Appendix A:

Air Quality and Greenhouse Gas Modeling Results

Phase 1 total – 6 weeks (4 weeks 24hrs, 2 weeks 12 hrs)

Phase I – Grading (2 weeks – 24 hour days, 7 days)

Equipment	Horsepower	Load Factor	Hours per Day
Off highway Trucks	479	0.57	8
Plate compactors	8	0.43	4
Sweepers/scrubbers	91	0.68	2
Tractors/loaders/backhoes	108	0.55	12
Water trucks	189	0.5	4

Phase I - Well Drilling (4 weeks: 2 weeks – 24 hour days, 7 days; 2 weeks – 12 hour days, 7 days)

Equipment	Horsepower	Load Factor	Hours per Day
Air compressors	106	0.48	8/4
Bore/drill rigs	291	0.75	16/8
Cranes	399	0.43	12/6
Off highway Trucks	479	0.57	8/4
Plate compactors	8	0.43	4/2
Pumps	53	0.74	16/8
Sweepers/scrubbers	91	0.68	2/1
Tractors/loaders/backhoes	108	0.55	12/6
Water trucks	189	0.5	4/2

Phase I - Temporary Groundwater Production Well Components (1 week, 12 hour day, 7 days)

Equipment	Horsepower	Load Factor	Hours per Day
Cranes	399	0.43	6
Off highway Trucks	479	0.57	4
Plate compactors	8	0.43	2
Sweepers/scrubbers	91	0.68	1
Tractors/loaders/backhoes	108	0.55	6

Phase 2 total – 4 weeks (12hrs per day, 7 days)

Phase II - Well head facilities and appurtenances (2 weeks)

Equipment	Horsepower	Load Factor	Hours per Day
Air compressors	106	0.48	4
Bore/drill rigs	291	0.75	8
Cranes	399	0.43	6
Off highway Trucks	479	0.57	4
Plate compactors	8	0.43	2
Pumps	53	0.74	8
Sweepers/scrubbers	91	0.68	1
Tractors/loaders/backhoes	108	0.55	6
Water trucks	189	0.5	2

Phase II - Blow-off pond (1 week)

Equipment	Horsepower	Load Factor	Hours per Day
Off highway Trucks	479	0.57	4
Sweepers/scrubbers	91	0.68	1
Tractors/loaders/backhoes	108	0.55	6
Water trucks	189	0.5	2

Phase II – Pipelines (1 week)

Equipment	Horsepower	Load Factor	Hours per Day
Cranes	399	0.43	6
Off highway Trucks	479	0.57	4
Plate compactors	8	0.43	2
Sweepers/scrubbers	91	0.68	1
Tractors/loaders/backhoes	108	0.55	6

EMWD Well 204

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.60	1000sqft	0.08	3,600.00	0
Other Non-Asphalt Surfaces	2.42	Acre	2.42	105,415.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2014
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Project specific construction scheduling

Off-road Equipment - Project Specific

Off-road Equipment - Project Specific

Off-road Equipment - Project Specific

Off-road Equipment - Project Specific

Off-road Equipment - Project Specific

Grading -

Trips and VMT -

Vehicle Trips - One maintenance trip per week.

Energy Use - Security Lighting

Water And Wastewater - No indoor water facilities

Solid Waste - No Solid Waste Generation

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6.00	7.00
tblConstructionPhase	NumDays	6.00	14.00
tblConstructionPhase	NumDays	220.00	14.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	3/11/2017	3/20/2017
tblConstructionPhase	PhaseStartDate	3/5/2017	3/14/2017
tblEnergyUse	NT24E	5.02	0.00
tblEnergyUse	NT24NG	17.13	0.00
tblEnergyUse	T24E	2.69	0.00
tblEnergyUse	T24NG	16.16	0.00
tblOffRoadEquipment	LoadFactor	0.50	0.50

tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.46	0.46
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.46	0.46
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.46	0.46
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	7.00	12.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblSolidWaste	SolidWasteGenerationRate	4.46	0.00
tblVehicleTrips	ST_TR	1.32	0.08
tblVehicleTrips	SU_TR	0.68	0.08
tblVehicleTrips	WD_TR	6.97	0.08
tblWater	IndoorWaterUseRate	832,500.00	0.00

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					
2017	0.0789	0.7802	0.4989	1.0800e-003	9.6500e-003	0.0395	0.0492	2.5800e-003	0.0372	0.0398	0.0000	96.1774	96.1774	0.0228	0.0000	96.6569
Total	**0.0789**	**0.7802**	**0.4989**	**1.0800e-003**	**9.6500e-003**	**0.0395**	**0.0492**	**2.5800e-003**	**0.0372**	**0.0398**	**0.0000**	**96.1774**	**96.1774**	**0.0228**	**0.0000**	**96.6569**

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					
2017	0.0789	0.7802	0.4989	1.0800e-003	9.6500e-003	0.0395	0.0492	2.5800e-003	0.0372	0.0398	0.0000	96.1773	96.1773	0.0228	0.0000	96.6568
Total	**0.0789**	**0.7802**	**0.4989**	**1.0800e-003**	**9.6500e-003**	**0.0395**	**0.0492**	**2.5800e-003**	**0.0372**	**0.0398**	**0.0000**	**96.1773**	**96.1773**	**0.0228**	**0.0000**	**96.6568**

	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	N20	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**

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	0.5203	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-004	1.5000e-004	0.0000	0.0000	1.6000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.4615	3.4615	1.6000e-004	3.0000e-005	3.4750
Mobile	2.6000e-004	9.3000e-004	3.4300e-003	1.0000e-005	4.8000e-004	1.0000e-005	5.0000e-004	1.3000e-004	1.0000e-005	1.4000e-004	0.0000	0.5854	0.5854	3.0000e-005	0.0000	0.5860
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	**0.5205**	**9.3000e-004**	**3.5100e-003**	**1.0000e-005**	**4.8000e-004**	**1.0000e-005**	**5.0000e-004**	**1.3000e-004**	**1.0000e-005**	**1.4000e-004**	**0.0000**	**4.0470**	**4.0470**	**1.9000e-004**	**3.0000e-005**	**4.0611**

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	0.5203	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-004	1.5000e-004	0.0000	0.0000	1.6000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.4615	3.4615	1.6000e-004	3.0000e-005	3.4750
Mobile	2.6000e-004	9.3000e-004	3.4300e-003	1.0000e-005	4.8000e-004	1.0000e-005	5.0000e-004	1.3000e-004	1.0000e-005	1.4000e-004	0.0000	0.5854	0.5854	3.0000e-005	0.0000	0.5860
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	**0.5205**	**9.3000e-004**	**3.5100e-003**	**1.0000e-005**	**4.8000e-004**	**1.0000e-005**	**5.0000e-004**	**1.3000e-004**	**1.0000e-005**	**1.4000e-004**	**0.0000**	**4.0470**	**4.0470**	**1.9000e-004**	**3.0000e-005**	**4.0611**

	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	N20	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	Phase I Grading	Grading	1/1/2017	1/14/2017	7	14	
2	Phase I Well Drilling & Temp Well Comp	Trenching	1/15/2017	2/11/2017	7	28	
3	Phase II Well Head Facilities	Building Construction	2/12/2017	2/25/2017	7	14	
4	Phase II Blow Off Pond	Grading	2/26/2017	3/4/2017	7	7	
5	Phase II Pipelines	Trenching	3/14/2017	3/20/2017	7	7	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase II Blow Off Pond	Air Compressors	0	6.00	78	0.48
Phase II Well Head Facilities	Cement and Mortar Mixers	0	8.00	9	0.56
Phase II Well Head Facilities	Cranes	1	6.00	226	0.29
Phase I Well Drilling & Temp Well Comp	Generator Sets	0	8.00	84	0.74
Phase I Well Drilling & Temp Well Comp	Cranes	1	6.00	226	0.29
Phase I Well Drilling & Temp Well Comp	Forklifts	0	7.00	89	0.20
Phase II Well Head Facilities	Forklifts	0	7.00	89	0.20
Phase II Well Head Facilities	Pavers	0	8.00	125	0.42
Phase II Well Head Facilities	Rollers	0	8.00	80	0.38
Phase II Well Head Facilities	Generator Sets	0	8.00	84	0.74
Phase I Grading	Rubber Tired Dozers	0	8.00	255	0.40
Phase I Well Drilling & Temp Well Comp	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Phase II Blow Off Pond	Graders	0	8.00	174	0.41
Phase I Grading	Tractors/Loaders/Backhoes	1	12.00	97	0.37
Phase II Well Head Facilities	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Phase II Blow Off Pond	Rubber Tired Dozers	0	8.00	255	0.40
Phase I Grading	Graders	0	8.00	174	0.41

Phase II Well Head Facilities	Paving Equipment	0	8.00	130	0.36
Phase II Blow Off Pond	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Phase I Well Drilling & Temp Well Comp	Welders	0	8.00	46	0.45
Phase II Well Head Facilities	Welders	0	8.00	46	0.45
Phase I Grading	Off-Highway Trucks	1	8.00	400	0.38
Phase I Grading	Plate Compactors	1	4.00	8	0.43
Phase I Grading	Sweepers/Scrubbers	1	2.00	64	0.46
Phase I Grading	Other Construction Equipment	1	4.00	171	0.42
Phase I Well Drilling & Temp Well Comp	Air Compressors	1	8.00	78	0.48
Phase I Well Drilling & Temp Well Comp	Bore/Drill Rigs	1	8.00	205	0.50
Phase I Well Drilling & Temp Well Comp	Off-Highway Trucks	1	4.00	400	0.38
Phase I Well Drilling & Temp Well Comp	Plate Compactors	1	2.00	8	0.43
Phase I Well Drilling & Temp Well Comp	Pumps	1	8.00	84	0.74
Phase I Well Drilling & Temp Well Comp	Sweepers/Scrubbers	1	1.00	64	0.46
Phase I Well Drilling & Temp Well Comp	Other Construction Equipment	1	2.00	171	0.42
Phase II Well Head Facilities	Air Compressors	1	4.00	78	0.48
Phase II Well Head Facilities	Bore/Drill Rigs	1	8.00	205	0.50
Phase II Well Head Facilities	Off-Highway Trucks	1	4.00	400	0.38
Phase II Well Head Facilities	Plate Compactors	1	2.00	8	0.43
Phase II Well Head Facilities	Pumps	1	8.00	84	0.74
Phase II Well Head Facilities	Sweepers/Scrubbers	1	1.00	64	0.46
Phase II Well Head Facilities	Other Construction Equipment	1	2.00	171	0.42
Phase II Blow Off Pond	Sweepers/Scrubbers	1	1.00	64	0.46
Phase II Blow Off Pond	Off-Highway Trucks	1	4.00	400	0.38
Phase II Pipelines	Cranes	1	6.00	226	0.29
Phase II Pipelines	Off-Highway Trucks	1	4.00	400	0.38
Phase II Pipelines	Plate Compactors	1	2.00	8	0.43
Phase II Pipelines	Sweepers/Scrubbers	1	1.00	64	0.46
Phase II Pipelines	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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
Phase II Pipelines	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase I Grading	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase I Well Drilling & Temp Well Comp	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase II Well Head Facilities	9	46.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase II Blow Off Pond	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Phase I Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0124	0.1315	0.0771	1.5000e-004		6.7500e-003	6.7500e-003		6.2200e-003	6.2200e-003	0.0000	14.0847	14.0847	4.2900e-003	0.0000	14.1748

Total	**0.0124**	**0.1315**	**0.0771**	**1.5000e-004**	**0.0000**	**6.7500e-003**	**6.7500e-003**	**0.0000**	**6.2200e-003**	**6.2200e-003**	**0.0000**	**14.0847**	**14.0847**	**4.2900e-003**	**0.0000**	**14.1748**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	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
Worker	3.3000e-004	4.8000e-004	5.0300e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.8995	0.8995	5.0000e-005	0.0000	0.9005
Total	**3.3000e-004**	**4.8000e-004**	**5.0300e-003**	**1.0000e-005**	**1.0000e-003**	**1.0000e-005**	**1.0100e-003**	**2.7000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8995**	**0.8995**	**5.0000e-005**	**0.0000**	**0.9005**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0124	0.1315	0.0771	1.5000e-004		6.7500e-003	6.7500e-003		6.2200e-003	6.2200e-003	0.0000	14.0847	14.0847	4.2900e-003	0.0000	14.1748
Total	**0.0124**	**0.1315**	**0.0771**	**1.5000e-004**	**0.0000**	**6.7500e-003**	**6.7500e-003**	**0.0000**	**6.2200e-003**	**6.2200e-003**	**0.0000**	**14.0847**	**14.0847**	**4.2900e-003**	**0.0000**	**14.1748**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	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
Worker	3.3000e-004	4.8000e-004	5.0300e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.8995	0.8995	5.0000e-005	0.0000	0.9005
Total	**3.3000e-004**	**4.8000e-004**	**5.0300e-003**	**1.0000e-005**	**1.0000e-003**	**1.0000e-005**	**1.0100e-003**	**2.7000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8995**	**0.8995**	**5.0000e-005**	**0.0000**	**0.9005**

3.3 Phase I Well Drilling & Temp Well Comp. - 2017

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	0.0382	0.3803	0.2225	4.8000e-004		0.0198	0.0198		0.0189	0.0189	0.0000	43.6075	43.6075	0.0106	0.0000	43.8310
Total	**0.0382**	**0.3803**	**0.2225**	**4.8000e-004**		**0.0198**	**0.0198**		**0.0189**	**0.0189**	**0.0000**	**43.6075**	**43.6075**	**0.0106**	**0.0000**	**43.8310**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	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
Worker	1.1600e-003	1.7100e-003	0.0178	4.0000e-005	3.5300e-003	3.0000e-005	3.5600e-003	9.4000e-004	3.0000e-005	9.6000e-004	0.0000	3.1828	3.1828	1.6000e-004	0.0000	3.1862
Total	**1.1600e-003**	**1.7100e-003**	**0.0178**	**4.0000e-005**	**3.5300e-003**	**3.0000e-005**	**3.5600e-003**	**9.4000e-004**	**3.0000e-005**	**9.6000e-004**	**0.0000**	**3.1828**	**3.1828**	**1.6000e-004**	**0.0000**	**3.1862**

