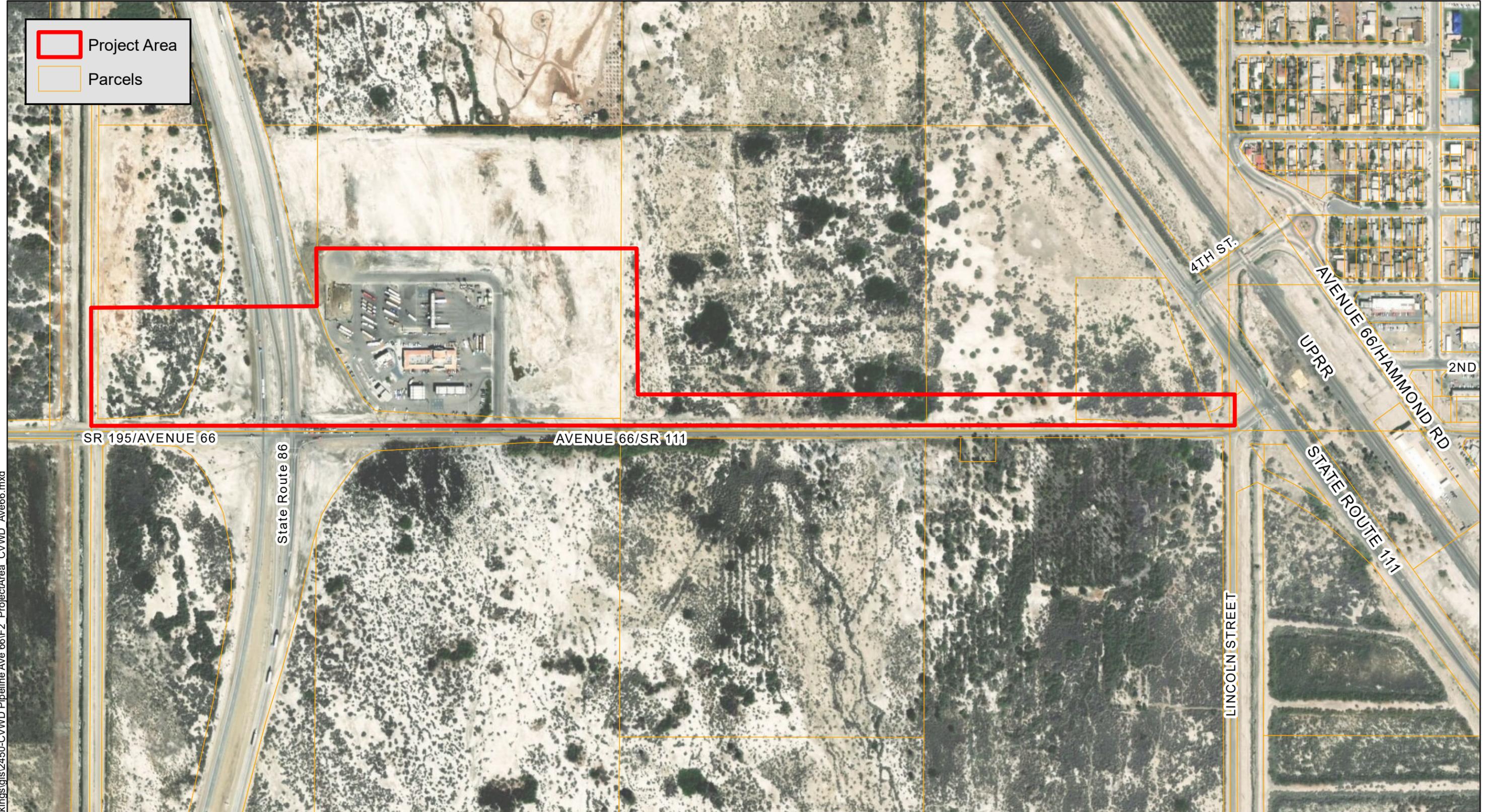


FIGURE 1
Project Vicinity
 Avenue 66 Domestic Water Transmission Main
 Community of Mecca, Riverside County, California



\\kings\gis\2450-CVWD Pipeline Ave 66\F2_ProjectArea CVWD_Ave66.mxd

Source: ArcGIS 10; Dokken Engineering 1/8/2019; Created By: zachl

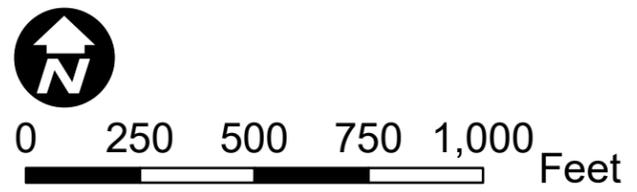


FIGURE 2
Project Area
 Avenue 66 Domestic Water Transmission Main
 Community of Mecca, Riverside County, California



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901
<http://www.fws.gov/carlsbad/>

In Reply Refer To:

December 18, 2018

Consultation Code: 08ECAR00-2019-SLI-0319

Event Code: 08ECAR00-2019-E-00730

Project Name: Avenue 66 Domestic Water Transmission Main

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office

2177 Salk Avenue - Suite 250

Carlsbad, CA 92008-7385

(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2019-SLI-0319

Event Code: 08ECAR00-2019-E-00730

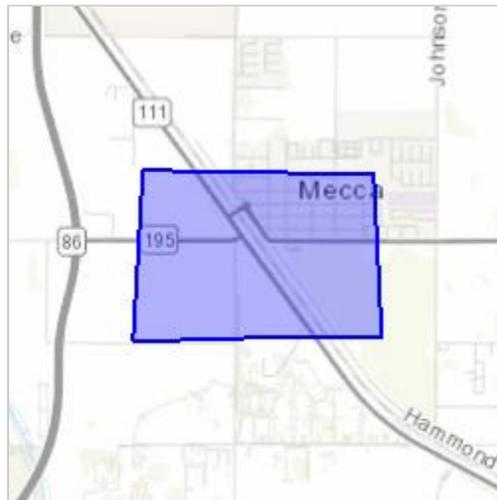
Project Name: Avenue 66 Domestic Water Transmission Main

Project Type: PIPELINE

Project Description: Domestic Water Transmission Main

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/33.56825307783634N116.07693735360381W>



Counties: Riverside, CA

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yuma Clapper Rail <i>Rallus longirostris yumanensis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3505	Endangered

Reptiles

NAME	STATUS
Desert Tortoise <i>Gopherus agassizii</i> Population: Wherever found, except AZ south and east of Colorado R., and Mexico There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4481	Threatened

Fishes

NAME	STATUS
<p>Desert Pupfish <i>Cyprinodon macularius</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7003</p>	Endangered
<p>Razorback Sucker <i>Xyrauchen texanus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/530</p>	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: Quad (Cottonwood Basin (3311568) OR Indio (3311662) OR Mecca (3311651) OR Mortmar (3311558) OR Thermal Canyon (3311661) OR Valerie (3311652))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Alverson's foxtail cactus <i>Coryphantha alversonii</i>	PDCAC0X060	None	None	G3	S3	4.3
American badger <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
black skimmer <i>Rynchops niger</i>	ABNNM14010	None	None	G5	S2	SSC
black-crowned night heron <i>Nycticorax nycticorax</i>	ABNGA11010	None	None	G5	S4	
black-tailed gnatcatcher <i>Polioptila melanura</i>	ABPBJ08030	None	None	G5	S3S4	WL
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S3	SSC
California black rail <i>Laterallus jamaicensis coturniculus</i>	ABNME03041	None	Threatened	G3G4T1	S1	FP
California ditaxis <i>Ditaxis serrata var. californica</i>	PDEUP08050	None	None	G5T3T4	S2?	3.2
chaparral sand-verbena <i>Abronia villosa var. aurita</i>	PDNYC010P1	None	None	G5T2?	S2	1B.1
cheeseweed owlfly (cheeseweed moth lacewing) <i>Oliarces clara</i>	IINEU04010	None	None	G1G3	S2	
Coachella giant sand treader cricket <i>Macrobaenetes valgum</i>	IIORT22020	None	None	G1G2	S1S2	
Coachella Valley fringe-toed lizard <i>Uma inornata</i>	ARACF15010	Threatened	Endangered	G1Q	S1	
Coachella Valley milk-vetch <i>Astragalus lentiginosus var. coachellae</i>	PDFAB0FB97	Endangered	None	G5T1	S1	1B.2
Colorado Valley woodrat <i>Neotoma albigula venusta</i>	AMAFF08031	None	None	G5T3T4	S1S2	
Couch's spadefoot <i>Scaphiopus couchii</i>	AAABF01020	None	None	G5	S2	SSC
Cove's cassia <i>Senna covesii</i>	PDFAB491X0	None	None	G5	S3	2B.2
Crissal thrasher <i>Toxostoma crissale</i>	ABPBK06090	None	None	G5	S3	SSC
desert bighorn sheep <i>Ovis canadensis nelsoni</i>	AMALE04013	None	None	G4T4	S3	FP
Desert Fan Palm Oasis Woodland <i>Desert Fan Palm Oasis Woodland</i>	CTT62300CA	None	None	G3	S3.2	