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	0.0382	0.3803	0.2225	4.8000e-004		0.0198	0.0198		0.0189	0.0189	0.0000	43.6075	43.6075	0.0106	0.0000	43.8309
Total	**0.0382**	**0.3803**	**0.2225**	**4.8000e-004**		**0.0198**	**0.0198**		**0.0189**	**0.0189**	**0.0000**	**43.6075**	**43.6075**	**0.0106**	**0.0000**	**43.8309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	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
Worker	1.1600e-003	1.7100e-003	0.0178	4.0000e-005	3.5300e-003	3.0000e-005	3.5600e-003	9.4000e-004	3.0000e-005	9.6000e-004	0.0000	3.1828	3.1828	1.6000e-004	0.0000	3.1862
Total	**1.1600e-003**	**1.7100e-003**	**0.0178**	**4.0000e-005**	**3.5300e-003**	**3.0000e-005**	**3.5600e-003**	**9.4000e-004**	**3.0000e-005**	**9.6000e-004**	**0.0000**	**3.1828**	**3.1828**	**1.6000e-004**	**0.0000**	**3.1862**

3.4 Phase II Well Head Facilities - 2017

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	0.0176	0.1802	0.1026	2.3000e-004		9.1100e-003	9.1100e-003		8.6200e-003	8.6200e-003	0.0000	20.6491	20.6491	5.2100e-003	0.0000	20.7584
Total	**0.0176**	**0.1802**	**0.1026**	**2.3000e-004**		**9.1100e-003**	**9.1100e-003**		**8.6200e-003**	**8.6200e-003**	**0.0000**	**20.6491**	**20.6491**	**5.2100e-003**	**0.0000**	**20.7584**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0300e-003	0.0104	0.0139	3.0000e-005	7.8000e-004	1.6000e-004	9.3000e-004	2.2000e-004	1.5000e-004	3.7000e-004	0.0000	2.4451	2.4451	2.0000e-005	0.0000	2.4455
Worker	1.1600e-003	1.7100e-003	0.0178	4.0000e-005	3.5300e-003	3.0000e-005	3.5600e-003	9.4000e-004	3.0000e-005	9.6000e-004	0.0000	3.1828	3.1828	1.6000e-004	0.0000	3.1862
Total	**2.1900e-003**	**0.0121**	**0.0317**	**7.0000e-005**	**4.3100e-003**	**1.9000e-004**	**4.4900e-003**	**1.1600e-003**	**1.8000e-004**	**1.3300e-003**	**0.0000**	**5.6279**	**5.6279**	**1.8000e-004**	**0.0000**	**5.6317**

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	0.0176	0.1801	0.1026	2.3000e-004		9.1100e-003	9.1100e-003		8.6200e-003	8.6200e-003	0.0000	20.6490	20.6490	5.2100e-003	0.0000	20.7583
Total	**0.0176**	**0.1801**	**0.1026**	**2.3000e-004**		**9.1100e-003**	**9.1100e-003**		**8.6200e-003**	**8.6200e-003**	**0.0000**	**20.6490**	**20.6490**	**5.2100e-003**	**0.0000**	**20.7583**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0300e-003	0.0104	0.0139	3.0000e-005	7.8000e-004	1.6000e-004	9.3000e-004	2.2000e-004	1.5000e-004	3.7000e-004	0.0000	2.4451	2.4451	2.0000e-005	0.0000	2.4455
Worker	1.1600e-003	1.7100e-003	0.0178	4.0000e-005	3.5300e-003	3.0000e-005	3.5600e-003	9.4000e-004	3.0000e-005	9.6000e-004	0.0000	3.1828	3.1828	1.6000e-004	0.0000	3.1862
Total	**2.1900e-003**	**0.0121**	**0.0317**	**7.0000e-005**	**4.3100e-003**	**1.9000e-004**	**4.4900e-003**	**1.1600e-003**	**1.8000e-004**	**1.3300e-003**	**0.0000**	**5.6279**	**5.6279**	**1.8000e-004**	**0.0000**	**5.6317**

3.5 Phase II Blow Off Pond - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5300e-003	0.0266	0.0154	3.0000e-005		1.3600e-003	1.3600e-003		1.2500e-003	1.2500e-003	0.0000	3.0048	3.0048	9.2000e-004	0.0000	3.0242

Total	**2.5300e-003**	**0.0266**	**0.0154**	**3.0000e-005**	**0.0000**	**1.3600e-003**	**1.3600e-003**	**0.0000**	**1.2500e-003**	**1.2500e-003**	**0.0000**	**3.0048**	**3.0048**	**9.2000e-004**	**0.0000**	**3.0242**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	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
Worker	1.0000e-004	1.5000e-004	1.5500e-003	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2768	0.2768	1.0000e-005	0.0000	0.2771
Total	**1.0000e-004**	**1.5000e-004**	**1.5500e-003**	**0.0000**	**3.1000e-004**	**0.0000**	**3.1000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2768**	**0.2768**	**1.0000e-005**	**0.0000**	**0.2771**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5300e-003	0.0266	0.0154	3.0000e-005		1.3600e-003	1.3600e-003		1.2500e-003	1.2500e-003	0.0000	3.0048	3.0048	9.2000e-004	0.0000	3.0242
Total	**2.5300e-003**	**0.0266**	**0.0154**	**3.0000e-005**	**0.0000**	**1.3600e-003**	**1.3600e-003**	**0.0000**	**1.2500e-003**	**1.2500e-003**	**0.0000**	**3.0048**	**3.0048**	**9.2000e-004**	**0.0000**	**3.0242**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	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
Worker	1.0000e-004	1.5000e-004	1.5500e-003	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2768	0.2768	1.0000e-005	0.0000	0.2771
Total	**1.0000e-004**	**1.5000e-004**	**1.5500e-003**	**0.0000**	**3.1000e-004**	**0.0000**	**3.1000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2768**	**0.2768**	**1.0000e-005**	**0.0000**	**0.2771**

3.6 Phase II Pipelines - 2017

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	4.2500e-003	0.0469	0.0228	5.0000e-005		2.2600e-003	2.2600e-003		2.0800e-003	2.0800e-003	0.0000	4.3947	4.3947	1.3400e-003	0.0000	4.4229
Total	**4.2500e-003**	**0.0469**	**0.0228**	**5.0000e-005**		**2.2600e-003**	**2.2600e-003**		**2.0800e-003**	**2.0800e-003**	**0.0000**	**4.3947**	**4.3947**	**1.3400e-003**	**0.0000**	**4.4229**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	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
Worker	1.6000e-004	2.4000e-004	2.5100e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4497	0.4497	2.0000e-005	0.0000	0.4502
Total	**1.6000e-004**	**2.4000e-004**	**2.5100e-003**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4497**	**0.4497**	**2.0000e-005**	**0.0000**	**0.4502**

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	4.2500e-003	0.0469	0.0228	5.0000e-005		2.2600e-003	2.2600e-003		2.0800e-003	2.0800e-003	0.0000	4.3947	4.3947	1.3400e-003	0.0000	4.4229
Total	**4.2500e-003**	**0.0469**	**0.0228**	**5.0000e-005**		**2.2600e-003**	**2.2600e-003**		**2.0800e-003**	**2.0800e-003**	**0.0000**	**4.3947**	**4.3947**	**1.3400e-003**	**0.0000**	**4.4229**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	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
Worker	1.6000e-004	2.4000e-004	2.5100e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4497	0.4497	2.0000e-005	0.0000	0.4502
Total	**1.6000e-004**	**2.4000e-004**	**2.5100e-003**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4497**	**0.4497**	**2.0000e-005**	**0.0000**	**0.4502**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

Mitigated	2.6000e-004	9.3000e-004	3.4300e-003	1.0000e-005	4.8000e-004	1.0000e-005	5.0000e-004	1.3000e-004	1.0000e-005	1.4000e-004	0.0000	0.5854	0.5854	3.0000e-005	0.0000	0.5860
Unmitigated	2.6000e-004	9.3000e-004	3.4300e-003	1.0000e-005	4.8000e-004	1.0000e-005	5.0000e-004	1.3000e-004	1.0000e-005	1.4000e-004	0.0000	0.5854	0.5854	3.0000e-005	0.0000	0.5860

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.29	0.29	0.29	1,275	1,275
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.29	0.29	0.29	1,275	1,275

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.516610	0.060517	0.179979	0.140587	0.041566	0.006616	0.015092	0.027587	0.001923	0.002530	0.004314	0.000602	0.002075

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3.4615	3.4615	1.6000e-004	3.0000e-005	3.4750
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3.4615	3.4615	1.6000e-004	3.0000e-005	3.4750
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-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
General Light Industry	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**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	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
Other Non-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**	**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			
General Light Industry	12096	3.4615	1.6000e-004	3.0000e-005	3.4750
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**3.4615**	**1.6000e-004**	**3.0000e-005**	**3.4750**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	12096	3.4615	1.6000e-004	3.0000e-005	3.4750
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**3.4615**	**1.6000e-004**	**3.0000e-005**	**3.4750**

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	0.5203	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-004	1.5000e-004	0.0000	0.0000	1.6000e-004
Unmitigated	0.5203	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-004	1.5000e-004	0.0000	0.0000	1.6000e-004

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	0.1263					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3939					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-004	1.5000e-004	0.0000	0.0000	1.6000e-004
Total	**0.5203**	**0.0000**	**8.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5000e-004**	**1.5000e-004**	**0.0000**	**0.0000**	**1.6000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1263					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3939					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-004	1.5000e-004	0.0000	0.0000	1.6000e-004
Total	**0.5203**	**0.0000**	**8.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5000e-004**	**1.5000e-004**	**0.0000**	**0.0000**	**1.6000e-004**

7.0 Water Detail

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			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Other Non-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			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Other Non-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

10.0 Vegetation

EMWD Well 204

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.60	1000sqft	0.08	3,600.00	0
Other Non-Asphalt Surfaces	2.42	Acre	2.42	105,415.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2014
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Project specific construction scheduling

Off-road Equipment - Project Specific

Off-road Equipment - Project Specific

Off-road Equipment - Project Specific

Off-road Equipment - Project Specific

Off-road Equipment - Project Specific

Grading -

Trips and VMT -

Vehicle Trips - One maintenance trip per week.

Energy Use - Security Lighting

Water And Wastewater - No indoor water facilities

Solid Waste - No Solid Waste Generation

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6.00	7.00
tblConstructionPhase	NumDays	6.00	14.00
tblConstructionPhase	NumDays	220.00	14.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	3/11/2017	3/20/2017
tblConstructionPhase	PhaseStartDate	3/5/2017	3/14/2017
tblEnergyUse	NT24E	5.02	0.00
tblEnergyUse	NT24NG	17.13	0.00
tblEnergyUse	T24E	2.69	0.00
tblEnergyUse	T24NG	16.16	0.00
tblOffRoadEquipment	LoadFactor	0.50	0.50

tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.46	0.46
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.46	0.46
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.46	0.46
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	7.00	12.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblSolidWaste	SolidWasteGenerationRate	4.46	0.00
tblVehicleTrips	ST_TR	1.32	0.08
tblVehicleTrips	SU_TR	0.68	0.08
tblVehicleTrips	WD_TR	6.97	0.08
tblWater	IndoorWaterUseRate	832,500.00	0.00

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					
2017	2.8202	27.3747	19.0411	0.0429	0.6267	1.4184	1.9545	0.1684	1.3488	1.4246	0.0000	4,164.3360	4,164.3360	0.8507	0.0000	4,182.2003
Total	**2.8202**	**27.3747**	**19.0411**	**0.0429**	**0.6267**	**1.4184**	**1.9545**	**0.1684**	**1.3488**	**1.4246**	**0.0000**	**4,164.3360**	**4,164.3360**	**0.8507**	**0.0000**	**4,182.2003**

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					
2017	2.8202	27.3747	19.0411	0.0429	0.6267	1.4184	1.9545	0.1684	1.3488	1.4246	0.0000	4,164.3360	4,164.3360	0.8507	0.0000	4,182.2003
Total	**2.8202**	**27.3747**	**19.0411**	**0.0429**	**0.6267**	**1.4184**	**1.9545**	**0.1684**	**1.3488**	**1.4246**	**0.0000**	**4,164.3360**	**4,164.3360**	**0.8507**	**0.0000**	**4,182.2003**

	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	N20	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**

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	2.8507	1.0000e-005	6.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3200e-003	1.3200e-003	0.0000		1.4000e-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
Mobile	1.4500e-003	4.7600e-003	0.0193	4.0000e-005	2.7000e-003	8.0000e-005	2.7800e-003	7.2000e-004	7.0000e-005	7.9000e-004		3.6886	3.6886	1.6000e-004		3.6920
Total	**2.8522**	**4.7700e-003**	**0.0199**	**4.0000e-005**	**2.7000e-003**	**8.0000e-005**	**2.7800e-003**	**7.2000e-004**	**7.0000e-005**	**7.9000e-004**		**3.6899**	**3.6899**	**1.6000e-004**	**0.0000**	**3.6934**

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	2.8507	1.0000e-005	6.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3200e-003	1.3200e-003	0.0000		1.4000e-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
Mobile	1.4500e-003	4.7600e-003	0.0193	4.0000e-005	2.7000e-003	8.0000e-005	2.7800e-003	7.2000e-004	7.0000e-005	7.9000e-004		3.6886	3.6886	1.6000e-004		3.6920
Total	**2.8522**	**4.7700e-003**	**0.0199**	**4.0000e-005**	**2.7000e-003**	**8.0000e-005**	**2.7800e-003**	**7.2000e-004**	**7.0000e-005**	**7.9000e-004**		**3.6899**	**3.6899**	**1.6000e-004**	**0.0000**	**3.6934**

	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	N20	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	Phase I Grading	Grading	1/1/2017	1/14/2017	7	14	
2	Phase I Well Drilling & Temp Well Comp	Trenching	1/15/2017	2/11/2017	7	28	
3	Phase II Well Head Facilities	Building Construction	2/12/2017	2/25/2017	7	14	
4	Phase II Blow Off Pond	Grading	2/26/2017	3/4/2017	7	7	
5	Phase II Pipelines	Trenching	3/14/2017	3/20/2017	7	7	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase II Blow Off Pond	Air Compressors	0	6.00	78	0.48
Phase II Well Head Facilities	Cement and Mortar Mixers	0	8.00	9	0.56
Phase II Well Head Facilities	Cranes	1	6.00	226	0.29
Phase I Well Drilling & Temp Well Comp	Generator Sets	0	8.00	84	0.74
Phase I Well Drilling & Temp Well Comp	Cranes	1	6.00	226	0.29
Phase I Well Drilling & Temp Well Comp	Forklifts	0	7.00	89	0.20
Phase II Well Head Facilities	Forklifts	0	7.00	89	0.20
Phase II Well Head Facilities	Pavers	0	8.00	125	0.42
Phase II Well Head Facilities	Rollers	0	8.00	80	0.38
Phase II Well Head Facilities	Generator Sets	0	8.00	84	0.74
Phase I Grading	Rubber Tired Dozers	0	8.00	255	0.40
Phase I Well Drilling & Temp Well Comp	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Phase II Blow Off Pond	Graders	0	8.00	174	0.41
Phase I Grading	Tractors/Loaders/Backhoes	1	12.00	97	0.37
Phase II Well Head Facilities	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Phase II Blow Off Pond	Rubber Tired Dozers	0	8.00	255	0.40
Phase I Grading	Graders	0	8.00	174	0.41
Phase II Well Head Facilities	Paving Equipment	0	8.00	130	0.36
Phase II Blow Off Pond	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Phase I Well Drilling & Temp Well Comp	Welders	0	8.00	46	0.45
Phase II Well Head Facilities	Welders	0	8.00	46	0.45
Phase I Grading	Off-Highway Trucks	1	8.00	400	0.38

Phase I Grading	Plate Compactors	1	4.00	8	0.43
Phase I Grading	Sweepers/Scrubbers	1	2.00	64	0.46
Phase I Grading	Other Construction Equipment	1	4.00	171	0.42
Phase I Well Drilling & Temp Well Comp	Air Compressors	1	8.00	78	0.48
Phase I Well Drilling & Temp Well Comp	Bore/Drill Rigs	1	8.00	205	0.50
Phase I Well Drilling & Temp Well Comp	Off-Highway Trucks	1	4.00	400	0.38
Phase I Well Drilling & Temp Well Comp	Plate Compactors	1	2.00	8	0.43
Phase I Well Drilling & Temp Well Comp	Pumps	1	8.00	84	0.74
Phase I Well Drilling & Temp Well Comp	Sweepers/Scrubbers	1	1.00	64	0.46
Phase I Well Drilling & Temp Well Comp	Other Construction Equipment	1	2.00	171	0.42
Phase II Well Head Facilities	Air Compressors	1	4.00	78	0.48
Phase II Well Head Facilities	Bore/Drill Rigs	1	8.00	205	0.50
Phase II Well Head Facilities	Off-Highway Trucks	1	4.00	400	0.38
Phase II Well Head Facilities	Plate Compactors	1	2.00	8	0.43
Phase II Well Head Facilities	Pumps	1	8.00	84	0.74
Phase II Well Head Facilities	Sweepers/Scrubbers	1	1.00	64	0.46
Phase II Well Head Facilities	Other Construction Equipment	1	2.00	171	0.42
Phase II Blow Off Pond	Sweepers/Scrubbers	1	1.00	64	0.46
Phase II Blow Off Pond	Off-Highway Trucks	1	4.00	400	0.38
Phase II Pipelines	Cranes	1	6.00	226	0.29
Phase II Pipelines	Off-Highway Trucks	1	4.00	400	0.38
Phase II Pipelines	Plate Compactors	1	2.00	8	0.43
Phase II Pipelines	Sweepers/Scrubbers	1	1.00	64	0.46
Phase II Pipelines	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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
Phase II Pipelines	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase I Grading	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase I Well Drilling & Temp Well Comp	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase II Well Head Facilities	9	46.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase II Blow Off Pond	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Phase I Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.7777	18.7870	11.0158	0.0218		0.9647	0.9647		0.8879	0.8879		2,217.9578	2,217.9578	0.6761		2,232.1556
Total	**1.7777**	**18.7870**	**11.0158**	**0.0218**	**0.0000**	**0.9647**	**0.9647**	**0.0000**	**0.8879**	**0.8879**		**2,217.9578**	**2,217.9578**	**0.6761**		**2,232.1556**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	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
Worker	0.0487	0.0611	0.7632	1.8400e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.7275	148.7275	7.3200e-003		148.8811
Total	**0.0487**	**0.0611**	**0.7632**	**1.8400e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**148.7275**	**148.7275**	**7.3200e-003**		**148.8811**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.7777	18.7870	11.0158	0.0218		0.9647	0.9647		0.8879	0.8879	0.0000	2,217.9578	2,217.9578	0.6761		2,232.1556
Total	**1.7777**	**18.7870**	**11.0158**	**0.0218**	**0.0000**	**0.9647**	**0.9647**	**0.0000**	**0.8879**	**0.8879**	**0.0000**	**2,217.9578**	**2,217.9578**	**0.6761**		**2,232.1556**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	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
Worker	0.0487	0.0611	0.7632	1.8400e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.7275	148.7275	7.3200e-003		148.8811
Total	**0.0487**	**0.0611**	**0.7632**	**1.8400e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**148.7275**	**148.7275**	**7.3200e-003**		**148.8811**

3.3 Phase I Well Drilling & Temp Well Comp. - 2017

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	2.7302	27.1671	15.8899	0.0344		1.4164	1.4164		1.3469	1.3469		3,433.5042	3,433.5042	0.8377		3,451.0967
Total	**2.7302**	**27.1671**	**15.8899**	**0.0344**		**1.4164**	**1.4164**		**1.3469**	**1.3469**		**3,433.5042**	**3,433.5042**	**0.8377**		**3,451.0967**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	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
Worker	0.0861	0.1081	1.3502	3.2600e-003	0.2571	2.0700e-003	0.2592	0.0682	1.9100e-003	0.0701		263.1332	263.1332	0.0129		263.4051
Total	**0.0861**	**0.1081**	**1.3502**	**3.2600e-003**	**0.2571**	**2.0700e-003**	**0.2592**	**0.0682**	**1.9100e-003**	**0.0701**		**263.1332**	**263.1332**	**0.0129**		**263.4051**

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	2.7302	27.1671	15.8899	0.0344		1.4164	1.4164		1.3469	1.3469	0.0000	3,433.5042	3,433.5042	0.8377		3,451.0967
Total	**2.7302**	**27.1671**	**15.8899**	**0.0344**		**1.4164**	**1.4164**		**1.3469**	**1.3469**	**0.0000**	**3,433.5042**	**3,433.5042**	**0.8377**		**3,451.0967**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	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
Worker	0.0861	0.1081	1.3502	3.2600e-003	0.2571	2.0700e-003	0.2592	0.0682	1.9100e-003	0.0701		263.1332	263.1332	0.0129		263.4051
Total	**0.0861**	**0.1081**	**1.3502**	**3.2600e-003**	**0.2571**	**2.0700e-003**	**0.2592**	**0.0682**	**1.9100e-003**	**0.0701**		**263.1332**	**263.1332**	**0.0129**		**263.4051**

3.4 Phase II Well Head Facilities - 2017

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	2.5102	25.7350	14.6521	0.0325		1.3011	1.3011		1.2316	1.2316		3,251.6686	3,251.6686	0.8197		3,268.8824
Total	**2.5102**	**25.7350**	**14.6521**	**0.0325**		**1.3011**	**1.3011**		**1.2316**	**1.2316**		**3,251.6686**	**3,251.6686**	**0.8197**		**3,268.8824**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1378	1.4234	1.6886	3.9100e-003	0.1125	0.0227	0.1352	0.0321	0.0208	0.0529		386.4009	386.4009	2.7300e-003		386.4581
Worker	0.1722	0.2163	2.7004	6.5100e-003	0.5142	4.1400e-003	0.5183	0.1364	3.8100e-003	0.1402		526.2665	526.2665	0.0259		526.8101
Total	**0.3100**	**1.6397**	**4.3889**	**0.0104**	**0.6267**	**0.0268**	**0.6535**	**0.1684**	**0.0246**	**0.1931**		**912.6674**	**912.6674**	**0.0286**		**913.2683**

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	2.5102	25.7350	14.6521	0.0325		1.3011	1.3011		1.2316	1.2316	0.0000	3,251.6686	3,251.6686	0.8197		3,268.8824
Total	**2.5102**	**25.7350**	**14.6521**	**0.0325**		**1.3011**	**1.3011**		**1.2316**	**1.2316**	**0.0000**	**3,251.6686**	**3,251.6686**	**0.8197**		**3,268.8824**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1378	1.4234	1.6886	3.9100e-003	0.1125	0.0227	0.1352	0.0321	0.0208	0.0529		386.4009	386.4009	2.7300e-003		386.4581
Worker	0.1722	0.2163	2.7004	6.5100e-003	0.5142	4.1400e-003	0.5183	0.1364	3.8100e-003	0.1402		526.2665	526.2665	0.0259		526.8101
Total	**0.3100**	**1.6397**	**4.3889**	**0.0104**	**0.6267**	**0.0268**	**0.6535**	**0.1684**	**0.0246**	**0.1931**		**912.6674**	**912.6674**	**0.0286**		**913.2683**

3.5 Phase II Blow Off Pond - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.7221	7.6117	4.4076	9.2500e-003		0.3886	0.3886		0.3575	0.3575		946.3615	946.3615	0.2900		952.4507
Total	**0.7221**	**7.6117**	**4.4076**	**9.2500e-003**	**0.0000**	**0.3886**	**0.3886**	**0.0000**	**0.3575**	**0.3575**		**946.3615**	**946.3615**	**0.2900**		**952.4507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	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
Worker	0.0299	0.0376	0.4696	1.1300e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		91.5246	91.5246	4.5000e-003		91.6192
Total	**0.0299**	**0.0376**	**0.4696**	**1.1300e-003**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.6000e-004**	**0.0244**		**91.5246**	**91.5246**	**4.5000e-003**		**91.6192**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.7221	7.6117	4.4076	9.2500e-003		0.3886	0.3886		0.3575	0.3575	0.0000	946.3615	946.3615	0.2900		952.4507
Total	**0.7221**	**7.6117**	**4.4076**	**9.2500e-003**	**0.0000**	**0.3886**	**0.3886**	**0.0000**	**0.3575**	**0.3575**	**0.0000**	**946.3615**	**946.3615**	**0.2900**		**952.4507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	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
Worker	0.0299	0.0376	0.4696	1.1300e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		91.5246	91.5246	4.5000e-003		91.6192
Total	**0.0299**	**0.0376**	**0.4696**	**1.1300e-003**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.6000e-004**	**0.0244**		**91.5246**	**91.5246**	**4.5000e-003**		**91.6192**

3.6 Phase II Pipelines - 2017

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	1.2140	13.3972	6.5066	0.0136		0.6459	0.6459		0.5944	0.5944		1,384.1057	1,384.1057	0.4223		1,392.9749
Total	**1.2140**	**13.3972**	**6.5066**	**0.0136**		**0.6459**	**0.6459**		**0.5944**	**0.5944**		**1,384.1057**	**1,384.1057**	**0.4223**		**1,392.9749**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	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
Worker	0.0487	0.0611	0.7632	1.8400e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.7275	148.7275	7.3200e-003		148.8811
Total	**0.0487**	**0.0611**	**0.7632**	**1.8400e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**148.7275**	**148.7275**	**7.3200e-003**		**148.8811**

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	1.2140	13.3972	6.5066	0.0136		0.6459	0.6459		0.5944	0.5944	0.0000	1,384.1057	1,384.1057	0.4223		1,392.9749
Total	**1.2140**	**13.3972**	**6.5066**	**0.0136**		**0.6459**	**0.6459**		**0.5944**	**0.5944**	**0.0000**	**1,384.1057**	**1,384.1057**	**0.4223**		**1,392.9749**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	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
Worker	0.0487	0.0611	0.7632	1.8400e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.7275	148.7275	7.3200e-003		148.8811
Total	**0.0487**	**0.0611**	**0.7632**	**1.8400e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**148.7275**	**148.7275**	**7.3200e-003**		**148.8811**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4500e-003	4.7600e-003	0.0193	4.0000e-005	2.7000e-003	8.0000e-005	2.7800e-003	7.2000e-004	7.0000e-005	7.9000e-004		3.6886	3.6886	1.6000e-004		3.6920
Unmitigated	1.4500e-003	4.7600e-003	0.0193	4.0000e-005	2.7000e-003	8.0000e-005	2.7800e-003	7.2000e-004	7.0000e-005	7.9000e-004		3.6886	3.6886	1.6000e-004		3.6920

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.29	0.29	0.29	1,275	1,275
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.29	0.29	0.29	1,275	1,275

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.516610	0.060517	0.179979	0.140587	0.041566	0.006616	0.015092	0.027587	0.001923	0.002530	0.004314	0.000602	0.002075

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-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
General Light Industry	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

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

General Light Industry	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
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.8507	1.0000e-005	6.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3200e-003	1.3200e-003	0.0000		1.4000e-003
Unmitigated	2.8507	1.0000e-005	6.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3200e-003	1.3200e-003	0.0000		1.4000e-003

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	0.6922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1585					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3200e-003	1.3200e-003	0.0000		1.4000e-003
Total	**2.8507**	**1.0000e-005**	**6.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.3200e-003**	**1.3200e-003**	**0.0000**		**1.4000e-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	lb/day										lb/day					
Architectural Coating	0.6922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1585					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3200e-003	1.3200e-003	0.0000		1.4000e-003
Total	**2.8507**	**1.0000e-005**	**6.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.3200e-003**	**1.3200e-003**	**0.0000**		**1.4000e-003**

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

10.0 Vegetation

Appendix B:

Biology – Special Status Species Desktop Search Results

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE **RareFind**

Query Summary:
Quad IS (Perris (3311772) OR El Casco (3311781) OR Riverside East (3311783) OR Sunnymead (3311782) OR Steele Peak (3311773) OR Lakeview (3311771) OR Lake Elsinore (3311763) OR Winchester (3311761) OR Romoland (3311762))
AND Elevation IS greater than OR equal to 1450
AND Elevation IS less than OR equal to 1460
AND Presence IS (Presumed Extant OR Possibly Extirpated)