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desert pupfish <i>Cyprinodon macularius</i>	AFCNB02060	Endangered	Endangered	G1	S1	
desert tortoise <i>Gopherus agassizii</i>	ARAAF01012	Threatened	Threatened	G3	S2S3	
ferruginous hawk <i>Buteo regalis</i>	ABNKC19120	None	None	G4	S3S4	WL
flat-tailed horned lizard <i>Phrynosoma mcallii</i>	ARACF12040	None	None	G3	S2	SSC
glandular ditaxis <i>Ditaxis claryana</i>	PDEUP080L0	None	None	G3G4	S2	2B.2
gravel milk-vetch <i>Astragalus sabulonum</i>	PDFAB0F7R0	None	None	G4G5	S2	2B.2
great blue heron <i>Ardea herodias</i>	ABNGA04010	None	None	G5	S4	
great egret <i>Ardea alba</i>	ABNGA04040	None	None	G5	S4	
gull-billed tern <i>Gelochelidon nilotica</i>	ABNNM08010	None	None	G5	S1	SSC
jackass-clover <i>Wislizenia refracta ssp. refracta</i>	PDCPP09013	None	None	G5T5?	S1	2B.2
Lancaster milk-vetch <i>Astragalus preussii var. laxiflorus</i>	PDFAB0F721	None	None	G4T2	S1	1B.1
Latimer's woodland-gilia <i>Saltugilia latimeri</i>	PDPLM0H010	None	None	G3	S3	1B.2
Le Conte's thrasher <i>Toxostoma lecontei</i>	ABPBK06100	None	None	G4	S3	SSC
little-leaf elephant tree <i>Bursera microphylla</i>	PDBUR01020	None	None	G4	S2	2B.3
Mecca-aster <i>Xylorhiza cognata</i>	PDASTA1010	None	None	G2	S2	1B.2
narrow-leaf sandpaper-plant <i>Petalonyx linearis</i>	PDLOA04010	None	None	G4	S3?	2B.3
Orocopia sage <i>Salvia greatae</i>	PDLAM1S0P0	None	None	G2G3	S2S3	1B.3
pallid bat <i>Antrozous pallidus</i>	AMACC10010	None	None	G5	S3	SSC
pallid San Diego pocket mouse <i>Chaetodipus fallax pallidus</i>	AMAFD05032	None	None	G5T34	S3S4	SSC
Palm Springs pocket mouse <i>Perognathus longimembris bangsi</i>	AMAFD01043	None	None	G5T2	S2	SSC
Palm Springs round-tailed ground squirrel <i>Xerospermophilus tereticaudus chlorus</i>	AMAFB05161	None	None	G5T2Q	S2	SSC



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pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	AMACD04010	None	None	G4	S3	SSC
prairie falcon <i>Falco mexicanus</i>	ABNKD06090	None	None	G5	S4	WL
razorback sucker <i>Xyrauchen texanus</i>	AFCJC11010	Endangered	Endangered	G1	S1S2	FP
San Bernardino milk-vetch <i>Astragalus bernardinus</i>	PDFAB0F190	None	None	G3	S3	1B.2
Santa Rosa Mountains leptosiphon <i>Leptosiphon floribundus ssp. hallii</i>	PDPLM090J3	None	None	G4T1T2	S1S2	1B.3
singlewhorl burrobrush <i>Ambrosia monogyra</i>	PDAST50010	None	None	G5	S2	2B.2
slender cottonheads <i>Nemacaulis denudata var. gracilis</i>	PDPGN0G012	None	None	G3G4T3?	S2	2B.2
slender-stem bean <i>Phaseolus filiformis</i>	PDFAB330P0	None	None	G5	S1	2B.1
snowy egret <i>Egretta thula</i>	ABNGA06030	None	None	G5	S4	
spotted bat <i>Euderma maculatum</i>	AMACC07010	None	None	G4	S3	SSC
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	AMACC08010	None	None	G3G4	S2	SSC
vermillion flycatcher <i>Pyrocephalus rubinus</i>	ABPAE36010	None	None	G5	S2S3	SSC
western mastiff bat <i>Eumops perotis californicus</i>	AMACD02011	None	None	G5T4	S3S4	SSC
western yellow bat <i>Lasiurus xanthinus</i>	AMACC05070	None	None	G5	S3	SSC
white-faced ibis <i>Plegadis chihi</i>	ABNGE02020	None	None	G5	S3S4	WL
Wright's jaffuelobryum moss <i>Jaffuelobryum wrightii</i>	NBMUS97020	None	None	G4G5	S2?	2B.3
yellow-breasted chat <i>Icteria virens</i>	ABPBX24010	None	None	G5	S3	SSC
Yuma Ridgway's rail <i>Rallus obsoletus yumanensis</i>	ABNME0501A	Endangered	Threatened	G5T3	S1S2	FP