Print Close

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Southern Cottonwood Willow Riparian Forest	Southern Cottonwood Willow Riparian Forest	Riparian	CTT61330CA	111	2	None	None	G3	S3.2	null	null	Riparian forest
Southern Riparian Scrub	Southern Riparian Scrub	Riparian	CTT63300CA	56	1	None	None	G3	S3.2	null	null	Riparian scrub
Arizona elegans occidentalis	California glossy snake	Reptiles	ARADB01017	260	3	None	None	G5T2	S2	null	CDFW_SSC-Species of Special Concern	null
Aspidoscelis hyperythra	orange-throated whiptail	Reptiles	ARACJ02060	368	1	None	None	G5	S2S3	null	CDFW_WL-Watch List, IUCN_LC-Least Concern, USFS_S-Sensitive	Chaparral, Cismontane woodland, Coastal scrub
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1375	1	None	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Phrynosoma blainvillii	coast horned lizard	Reptiles	ARACF12100	781	2	None	None	G3G4	S3S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Chaparral, Cismontane woodland, Coastal bluff scrub, Coastal scrub, Desert wash, Pinon & juniper woodlands, Riparian scrub, Riparian woodland, Valley & foothill grassland
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	Mammals	AMAFD05031	101	1	None	None	G5T3T4	S3S4	null	CDFW_SSC-Species of Special Concern	Chaparral, Coastal scrub
Dipodomys merriami parvus	San Bernardino kangaroo rat	Mammals	AMAFD03143	81	1	Endangered	Candidate Endangered	G5T1	S1	null	CDFW_SSC-Species of Special Concern	Coastal scrub
Dipodomys stephensi	Stephens' kangaroo rat	Mammals	AMAFD03100	220	4	Endangered	Threatened	G2	S2	null	IUCN_EN-Endangered	Coastal scrub, Valley & foothill grassland
Neotoma lepida intermedia	San Diego desert woodrat	Mammals	AMAFF08041	132	1	None	None	G5T3T4	S3S4	null	CDFW_SSC-Species of Special Concern	Coastal scrub
Onychomys torridus ramona	southern grasshopper mouse	Mammals	AMAFF06022	28	1	None	None	G5T3	S3	null	CDFW_SSC-Species of Special Concern	Chenopod scrub

Abronia villosa var. aurita	chaparral sand-verbena	Dicots	PDNYC010P1	98	1	None	None	G5T2?	S2	1B.1	BLM_S-Sensitive, SB_RSABG-Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Chaparral, Coastal scrub, Desert dunes
Atriplex parishii	Parish's brittlescale	Dicots	PDCHE041D0	15	1	None	None	G1G2	S1	1B.1	USFS_S-Sensitive	Alkali playa, Chenopod scrub, Meadow & seep, Vernal pool, Wetland
Atriplex serenana var. davidsonii	Davidson's saltscale	Dicots	PDCHE041T1	27	1	None	None	G5T1	S1	1B.2	null	Coastal bluff scrub, Coastal scrub
Centromadia pungens ssp. laevis	smooth tarplant	Dicots	PDAST4R0R4	126	7	None	None	G3G4T2	S2	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Alkali playa, Chenopod scrub, Meadow & seep, Riparian woodland, Valley & foothill grassland, Wetland
Chorizanthe polygonoides var. longispina	long-spined spineflower	Dicots	PDPGN040K1	166	1	None	None	G5T3	S3	1B.2	BLM_S-Sensitive, SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral, Coastal scrub, Meadow & seep, Ultramafic, Valley & foothill grassland, Vernal pool
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Dicots	PDAST5L0A1	111	4	None	None	G4T2	S2	1B.1	BLM_S-Sensitive, SB_RSABG-Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden	Alkali playa, Marsh & swamp, Salt marsh, Vernal pool, Wetland
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	Dicots	PDBRA1M114	142	1	None	None	G5T3	S3	4.3	null	Chaparral, Coastal scrub
Myosurus minimus ssp. apus	little mousetail	Dicots	PDRAN0H031	24	1	None	None	G5T2Q	S2	3.1	SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Valley & foothill grassland, Vernal pool, Wetland
Athene cunicularia	burrowing owl	Birds	ABNSB10010	1988	4	None	None	G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Coastal prairie, Coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland
Lanius ludovicianus	loggerhead shrike	Birds	ABPBR01030	110	1	None	None	G4	S4	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Broadleaved upland forest, Desert wash, Joshua tree woodland, Mojavean desert scrub, Pinon & juniper woodlands, Riparian woodland, Sonoran desert scrub
Polioptila californica californica	coastal California gnatcatcher	Birds	ABPBJ08081	845	1	Threatened	None	G4G5T2Q	S2	null	CDFW_SSC-Species of Special Concern, NABCI_YWL-Yellow Watch List	Coastal bluff scrub, Coastal scrub
Vireo bellii pusillus	least Bell's vireo	Birds	ABPBW01114	501	4	Endangered	Endangered	G5T2	S2	null	IUCN_NT-Near Threatened, NABCI_YWL-Yellow Watch List	Riparian forest, Riparian scrub, Riparian woodland
Spea hammondii	western spadefoot	Amphibians	AAABF02020	1057	2	None	None	G3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	Cismontane woodland, Coastal scrub, Valley & foothill grassland, Vernal pool, Wetland

CNPS RPI Query Results (9-Quad), October 2019
EMWD Well 204 Project Site, Perris, CA

Scientific Name	Common Name	CRPR	CESA	FESA	Habitat
Abronia villosa var. aurita	chaparral sand-verbena	1B.1	None	None	Chaparral, Coastal scrub, Desert dunes
Allium munzii	Munz's onion	1B.1	CT	FE	Chaparral, Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland
Artemisia palmeri	San Diego sagewort	4.2	None	None	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland
Astragalus pachypus var. jaegeri	Jaeger's bush milk-vetch	1B.1	None	None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland
Atriplex coronata var. notatior	San Jacinto Valley crownscale	1B.1	None	FE	Playas, Valley and foothill grassland (mesic), Vernal pools
Atriplex parishii	Parish's brittlescale	1B.1	None	None	Chenopod scrub, Playas, Vernal pools
Berberis nevinii	Nevin's barberry	1B.1	CE	FE	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub
Brodiaea filifolia	thread-leaved brodiaea	1B.1	CE	FT	Chaparral (openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools
Calochortus plummerae	Plummer's mariposa lily	4.2	None	None	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland
Calochortus weedii var. intermedius	intermediate mariposa lily	1B.2	None	None	Chaparral, Coastal scrub, Valley and foothill grassland
Carex buxbaumii	Buxbaum's sedge	4.2	None	None	Bogs and fens, Meadows and seeps (mesic), Marshes and swamps
Caulanthus simulans	Payson's jewelflower	4.2	None	None	Chaparral, Coastal scrub
Centromadia pungens ssp. laevis	smooth tarplant	1B.1	None	None	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland
Chorizanthe leptotheca	Peninsular spineflower	4.2	None	None	Chaparral, Coastal scrub, Lower montane coniferous forest
Chorizanthe parryi var. parryi	Parry's spineflower	1B.1	None	None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland
Chorizanthe polygonoides var. longispina	long-spined spineflower	1B.2	None	None	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools
Convolvulus simulans	small-flowered morning-glory	4.2	None	None	Chaparral (openings), Coastal scrub, Valley and foothill grassland
Deinandra paniculata	paniculate tarplant	4.2	None	None	Coastal scrub, Valley and foothill grassland, Vernal pools
Dodecahema leptoceras	slender-horned spineflower	1B.1	CE	FE	Chaparral, Cismontane woodland, Coastal scrub (alluvial fan)
Dudleya multicaulis	many-stemmed dudleya	1B.2	None	None	Chaparral, Coastal scrub, Valley and foothill grassland
Harpagonella palmeri	Palmer's grapplinghook	4.2	None	None	Chaparral, Coastal scrub, Valley and foothill grassland
Hordeum intercedens	vernal barley	3.2	None	None	Coastal dunes, Coastal scrub, Valley and foothill grassland (saline flats and depressions), Vernal pools
Juglans californica	Southern California black walnut	4.2	None	None	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland

Scientific Name	Common Name	CRPR	CESA	FESA	Habitat
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	1B.1	None	None	Marshes and swamps (coastal salt), Playas, Vernal pools
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	4.3	None	None	Chaparral, Coastal scrub
Microseris douglasii ssp. platycarpha	small-flowered microseris	4.2	None	None	Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools
Myosurus minimus ssp. apus	little mousetail	3.1	None	None	Valley and foothill grassland, Vernal pools (alkaline)
Nama stenocarpa	mud nama	2B.2	None	None	Marshes and swamps (lake margins, riverbanks)
Navarretia fossalis	spreading navarretia	1B.1	None	FT	Chenopod scrub, Marshes and swamps (assorted shallow freshwater), Playas, Vernal pools
Orcuttia californica	California Orcutt grass	1B.1	CE	FE	Vernal pools
Romneya coulteri	Coulter's matilija poppy	4.2	None	None	Chaparral, Coastal scrub
Senecio aphanactis	chaparral ragwort	2B.2	None	None	Chaparral, Cismontane woodland, Coastal scrub
Sidalcea neomexicana	salt spring checkerbloom	2B.2	None	None	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas
Symphyotrichum defoliatum	San Bernardino aster	1B.2	None	None	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Valley and foothill grassland (vernally mesic)
Texosporium sancti-jacobi	woven-spored lichen	3	None	None	Chaparral (openings)
Tortula californica	California screw-moss	1B.2	None	None	Chenopod scrub, Valley and foothill grassland

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

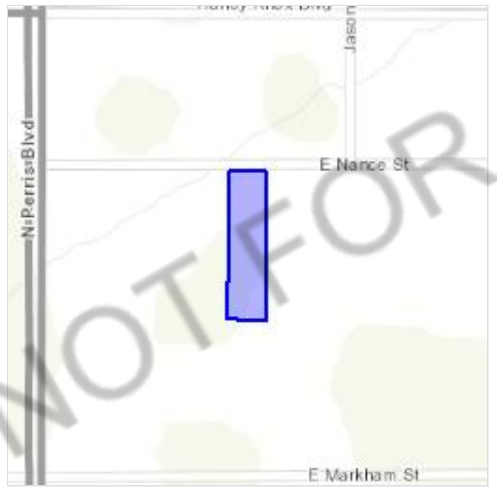
This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Riverside County, California



Local office

Carlsbad Fish And Wildlife Office

(760) 431-9440
(760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

http://www.fws.gov/carlsbad/

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. 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.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

NOT FOR CONSULTATION

San Bernardino Merriam's Kangaroo Rat Dipodomys merriami parvus — Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2060

Stephens' Kangaroo Rat Dipodomys stephensi (incl. D. cascus) — Endangered

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/3495

Birds

NAME	STATUS

Coastal California Gnatcatcher Polioptila californica californica — Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8178

Least Bell's Vireo Vireo bellii pusillus — Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Insects

NAME	STATUS

Quino Checkerspot Butterfly Euphydryas editha quino (=E. e. wrighti) — Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5900

Crustaceans

NAME	STATUS

Riverside Fairy Shrimp Streptocephalus woottoni — Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8148

NOT FOR CONSULTATION

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Munz's Onion Allium munzii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2951	Endangered
San Diego Ambrosia Ambrosia pumila There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8287	Endangered
San Jacinto Valley Crownscale Atriplex coronata var. notatior There is **final** critical habitat for this species. However, no *actual* acres or miles were designated due to exemptions and/or exclusions. See Federal Register publication for details. https://ecos.fws.gov/ecp/species/4353	Endangered
Spreading Navarretia Navarretia fossalis There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/1334	Threatened
Thread-leaved Brodiaea Brodiaea filifolia There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6087	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

NOT FOR CONSULTATION

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NOT FOR CONSULTATION

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE

BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Costa's Hummingbird Calypte costae — Breeds Jan 15 to Jun 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9470

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Probability of Presence Summary

NOT FOR CONSULTATION

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

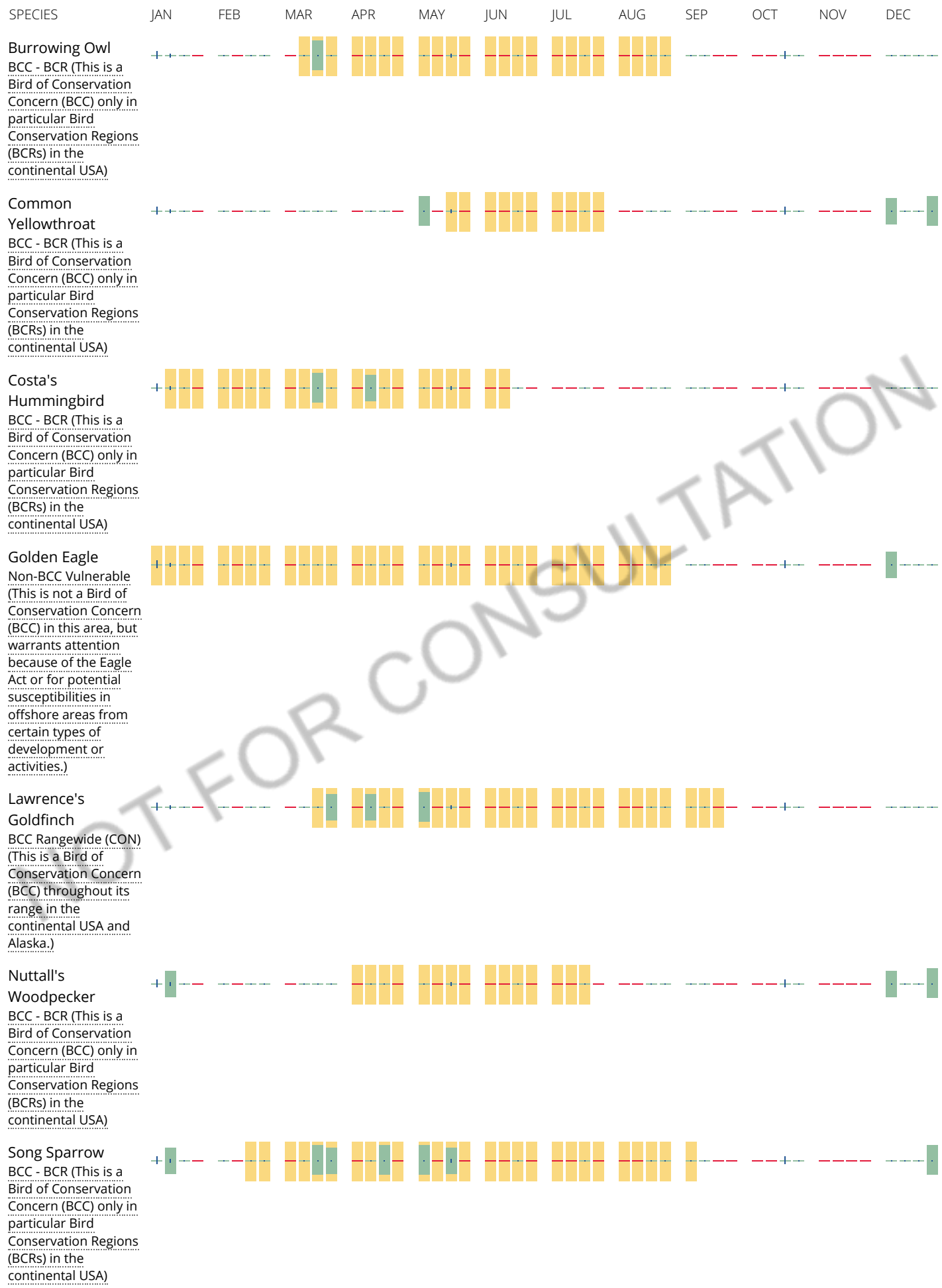
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

■ probability of presence ■ breeding season | survey effort – no data

NOT FOR CONSULTATION



NOT FOR CONSULTATION

Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

NOT FOR CONSULTATION

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Appendix C:

Cultural Resources Assessment Report

Phase I Cultural Resources Assessment of the Proposed Groundwater Production Well No. 204 Project City of Perris, County of Riverside, California

Prepared for:

Eastern Municipal Water District
Helen Stratton
P.O. Box 8300
Perris, CA 92572

Prepared by:

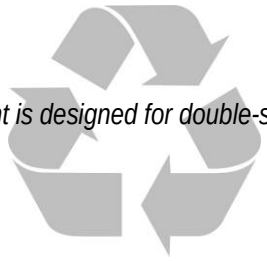
MIG.
1500 Iowa Avenue, Suite 110
Riverside, California 92507

Authors:
Christopher W. Purtell, M.A., RPA, Senior Archaeologist
Christopher Brown, Director of Environmental Services

Perris, CA United States Geological Survey 7.5" Quadrangle Map, Section 5 of Township 4 South, Range 5 West

Project Acreage: 2.3
Resources Indentified: None

June 17, 2016



This document is designed for double-sided printing

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EXECUTIVE SUMMARY

The Eastern Municipal Water District (EMWD) is proposing the construction and operation of a new portable groundwater production facility identified as Well No. 204, located on East Nance Street in the City of Perris, Riverside County, California. The proposed project will operate on 2.3-arces of land that includes the construction of one new groundwater production well (No. 204), well head facilities and appurtenances. The project's appurtenances include: a new field office, water supply line, and water discharge pump, settling tanks, drill rig, dog house, mud tank, blow off pond, pipe trailer, and material and cutting storage and laydown yards. The EMWD anticipates producing on the order of 1,000 acre-feet of potable water from this well at an approximate production rate between 400 gallons per minute (gpm) and 1, 500 gpm.

The project site is located north of Markham Street, south of East Nance Street, east of Flair Court, and west of Johnson Avenue. The project site is situated within the Perris Valley Commerce Center (PVCC) Specific Plan Land Use Area. For the purpose of this report, all project components will collectively be referred to as the "Study Area", unless otherwise noted. The proposed project includes excavations across the majority of the Study Area.

MIG conducted a Phase I Cultural Resources Assessment of the Study Area to determine the potential impacts to cultural resources (including archaeological, historical, and paleontological resources) for the purpose of complying with the California Environmental Quality Act (CEQA) and the local cultural resource regulations. The scope of work for this assessment included a cultural resources records search through the California Historical Resources Information System-Eastern Information Center at the California University, Riverside (CHRIS-EIC), a Sacred Lands File (SLF) search through the California Native American Heritage Commission (NAHC) and follow-up Native American consultation, a paleontological resources records search through the Natural History Museum of Los Angeles County's Vertebrate Paleontology Section (NHMLAC) a pedestrian survey, eligibility evaluations for resources identified within the Study Area, impact analyses, and the recommendation of additional work and mitigation measures.

Archaeological Resources

The cultural resources records search results from the Eastern Information Center (CHRIS-EIC) indicated that there were no archaeological resources located within the Study Area. However, there are three (3) previously recorded archaeological resources (prehistoric and historic) and one (1) historic located within one-mile radius (1-prehistoric, 2-historic, and 1-historic structure) of Study Area. None of these resources will be impacted by the proposed project. There were no archaeological resources identified during the pedestrian survey.

A review of the City of Perris General Plan has identified the Study Area to be in a vicinity of low sensitivity for cultural resources consisting of one or less recorded sites per quarter square mile (City of Perris General Plan 2005). Therefore, the proposed project would result in no adverse change in the significance of an archaeological resource as defined in §15064.5.

The Study Area is comprised of a vacant land that was a formerly used as a construction laydown yard. The vacant land measures approximately: 637-feet north-south by 158-feet east-west and exhibits shallow plowing or disking of soils in a north-south direction. Despite the heavy disturbances of the Study Area that may have displaced archaeological resources on the surface, it is possible that intact archaeological resources exist at depth. As a result, recommended mitigation measures are provided in Chapter 9 to reduce potentially significant impacts to previously undiscovered archaeological resources that may be accidentally encountered during project implementation to a less than significant level.

Historical Resources

The cultural resources records search results from the (CHRIS-EIC) indicated that there were no historical resources located within the Study Area. However, there was one (1) previously recorded historic structure (CA-RIV- 005516H) located within a one-mile radius, of the Study Area. This historic resource will not be impacted by the proposed project. There were no historic structures (built environments) identified during the pedestrian survey. Therefore, the proposed project would result in no adverse change in the significance of a historical resource as defined in §15064.5.

Paleontological Resources

Results of the paleontological resources records search through NHMLAC indicate that no vertebrate fossil localities from the NHMLAC records have been previously recorded within the Study Area or within a one-mile radius. Moreover, no paleontological resources were identified by MIG during the pedestrian survey. Nevertheless, the results of the literature review and the search at the NHMLAC indicate that the Study Area is situated upon surficial deposits of Quaternary Alluvium, derived primarily as alluvial fan deposits from the hills immediately to the northeast and also to the west. These Quaternary alluvial fan deposits are unlikely to contain significant fossil vertebrates, at least in the uppermost layers. Deeper and older Quaternary deposits that may well contain significant fossil vertebrate remains probably underlie the surficial Quaternary Alluvium deposits. Excavations in this older alluvium therefore have high potential to impact paleontologic resources. Further, a review of the City of Perris's General Plan indicate that the Study Area is located within a vicinity of low to high paleontological sensitivity, exhibiting surface exposures of younger Pleistocene valley deposits overlying older valley alluvium at depth; thus, requiring paleontological construction monitoring once subsurface excavations reach five (5) feet in depth, and monitoring levels reduced if appropriate, at the discretion of a certified Project Paleontologist. (City of Perris General Plan 2005, Mitigation Measure IV.A.4). As a result, recommended mitigation measures are provided in Chapter 9 to reduce potentially significant impacts to previously undiscovered paleontological resources or unique geological features that may be accidentally encountered during project implementation to a less than significant level.

INTRODUCTION 1

1.1 – Proposed Project and Location

The Eastern Municipal Water District (EMWD) is proposing the construction and operation of a new portable groundwater production facility identified as Well No. 204, located on East Nance Street in the City of Perris, Riverside County, California. The proposed project will operate on 2.3-arces of land and includes the construction of one new groundwater production well (No. 204), well head facilities and appurtenances. The project's appurtenances include: a new field office, water supply line, and water discharge pump, settling tanks, drill rig, dog house, mud tank, blow off pond, pipe trailer, and material and cutting storage and laydown yards. The EMWD anticipates producing on the order of 1,000 acre-feet of potable water from this well at an approximate production rate between 400 gallons per minute (gpm) and 1, 500 gpm.

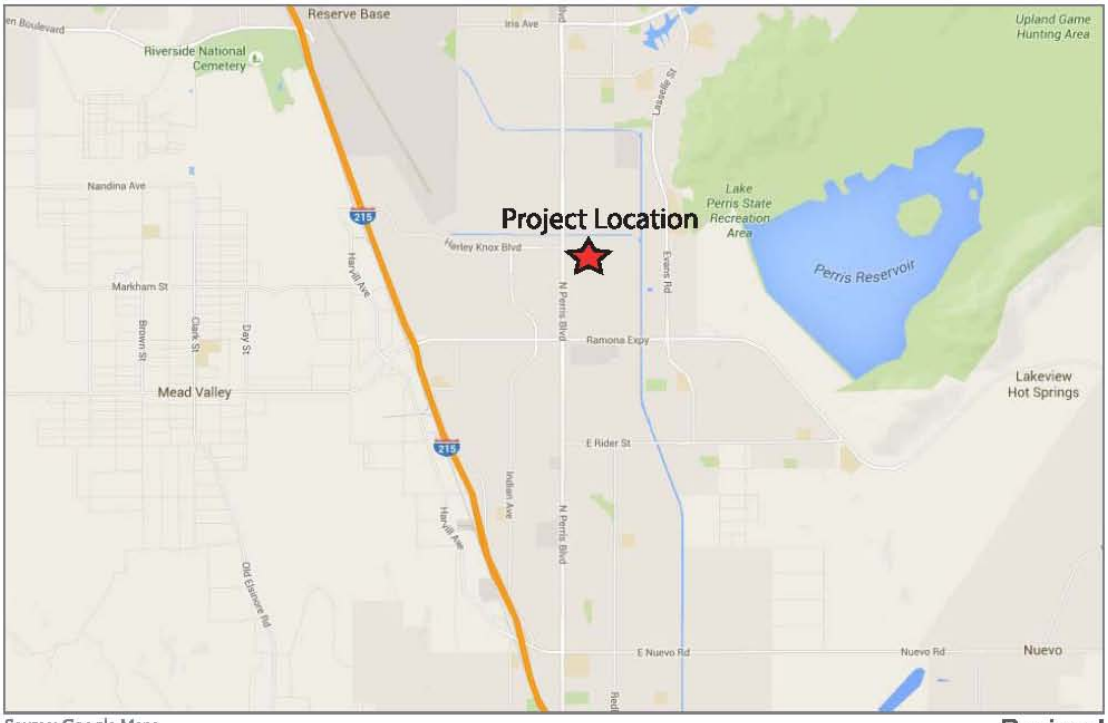
The project site is located north of Markham Street, south of East Nance Street, east of Flair Court, and west of Johnson Avenue. The project site is situated within the Perris Valley Commerce Center (PVCC) Specific Plan Land Use Area. For the purpose of this report, all project components will collectively be referred to as the "Study Area", unless otherwise noted. The proposed project includes excavations across the majority of the Study Area.

The Study Area is located in the City of Perris, in Riverside County, California (Figure 1, Regional and Vicinity Map). The Study Area is depicted in Section 5 of Township 4 South, Range 5 West of the Perris CA United States Geological Survey (USGS) 7.5' topographic (Figure 2, USGS Topographic Map). The Study Area is surrounded by vacant land to the north adjacent to East Nance, to the south by Markham Street, to the east by Johnson Avenue, and to the west by Flair Court.

1.2 – Scope of Study and Personnel

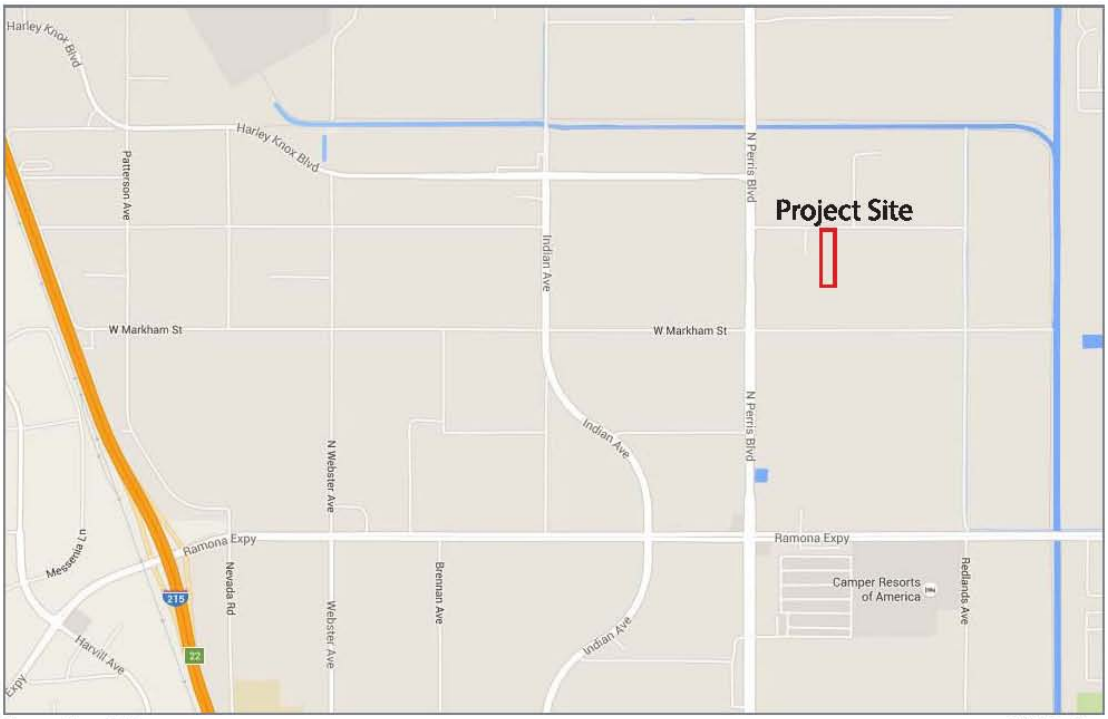
MIG conducted a phase I cultural resources assessment of the Study Area from May 2016 through June 2016 to identify potential impacts to cultural resources (including archaeological, historical, and paleontological resources) and to develop mitigation measures to avoid, reduce, or mitigate potential impacts to resources for the purpose of complying with CEQA and local cultural resource guidelines. The scope of work for this assessment included a cultural resources records search through the CHRIS-EIC, a Scared Lands File (SLF) search through the NAHC and follow-up Native American consultation, a paleontological resources records search through the NHMLAC, a pedestrian survey, eligibility evaluations for the resources identified within the Study Area, impact analyses, and the recommendations of additional work and mitigation measures, if necessary.