Record Count: 58

Plant List

Inventory of Rare and Endangered Plants

23 matches found. [Click on scientific name for details](#)

Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B, 3], Found in Quads 3311652, 3311651, 3311558, 3311662, 3311661 and 3311568;

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Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Abronia villosa var. aurita	chaparral sand-verbena	Nyctaginaceae	annual herb	(Jan)Mar-Sep	1B.1	S2	G5T2?
Ambrosia monogyra	singlewhorl burrobrush	Asteraceae	perennial shrub	Aug-Nov	2B.2	S2	G5
Astragalus bernardinus	San Bernardino milk-vetch	Fabaceae	perennial herb	Apr-Jun	1B.2	S3	G3
Astragalus lentiginosus var. coachellae	Coachella Valley milk-vetch	Fabaceae	annual / perennial herb	Feb-May	1B.2	S1	G5T1
Astragalus sabulonum	gravel milk-vetch	Fabaceae	annual / perennial herb	Feb-Jun	2B.2	S2	G4G5
Astragalus tricarinatus	triple-ribbed milk-vetch	Fabaceae	perennial herb	Feb-May	1B.2	S2	G2
Ayenia compacta	California ayenia	Malvaceae	perennial herb	Mar-Apr	2B.3	S3	G4
Bursera microphylla	little-leaf elephant tree	Burseraceae	perennial deciduous tree	Jun-Jul	2B.3	S2	G4
Ditaxis claryana	glandular ditaxis	Euphorbiaceae	perennial herb	Oct,Dec,Jan,Feb,Mar	2B.2	S2	G3G4
Ditaxis serrata var. californica	California ditaxis	Euphorbiaceae	perennial herb	Mar-Dec	3.2	S2?	G5T3T4
Jaffuelobryum raui	Rau's jaffuelobryum moss	Grimmiaceae	moss		2B.3	S2?	G4?
Jaffuelobryum wrightii	Wright's jaffuelobryum moss	Grimmiaceae	moss		2B.3	S2?	G4G5
Leptosiphon floribundus ssp. hallii	Santa Rosa Mountains leptosiphon	Polemoniaceae	perennial herb	May-Jul(Nov)	1B.3	S1S2	G4T1T2
Mentzelia tridentata	creamy blazing star	Loasaceae	annual herb	Mar-May	1B.3	S3	G3
Nemacaulis denudata var. gracilis	slender cottonheads	Polygonaceae	annual herb	(Mar)Apr-May	2B.2	S2	G3G4T3?
Petalonyx linearis	narrow-leaf sandpaper-plant	Loasaceae	perennial shrub	(Jan-Feb)Mar-May(Jun-Dec)	2B.3	S3?	G4
Phaseolus filiformis	slender-stem bean	Fabaceae	annual herb	Apr	2B.1	S1	G5
Saltugilia latimeri	Latimer's woodland-gilia	Polemoniaceae	annual herb	Mar-Jun	1B.2	S3	G3
Salvia greatae	Orocopia sage	Lamiaceae	perennial	Mar-Apr	1B.3	S2S3	G2G3

			evergreen shrub				
Senna covesii	Coves' cassia	Fabaceae	perennial herb	Mar-Jun(Aug)	2B.2	S3	G5
Wislizenia refracta ssp. palmeri	Palmer's jackass clover	Cleomaceae	perennial deciduous shrub	Jan-Dec	2B.2	S1	G5T3T5
Wislizenia refracta ssp. refracta	jackass-clover	Cleomaceae	annual herb	Apr-Nov	2B.2	S1	G5T5?
Xylorhiza cognata	Mecca-aster	Asteraceae	perennial herb	Jan-Jun	1B.2	S2	G2

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Questions and Comments

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