The assessment was co-managed and this report compiled by Mr. Chris Purtell, M.A., RPA and Mr. Chris Brown. The pedestrian field survey was performed by Mr. Purtell. The record searches were conducted by Mr. Purtell. Qualifications of key personnel are provided in Appendix A.



Source: Google Maps

Regional

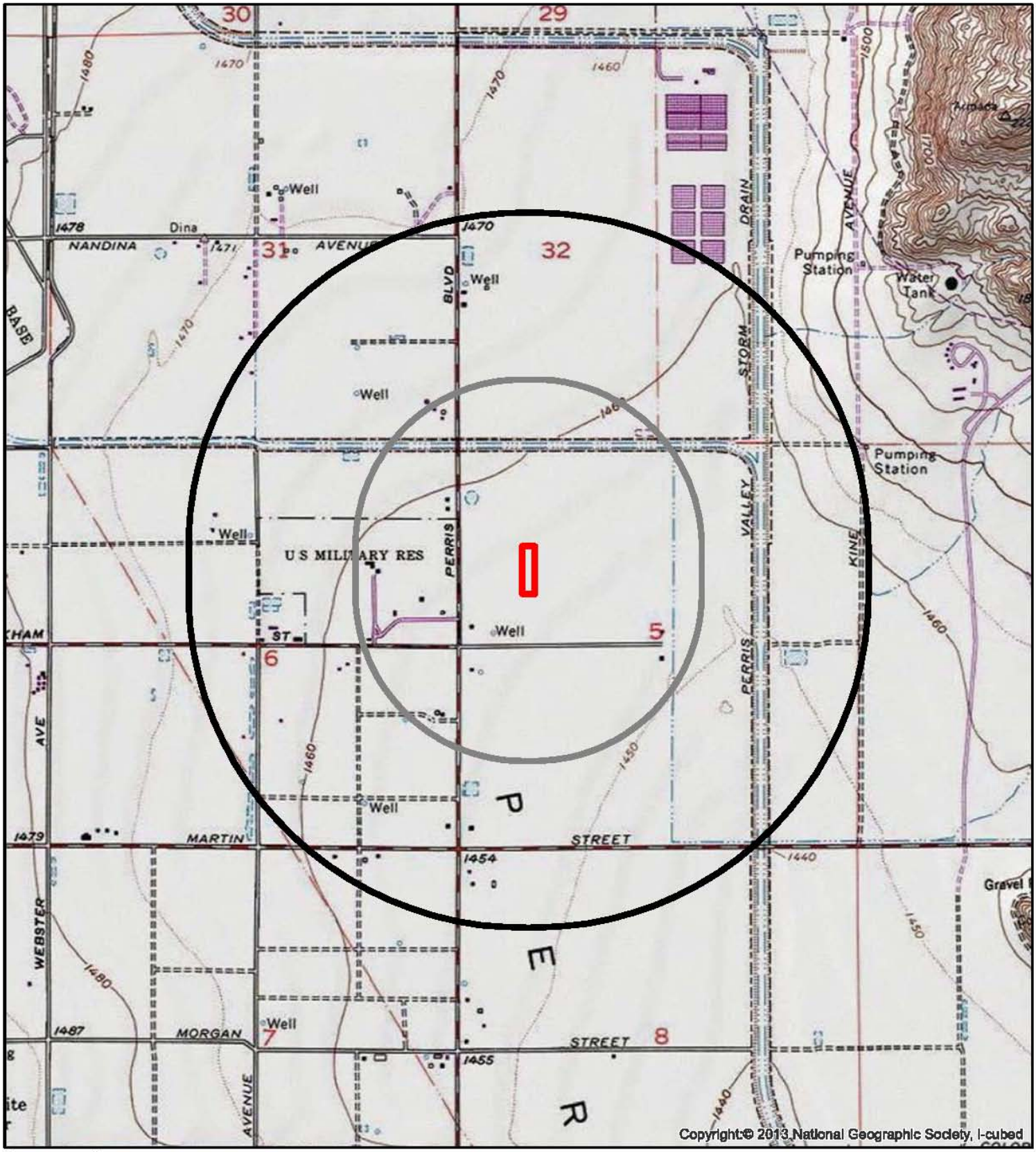


Source: Google Maps

Vicinity

Figure 1 Regional and Vicinity Map

Eastern Municipal Water District Well 204
Perris, California



Legend

- 1 Mile Buffer
- 0.5 Mile Buffer
- Project Site

EMWD Well 204 Project

Section 5, Township 4 South, Range 5 West
Perris USGS 7.5 Minute Quadrangle
1:24,000

N

REGULATORY SETTING 2

Regulatory Framework

Cultural resources are indirectly protected under the provisions of the Federal Antiquities Act of 1906 (16 U.S.C §§ 431 et seq.) and subsequent related legislation, regulations, policies, and guidance documents. The following is a summary of the applicable (federal, state, and local) regulatory framework related to the protection of cultural resources in California.

Numerous laws and regulations require federal, state, and local agencies to consider the effects of a proposed project on cultural resources. These laws and regulations establish a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (e.g., State Historic Preservation Office and the Advisory Council on Historic Preservation). The National Historic Preservation Act (NHPA) of 1966, as amended, CEQA, and Public Resources Code (PRC) 5024, are the primary federal and state laws governing and affecting preservation of cultural resources of national, state, regional, and local significance. Other relevant regulations and guidelines at the local level include the City's General Plan and Municipal Code. A description of the applicable laws, regulations, and guidelines are provided in the following paragraphs.

2.1 Federal Level

2.1.1 – NATIONAL HISTORIC PRESERVATION ACT OF 1966

Enacted in 1966, the National Historic Preservation Act (NHPA) (16 U.S.C §§ 470 et seq.) declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP), established the position of State Historic Preservation Officer (SHPO), provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assist Native American tribes in preserving their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP).

In summary, the NHPA establishes the nation's policy for historic preservation and sets in place a program for the preservation of historic properties by requiring federal agencies to consider effects to significant cultural resources (i.e. historic properties) prior to undertakings.

2.1.2 – SECTION 106 OF THE FEDERAL GUIDELINES

Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the NRHP and that the ACHP and SHPO must be afforded an opportunity to comment, through a process outlined in the ACHP regulations at 36 Code of Federal Regulations (CFR) Part 800, on such undertakings.

2.1.3 – NATIONAL REGISTER OF HISTORIC PLACES

The NRHP was established by the NHPA of 1966 as "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment." The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, or association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history.

Criterion B: It is associated with the lives of persons who are significant in our past.

Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.

Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

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 at least 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

2.1.4 – Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

2.2 – State

2.2.1 – California Environmental Quality Act

Pursuant to CEQA, a historical resource is a resource listed in, or eligible for listing in, the California Register of Historical Resources (CRHR). In addition, resources included in a local register of historic resources or identified as significant in a local survey conducted in accordance with state guidelines are also considered historic resources under CEQA, unless a preponderance of the facts demonstrates otherwise. According to CEQA, the fact that a resource is not listed in or determined eligible for listing in the CRHR or is not included in a local register or survey shall not preclude a Lead Agency, as defined by CEQA, from determining that the resource may be a historic resource as defined in California Public Resources Code (PRC) Section 5024.1.

CEQA applies to archaeological resources when (1) the archaeological resource satisfies the definition of a historical resource or (2) the archaeological resource satisfies the definition of a “unique archaeological resource.” A unique archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

1. The archaeological resource contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.

2. The archaeological resource has a special and particular quality such as being the oldest of its type or the best available example of its type.

3. The archaeological resource is directly associated with a scientifically recognized important prehistoric or historic event or person.

Appendix G of the State CEQA Guidelines provides a set of sample questions that guide the evaluation of potential impacts with regard to cultural resources:

Would the project:

a) Cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

d) Disturb any human remains, including those interred outside of formal cemeteries?

2.2.2 – CALIFORNIA REGISTER OF HISTORICAL RESOURCES

Created in 1992 and implemented in 1998, the California Register of Historical Resources (CRHR) is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate properties that are to be protected, to the extent prudent and feasible, from substantial adverse change."[1] Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks (CHLs) numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historic resources surveys, or designated by local landmarks programs may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria[2]:

Criterion 1: It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

Criterion 2: It is associated with the lives of persons important in our past.

Criterion 3: It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.

Criterion 4: It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to be recognizable as historic resources and to convey the reasons for their significance. It is possible that a resource whose integrity does not satisfy NRHP criteria may still be eligible for listing in the CRHR. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data. Resources that have achieved significance within the past 50 years also may 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.

2.3 – Other State Statutes and Regulations

2.3.1 – CALIFORNIA HISTORICAL LANDMARKS

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The

[1] *California Public Resources Code § 5024.1(a).*
[2] *California Public Resources Code § 5024.1(b).*

resource must also be approved for designation by the County Board of Supervisors or the City or Town Council in whose jurisdiction it is located, be recommended by the State Historical Resources Commission, or be officially designated by the Director of California State Parks. The specific standards in use now were first applied in the designation of CHL No. 770. CHLs No. 770 and above are automatically listed in the CRHR.

To be eligible for designation as a Landmark, a resource must meet at least one of the following criteria:

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California)
- Associated with an individual or group having a profound influence on the history of California
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder

2.3.2 – California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of Historical Interest (Points) designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a Landmark and a Point. If a Point is later granted status as a Landmark, the Point designation will be retired. In practice, the Point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a Point, a resource must meet at least one of the following criteria:

- The first, last, only, or most significant of its type within the local geographic region (city or county)
- Associated with an individual or group having a profound influence on the history of the local area
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder

2.3.3 – Native American Heritage Commission, Public Resources Code Sections 5097.9–5097.991

Section 5097.91 of the Public Resources Code (PRC) established the Native American Heritage Commission (NAHC), whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Under Section 5097.9 of the PRC, a state policy of noninterference with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites or sacred shrines located on public property. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner. Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

2.3.4 – California Native American Graves Protection and Repatriation Act of 2001

Codified in the California Health and Safety Code Sections 8010–8030, the California Native American Graves Protection Act (NAGPRA) is consistent with the federal NAGPRA. Intended to "provide a seamless and consistent state policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect," the California NAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The act also provides a process for non–federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

2.3.5 – SENATE BILL 18

Senate Bill (SB) 18 (California Government Code, Section 65352.3) incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies by establishing responsibilities for local governments to contact, refer plans to, and consult with California Native American tribes as part of the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. SB18 requires public notice to be sent to tribes listed on the Native American Heritage Commission's SB18 Tribal Consultation list within the geographical areas affected by the proposed changes. Tribes must respond to a local government notice within 90 days (unless a shorter time frame has been agreed upon by the tribe), indicating whether or not they want to consult with the local government. Consultations are for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code that may be affected by the proposed adoption or amendment to a general or specific plan.

2.3.6 – ASSEMBLY BILL 52

Assembly Bill (AB) 52 specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. AB 52 requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. AB 52 specifies examples of mitigation measures that may be considered to avoid or minimize impacts on tribal cultural resources. The bill makes the above provisions applicable to projects that have a notice of preparation or a notice of negative declaration filed or mitigated negative declaration on or after July 1, 2015. AB 52 amends Sections 5097.94 and adds Sections 21073, 21074, 2108.3.1., 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to the California Public Resources Code (PRC), relating to Native Americans.

2.3.7 – HEALTH AND SAFETY CODE, SECTIONS 7050 AND 7052

Health and Safety Code Section 7050.5 declares that, in the event of the discovery of human remains outside a dedicated cemetery, all ground disturbances must cease and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

2.3.8 – PENAL CODE, SECTION 622.5

Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

2.5 – Local Level

2.5.1 – CITY OF PERRIS GENERAL PLAN-CONSERVATION ELEMENT

The City of Perris has put forth numerous policies with the Goals and Objectives section of the General Plan. These policies were created to identify and preserve the City's unique historical and archaeological resources for generations (City of Perris 2005).

Measure IV.A.2	For all projects subject to CEQA, applicants will be required to submit results of an archaeological records request through the Eastern Information Center at the University of Riverside.
Measure IV.A.3	Require Phase I Surveys for all projects located in areas that have not been previously surveyed for archaeological or historic resources, or which lie near areas where archaeological or historic sites have been recorded.

Regulatory Setting 2

Measure IV.A.4	In Area I and Area 2 shown on the Paleontological Sensitivity Map, paleontological monitoring of all projects requiring subsurface excavations will be required once any excavation begins. In Areas 4 and 5, paleontological monitoring will be required once subsurface excavations five feet in depth, with monitoring levels reduced if appropriate, at the discretion of a certified Project Paleontologist.

ENVIRONMENTAL SETTING 3

The Study Area is located on approximately 2.3 acres of land located in the Northeast Perris area of western Riverside County. The Project Site is bordered by vacant land on the north by East Nance Street, on the south by Markham Street, on the east by Johnson Avenue, and a residential residence and storage yard is located adjacent to Flair Court on the west. The project site is situated within the Perris Valley Commerce Center (PVCC) Specific Plan Land Use Area.

The elevation within the Study Area ranges from approximately 1,560 feet above mean sea level (MSL) in the north-northeast to 1,550 feet above MSL in the south-southwest. The Study Area is currently undeveloped and was formerly used as a construction laydown yard. The topography of the Study Area is relatively flat, with a slight slope along a northwest to southeast direction. Reviews of aerial photographs indicate that the Study Area has been highly disturbed by regular disking/plowing for weed abatement or agricultural usage.

Geologically, the Study Area is located in the north portion of the Peninsular Ranges geomorphic province. The Peninsular Ranges province is distinguished by northwest trending mountain ranges and valleys following faults branching from the San Andreas Fault. The Peninsular Ranges are bound to the east by the Colorado Desert and extend north to the San Bernardino – Riverside county line (Norris and Webb 1976), west into the submarine continental shelf, and south to the California state line.

The Perris Valley, in which the Study Area lies, is a northwest-southwest trending inland valley between the Lakeview Mountains and the Santa Ana-Elsinore Mountains. The Study Area is located in the western portion of this valley, more than a mile east of the Gavilan Hills, a high portion of the Perris Structural Block that marks its western edge. The Perris Valley is one of several tectonically controlled valleys within the valley and ridge system of the Perris Structural Block. These are structurally depressed troughs filled with sediments of upper Pliocene through recent ages, and the ridges are composed of plutonic igneous rocks, metasedimentary rocks, and late-stage intrusive dikes (City of Perris 2011).

Environmental Setting 3

CULTURAL SETTING 4

4.1 – Prehistoric Context

Prehistory is most easily discussed chronologically, in terms of environmental change and recognized cultural developments. Several chronologies have been proposed for inland Southern California, the most widely accepted of which is Wallace's four-part Horizon format (1955), which was later updated and revised by Claude Warren (1968). The advantages and weaknesses of Southern California chronological sequences are reviewed by Warren (in Moratto 1984), Chartkoff and Chartkoff (1984), and Heizer (1978). The following discussion is based on Warren's (1968) sequence, but the time frames have been adjusted to reflect more recent archaeological findings, interpretations, and advances in radiocarbon dating.

4.1.1 – PALEO-INDIAN PERIOD (CA. 13,000-11,000 YEARS BEFORE PRESENT [YBP])

Little is known of Paleo-Indian peoples in inland southern California, and the cultural history of this period follows that of North America in general. Recent discoveries in the Americas have challenged the theory that the first Americans migrated from Siberia, following a route from the Bering Strait into Canada and the Northwest Coast sometime after the Wisconsin Ice Sheet receded (ca. 14,000 YBP), and before the Bering Land Bridge was submerged (ca. 12,000 YBP). Based on new research from the Pacific Rim, it has been proposed that modern humans settled islands of the eastern Pacific between 40,000 and 15,000 years ago. Evidence of coastal migration has also come from sites on islands off Alta and Baja California. As a result, these sites are contemporary with Clovis and Folsom points found in North America's interior regions. All of these new findings have made the coastal migration theory gain credibility in recent times (Erlandson et al. 2007).

The timing, manner, and location of the Bering Strait crossing are a matter of debate among archaeologists, but the initial migration probably occurred as the Laurentide Ice Sheet melted along the Alaskan Coast and interior Yukon. The earliest radiocarbon dates from the Paleo-Indian Period in North America come from the Arlington Springs Woman site on Santa Rosa Island, which is located approximately 36 miles off the coast of California and is approximately 150 miles west-northwest of the Study Area. These human remains date to approximately 13,000 YBP (Johnson, et al. 2002). Other early Paleo-Indian sites include the Monte Verde Creek site in Chile (Meltzer, et al. 1997) and the controversial Meadowcroft Rockshelter in Pennsylvania. Both sites have early levels dated roughly at 12,000 YBP. Lifeways during the Paleo-Indian Period were characterized by highly mobile hunting and gathering. Prey included megafauna such as mammoth and technology included a distinctive flaked stone toolkit that has been identified across much of North America and into Central America. They likely used some plant foods, but the Paleo-Indian toolkit recovered archaeologically does not include many tools that can be identified as designed specifically for plant processing.

The megafauna that appear to have been the focus of Paleo-Indian life went extinct during a warming trend that began approximately 10,000 years ago, and both the extinction and climatic change (which included warmer temperatures in desert valleys and reduced precipitation in mountain areas) were factors in widespread cultural change. Subsistence and social practices continued to be organized around hunting and gathering, but the resource base was expanded to include a wider range of plant and game resources. Technological traditions also became more localized and included tools specifically for the processing of plants and other materials. This constellation of characteristics has been given the name "Archaic" and it was the most enduring of cultural adaptations to the North American environment throughout this time period.

4.1.2 – ARCHAIC PERIOD (CA. 11,000-3,500 YBP)

The earliest Archaic Period life in inland southern California has been given the name San Dieguito tradition, after the San Diego area where it was first identified and studied (Warren 1968). Characteristic artifacts include stemmed projectile points, crescents and leaf-shaped knives, which suggest a continued, focus on large game, although not megafauna of the earlier Paleo-Indian period. Milling equipment appears in the archaeological record at approximately 7,500 years ago (Moratto 1984:158). Artifact assemblages with this equipment include basin milling stones and unshaped manos, projectile points, flexed burials under cairns, and cogged stones, and have been given the name La Jolla Complex (7,500–3,000 YBP). The transition from San Dieguito life to La Jolla life appears to have been an

adaptation to drying of the climate after 8,000 YBP, which may have stimulated movements of desert peoples to the coastal regions, bringing milling stone technology with them. Groups in the coastal regions focused on mollusks, while inland groups relied on wild-seed gathering and acorn collecting.

4.1.3 – LATE PREHISTORIC PERIOD (CA. 3,500 YBP-A.D. 1769)

Cultural responses to environmental changes around 4,000–3,000 YBP included a shift to more land-based gathering practices. This period was characterized by the increasing importance of acorn processing, which supplemented the resources from hunting and gathering. Meighan (1954) identified the period after A.D. 1400 as the San Luis Rey complex. San Luis Rey I (A.D. 1400–1750) is associated with bedrock mortars and milling stones, cremations, small triangular projectile points with concave bases and Olivella beads. The San Luis Rey II (A.D. 1750–1850) period is marked by the addition of pottery, red and black pictographs, cremation urns, steatite arrow straighteners, and non-aboriginal materials (Meighan 1954:223, Keller and McCarthy 1989:6). Work at Cole Canyon and other sites in southern California suggest that this complex, and the ethnographically described life of the native people of the region, were well established by at least 1,000 YBP (Keller and McCarthy 1989:80).

4.1.4 – ETHNOGRAPHIC CONTEXT

Information presented in the California volume of the Handbook of North American Indians (Heizer 1978:575) shows the Study Area is located near the traditional territory of the Serrano, Luiseño and Cahuilla. These ethnographic groups are described below.

4.1.5 – SERANO

The Serrano people speak the Takic language, which is a similar to dialect spoken by the Luiseno, Cahuilla, and Garbrielino's (Bean and Smith 1978). The name Serrano comes from the Spanish word: "mountaineer or highlander" and refers to the indigenous people inhibiting the San Bernardino Mountains east of the Cajon Pass and may have settled along the Santa Ana River as early as 8,000 B.C. Their territory has been difficult to define, but it can be reliable characterized as from the San Bernardino Mountains extending northeast to the Mojave River region and southeast to the Tejon Creek area. The Serrano people were hunters-gathers and their diet consisted of small game such as rabbits, ground squirrels, and birds that was supplement by pinion nuts, acorns, agave, tuber-vegetables, and prickly pears. Villages were based on exogamous moieties (marriage outside of one's clan) and their size ranged between 25 to hundred people (Bean and Shipek 1978). The Yuhaviatam clan is known as the San Manuel Band of Mission Indians and the Maarenga' yam clan is known as the Morongo Band of Mission Indians, with a further, clan division for the Sobba Band of Luiseno Indians. The villagers lived in large communal dwellings made from tree branches that were covered with woven mats. Each family group had its own individual fire place inside the dwelling, where they crafted mother-of-pearl inlay baskets and vessels that they trade with the Chumash and Tongvas. In 1771, the Serrano's' were subjugated and absorbed into the San Gabriel Mission system that resulted in the loss of their freedom, cultural and customs. In 1891, the United States created the "San Manuel" Indian Reservation after Chief Santos Manuel. From this date forward the Serrano Indians have been known as the San Manuel Band of Mission Indians (Boyd and Brown 1922 and San Manuel Band of Mission Indians 2010).

4.1.6 – LUISEÑO

The Luiseño are a Takic speaking people that are usually associated with coastal and inland areas of present day Orange and southern Riverside counties, with cultural and social behavioral characteristics similar to those of the Cahuilla, a tribal group generally linked with areas northeast of the San Jacinto Mountains. In fact, exchanges between the Luiseno and Cahuilla have been well documented. In context, the Study Area is considered a Luiseño area, though evidence of a Cahuilla presence may be identified (Robinson and Risher 1996:102-103). The term Luiseño derives from the mission named San Luis Rey and has been used in the region to refer to those Takic-speaking people associated with Mission San Luis Rey (Bean and Shipek 1978:550). The Luiseño shared boundaries with the Cahuilla, Cupeño, Gabrielino, and Kummeyaay groups on the east, north, and south, respectively. These different bands shared cultural and language traditions with the Luiseño. The Luiseño territory comprised from the coast to Agua Hedionda Creek on the south to near Aliso Creek on the northwest. The boundary extended inland to Santiago Peak, then across to the eastern side of Elsinore Fault Valley, then southward to the east of Palomar Mountain, then around the southern slope above the

valley of San Jose (ibid.:550). Their habitat covered every ecological zone from the ocean, sandy beaches, shallow inlets, coastal chaparral, grassy valleys oak groves, among various other niches. The primary food source consisted of game animals such as deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, antelope, and various species of birds. Next to game animals, acorns were the most single important staple, and six different species were utilized (ibid.:552). The Luiseño social structure is unclear; however, each village was a clan-triblet-a group of people patrilineally related who owned an area in common and who were politically and economically autonomous from neighboring groups. The Luiseño were not organized into exogamous moieties such as were their neighbors, Cahuilla, Cupeño, and Serrano (Strong 1929:291). The hereditary village chief held an administrative position that combined and controlled religious, economic, and warfare powers (Boscana 1846:43). Marriage was arranged by the parents of children and important lineages were allied through marriage. Reciprocally useful alliances were arranged between groups in different ecological niches, and became springboards of territorial expansion, especially following warfare and truces (White1963:130). The Luiseño material culture included an array of tools that were made from stone, wood, bone, and shell, and which served to procure and process the region's resources. Needs for shelter and clothing were minimal in the region's forgiving climate, but considerable attention was devoted to personal decoration in ornaments, painting, and tattooing. The local pottery was well made, although it was not elaborately decorated (Laylander and Pham 2012).
The Luiseño material culture included an array of tools that were made from stone, wood, bone, and shell, and which served to procure and process the region's resources. Needs for shelter and clothing were minimal in the region's forgiving climate, but considerable attention was devoted to personal decoration in ornaments, painting, and tattooing. The local pottery was well made, although it was not elaborately decorated (Laylander and Pham 2012).

4.1.7 – CAHUILLA

The Cahuilla occupied a large area in the geographic center of southern California that was bisected by the Cocopa-Maricopa Trail in addition to Santa Fe and Yuman Trails. They occupied an area from the summit of the San Bernardino Mountains in the north to Borrego Springs and the Chocolate Mountains in the south, portions of the Colorado Desert west of Orocopia Mountain to the east, and the San Jacinto Plain near Riverside and the eastern slopes of Palomar Mountain to the west (Bean 1978). The Cahuilla hunted with throwing sticks, clubs, nets, traps, dead falls with seed triggers, spring-poled snares, arrows (often poison-tipped) and self-backed and sinew-backed bows. They sometimes fired bush clumps to drive game out in the open, and flares to attract birds at night. Baskets of various kinds were used for winnowing, leaching, grinding, transporting, parching, storing, and cooking. Pottery vessels were used for carrying water, for storage, cooking, serving food and drink. Cahuilla tools included mortars and pestles, manos and metates, fire drills, awls, arrow-straighteners, flint knives, wood, horn, and bone spoons and stirrers, scrapers, and hammerstones. Woven rabbit skin blankets served to keep people warm in cold weather. Feathered costumes were worn for ceremonial events, and at these events the Cahuilla made music using rattles derived from insect cocoon, turtle and tortoise shell, and deer-hoofs, along with wood rasps, bone whistles, bull-roarers, and flutes, to make music. They wove bags, storage pouches, cords, and nets from the fibers of yucca.

4.1.8 – EUROPEAN CONTACT

European contact with the Native American groups that likely inhabited the Study Area and surrounding region began in 1542 when Spanish explorer, Juan Rodriguez Cabrillo, arrived by sea during his navigation of the California coast. Sebastian Vizcaino arrived in 1602 during his expedition to explore and map the western coast that Cabrillo visited 60 years earlier. In 1769, another Spanish explorer, Gaspar de Portola, passed through Luiseño/Kumeyaay territory and interacted with the local indigenous groups. In 1798, Mission San Luis Rey was established by the Spanish and it likely integrated the Native Americans from the surrounding region. Multiple epidemics took a great toll on Native American populations between approximately 1800 and the early 1860s (Porretta 1983), along with the cultural and political upheavals that came with European, Mexican, and American settlement (Goldberg 2001:50-52). In the beginning of the nineteenth century, some Spaniards who had worked at the missions began to set up what would later be known as the "Ranchos." The Rancho era in California history was a period when the entire state was divided into large parcels of land equaling thousands of acres apiece. These large estates were ruled over in a semi-feudal manner by men who had been deeded the land by first the Spanish crown, and later the Mexican government. In 1821 Mexico won independence from Spain and began to dismantle the mission system in California. As the missions began to secularize, they were transformed into small towns and most Native Americans would later be marginalized into reservations or into American society. It was during this time that "Americans" began to enter California. Many of the American Californians married

into the Rancho families, a development that would transform land ownership in Mexican California. By the time the United States annexed California after the Mexican-American War in 1850, much of the Rancho lands were already in the hands of Americans.

4.2– Historic Context

Riverside County was settled by non-Indians in 1818-1819, by Leandro Jose Serrano who established a cattle ranch in the Temescal Valley under a permit authorized by the Mission San Luis Rey (Jennings et.al. 1993:91). During the same period the Mission San Luis Rey constructed a granary, a chapel and living quarters for the majordomo near the Luiseno village of Temecula. Concurrently, the Perris and San Jacinto Valleys became loosely affiliated with the Rancho San Jacinto, a vast cattle ranch controlled by the Mission San Luis Rey. Rancho San Jacinto first appeared in mission records in 1821 (City of Perris Draft Environmental Impact Report 2011).

During the secularization of the mission systems starting in 1834, mission ranchos throughout, Alta California were surrendered to the Mexican Government, and were consequently divided into large land grants and given to prominent citizens in the various provinces. The Rancho San Jacinto, Mexican officials created three large land grants commencing in the 1840's, including San Jacinto Nuevo y Potrero, which is located east of the project site and was granted to Miguel de Pendrorena, a propionate merchant from San Diego in 1846, just prior to American occupation of California. Cattle and agriculture was the economic engine that drove the ranchos way of life, which continued until the second half of the 19th century with the arrival of American and European settlers into California (City of Perris Draft Environmental Impact Report 2011).

4.2.1 – CITY OF PERRIS

Prior to American control of California, a wealthy Mexican landowner, Don Jose Antonio Estudillo, held most of the area in the eastern portion of Perris and further east to Hemet. In 1842, Estudillo was granted the Rancho San Jacinto Viejo Potrero, a 35,000-acre parcel, by Mexican Governor Juan B. Alvarado. The tract, which included an area encompassing the present areas of Hemet, San Jacinto, Valle Vista (Florida) and Winchester (Pleasant Valley), was used to graze cattle. After a son of Don Estudillo inherited the rancho, the division and sale of the rancho to immigrant American pioneers began (City of Perris General Plan 2005).

The western half of Perris was located within the Rancho El Sobrante de San Jacinto, which was granted to Maria del Rosario and Estudillo de Aguirre by Governor Pio Pico on May 9, 1846. This rancho amounted to 48,847 acres and was the last large rancho created by the secularization of the old Spanish ranchlands by the Mexican government. The area included western Perris Valley, the Canyon Lake area and the Lake Mathews region (City of Perris General Plan 2005).

In 1881, when the Southern California Railroad decided to build a railroad through the valley, Fredrick Perris was charged with surveying and constructing the route. The new route was a spur of the transcontinental railroad that led north from San Diego. Once completed, the railroad alignment served to provide access for lands opened for homesteading (City of Perris General Plan 2005).

In 1885, a railroad stop was constructed and the core area of Perris grew up around the depot and few existing buildings, such as the Perris Hotel. Later, the tracks were extended to Los Angeles. In the early 1890s, the tracks in the Temecula gorge portion of the Santa Margarita River were washed out by repeated rainstorms and could not be rebuilt. This meant that the inhabitants of Perris were forced to rely upon farming alone for economic growth until another route could be constructed. Dryland farming became the predominant source of income well into the late 20th century (City of Perris General Plan 2005).

Economic growth hinged upon water, and the early farmers dug wells and grew dryland crops. Plans for citrus groves could not be realized until a reliable source of water could be built and maintained. The Eastern Municipal Water District brought the first water via pipeline to the Perris valley area in the 1950s. Additional sources were brought to the area in the 1970s and 1980s fueling the expansion in development seen today (City of Perris General Plan 2005).

METHODS 5

5.1 – Cultural Resources Records Search

On May 20, 2016, Mr. Purtell conducted a records search of the Study Area and within a one-mile radius of the project boundaries at the CHRIS-EIC. The records search included a review of all recorded archaeological and historical resources within a one-mile radius of the Study Area as well as a review of cultural resource reports and historic topographic maps on file. In addition, MIG reviewed the California Points of Historical Interest (CPHI), the California Historical Landmarks (CHL), the California Register, the National Register, and the California State Historic Resources Inventory (HRI) listings. The purpose of the records search is to determine whether or not there are previously recorded archaeological or historical resources within the Study Area that required evaluation and treatment. The results also provide a basis for assessing the sensitivity of the Study Area for additional and buried cultural resources.

5.2 – Sacred Lands File Search and Native American Consultation

On May 10, 2016, Mr. Purtell commissioned a Sacred Lands File (SLF) records search of the Study Area through the NAHC and conducted follow-up consultation with the eighteen (18) Native American groups or individuals (inclusive of Luiseño and Cahuilla groups) identified by the NAHC as having affiliation with the Study Area vicinity. Each Native American group or individual listed was sent a project notification letter and map and was asked to convey any knowledge regarding prehistoric or Native American resources (archaeological sites, sacred lands, or artifacts) located within the Study Area or surrounding vicinity. The letter included information such as Study Area location and a brief description of the proposed project. Results of the search and follow-up consultation provided information as to the nature and location of additional prehistoric or Native American resources to be incorporated in the assessment whose records may not be available at the CHRIS-EIC.

5.3 – Paleontological Resources Records Search

On May 13, 2016, Mr. Purtell commissioned a paleontological resources records search through the Division of Geological Sciences at the NHMLAC in Redlands, California. This institution maintains files of regional paleontological site records as well as supporting maps and documents. This record search entailed an examination of current geologic maps and known fossil localities inside and within a one-mile radius of the Study Area. The objective of the records search was to determine the geological formations underlying the Study Area, whether any paleontological localities have previously been identified within the Study Area or in the same or similar formations near the Study Area, and the potential for excavations associated with the Study Area to encounter paleontological resources. The results also provide a basis for assessing the sensitivity of the Study Area for additional and buried paleontological resources.

5.4 – Pedestrian Survey

On June 1, 2016, MIG (Mr. Purtell) conducted a reconnaissance site survey of the Study Area to identify the presence of archaeological, historical, or paleontological resources. Mr. Purtell surveyed the Study Area and detailed notes and digital photographs were also taken of the Study Area and surrounding vicinity.

Methods 5

RESULTS 6

6.1 – Cultural Resources Records

Results of the records research conducted at the CHRIS-EIC indicate that there are no cultural resources (prehistoric or historic) recorded within the Study Area. However, there are three (3) previously recorded archaeological resources (prehistoric and historic) and one (1) historic structure located within one-mile radius (1-prehistoric, 2-historic, and 1-historic structure) of Study Area (see Table 1 Previously Recorded Cultural Resources within the Study Area). None of these resources will be impacted by the proposed project. There were no archaeological resources identified during the pedestrian survey. A brief summary of each of these cultural resources is provided below.

Table 1 Previously Recorded Cultural Resources within the Study Area

Resource No.	Resource Type	Description	NRHR Eligibility	CRHR Eligibility	Distance from the Project Site
RIV-CA-005516H P-33-005775	Historic Structure	Well house No. 6, March Air Force Base; dated circa 1953	Not Eligible	Not Eligible	Within a ½ mile to the southwest
RIV-CA-007758 P-33-014136	Prehistoric	Bedrock milling feature, ground equipment, and lithic scatter	Not Eligible	Not Eligible	¼ miles to the southeast
RIV-CA-00822 P-33-015853	Historic	Remains of an agricultural Irrigation system, including concrete pads; dated circa 1943 -1953	Not Evaluated	Not Evaluated	¾ miles to the northwest
RIV-CA-008312 P-33-016078	Historic	Remains of an historic water conveyance system and concrete water reservoir; dated post 1945	Not Evaluated	Not Evaluated	Within a ½ mile to the southwest

KEY:
NRHR = National Register of Historic Places
CRHP = California Register of Historic Resources

RIV-CA-005516H. This historic site was recorded by Tetra Tech, Inc. in 1999. The site is known as Well House No 6. Well house No. 6 is located by Building 3002 and was drilled in 1941 as part of the Gregory Radio Range complex associated with March Army Air Field. The well house is a cube-shaped building measuring 12 feet 4 inches square in plan. It has a concrete foundation and floor, and a flat concrete roof covered with tar and gravel. The exteriors of the walls have a beveled 2-inch setback 17.5 inches below the top of the building. The well house was constructed circa1941 to 1953 and does not appear to have undergone any alterations. The building was determined not to eligible for listing on the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR), under Criteria A, B, C, or D (NRHP) or 1,2,3, or 4 (CRHR). [3]

RIV-CA-007758. This prehistoric bedrock milling feature was first recorded by Clifford and Smith in 2005 and was recorded by Goodwin and Strudwick in 2012. The site consists of four bedrock milling features, 15 grinding slicks, and a single metate fragment. The site measures approximately 50-feet north/south by 100-feet east/west. Goodwin and Strudwick conducted a Phase II Testing and Evaluation of the site, in which they excavated 12 shovel test pits and 3 (1-meter by 1-meter) test units. The results of this investigation showed no significant intact deposits, features or artifacts and showed the site to be a typical example of a common resource type: a processing/temporary camp site lacking substantial subsurface deposits with moderate to severe disturbance. The authors concluded that site does not appear eligible for the California Register; and the remaining data potential for site has been realized by the current testing program.[4]

[3] California Department of Parks and Recreation. 1999. Primary Record for CA-RIV-005516H. Site form on file at the Eastern Information Center, University of California, Riverside

[4] California Department of Parks and Recreation. 2012 Primary Record for CA-RIV-007758.. Site form on file at the Eastern Information Center, University of California, Riverside

RIV-CA-00822. This historic site was recorded by Sanka et al in 2007. The site consisted of 10 features, including concrete pads for structures and the remains of an agricultural irrigation system. The constituents of the site most likely represent the remains of buildings and systems associated with the agricultural use of nearby land. The overall condition of the site is very poor, as much of the concrete is fragmented, and none of the structures remain intact. The site measured approximately 396-feet north/south by 396-feet east/west. The authors concluded that the site was construction between 1943 through 1953. The site was not evaluated for listing in the NRHP or in the CRHR. [5]

RIV-CA-008312. This historic site was recorded by Strudwick, et al. in 2005. The site consisted of an historic water conveyance system, a concrete pad, and a concrete water reservoir with an attached electric water pump. The site entire measured approximately 151-feet north/south by 115-feet east/west. The water reservoir measured 22-feet north/south by 12-feet east/west by 8-feet deep, and the concrete pad measured 15-feet north/south by 10-feet east/west. The electric motor attached to the corner of the reservoir had a manufacturing date of 9-15-50. The authors believed that water conveyance system is likely related to either agricultural fields or ranching activities in the area. The site was not evaluated for listing in the NRHP or in the CRHR. [6]

A review of the City of Perris's General Plan indicate that the Study Area lies in a vicinity of low sensitivity for cultural resources, consisting of one or less recorded cultural resource studies/reports cultural sites (prehistoric or historic) per square mile (City of Perris General Plan 2005).

The results of the record search indicate that there has been one (1) cultural resource study/report previously conducted within proposed project site (RI-07538) and six (6) cultural studies/reports that have been previously conducted within a one-half mile radius of the Study Area (see Table 2 Previously Conducted Cultural Reports within the Study Area). These studies were performed for one (1) storm drain and street improvement project, one (1) specific plan survey, one (1) environmental impact study, one (1) industrial complex construction project, one (1) industrial warehouse project, and two (2) archaeological/paleontological monitoring programs. These studies were conducted between1995 and 2015. A brief description of the one (1) previously recorded cultural study/report conducted within the Study Area is provided below.

Table 2 Previously Conducted Cultural Reports within the Study Area

Report Number	Year	Report Title	Study	Authors
RI-04211	1999	IDENTIFICATION AND EVALUATION OF HISTORIC PROPERTIES PERRIS VALLEY INDUSTRIAL CORRIDOR INFRASTRUCTURE PROJECT NEAR THE CITY OF PERRIS, RIVERSIDE COUNTY, CALIFORNIA.	Strom Drain and Street Improvement	LOVE, BRUCE and BAI "TOM" TANG
RI-05550	1995	PHASE I ARCHAEOLOGICAL SURVEY OF THE GREGORY SITE, MARCH AIR FORCE BASE, RIVERSIDE COUNTY, CA	Environmental Impact Study	EARTH TECH
RI-07538	2007	Cultural Resources Technical Report: North Perris Industrial Specific Plan, City of Perris, Riverside County, California	Specific Plan Survey	CRM Tech.
RI-07620	2005	A CULTURAL RESOURCES SURVEY FOR THE IDI PERRIS PROJECT COUNTY OF RIVERSIDE: APNS 302-080-011 THROUGH\ 302-080-017, 302-090-016, 302-090-017	Industrial Complex	CLIFFORD, J. and SMITH, B.
RI-08983	2013	Cultural Resources Assessment: Pelican Industrial Project, City of Perris, Riverside County, California	Industrial Warehouse Project	Riordan Goodwin

[5] California Department of Parks and Recreation. 2007 Primary Record for CA-RIV-0000822. Site form on file at the Eastern Information Center, University of California, Riverside

[6] California Department of Parks and Recreation. 2005. Primary Record for CA-RIV-005516H. Site form on file at the Eastern Information Center, University of California, Riverside

RI-09270	2015	Archaeological/Paleontological Monitoring Program Stratford Ranch Industrial Park Project in the City of Perris, Riverside County, California	Archaeological/Paleontological Monitor	Daniel Ballester
RI-09277	2015	Archaeological/Paleontological Monitoring Program ORE Industrial; Perris Valley Logistics; Tentative Parcel Map No. 36010 Project in the City of Perris, Riverside County, California CRM	Archaeological/Paleontological Monitor	Daniel Ballester

RI-07538. This study was conducted in 2007, and documents the results of the Cultural Resources Technical Report in support of the North Perris Industrial Specific Plan for the City of Perris. A cultural resources assessment was conducted and included cultural resources records searches, Native American consultation, and a pedestrian survey of the approximately six square-mile project area (3,860 acres) in the City of Perris. A cultural resource assessment concluded that the proposed Industrial Specific Plan Project Area exhibited a low sensitivity for both historic-period built-environmental features and archaeological remains. The report concluded that any proposed project located within the Industrial Specific Plan Area should require a Cultural Resource Assessment prior to the issuance of a Conditional Use Permit.[7]

6.2 – Sacred Lands File Search and Native American Consultation

The NAHC SLF records search results (received May 16, 2016) revealed that there are no known "Native American cultural resources" in the SLF database within the Study Area. As per NAHC suggested procedure, follow-up letters were sent via certified mail on May 19, 2016 to the eighteen (18) Native American individuals and organizations identified by the NAHC as being affiliated with the vicinity of the Study Area. The letters requested any additional information they may have about Native American cultural resources that may be affected by the proposed project. As of June 9, 2016, MIG has received responses from the following three (3) tribes: The Santa Rosa Band of Mission Indians, Rincon Band of Mission Indians, and the Agua Caliente Band of Cahuilla Mission Indians. The San Luis Band of Mission Indians deterred their comments to the Pechanga Band of Mission Indians or to the Soboba Tribe. The Rincon Band of Mission Indians stated that the project was not within their historic boundaries, had no project concerns, and deferred further comments to the Pechanga Band of Luiseno Indians or the Soboba Band of Luiseno Indians who are located closer to the project area. Finally, the Agua Caliente Band of Cahuilla Mission Indians requested a cultural technical report of the Study Area (the report was in-progress at the time of their request) to include CHIRIS- Record Search results before they would comment on the proposed project. As of June 9, 2016, MIG has received no other responses from the Native American community concerning the proposed project. MIG will keep the Applicant apprised with the progress of this on-going Native American consultation. The NAHC SLF records search results, the Native American contact list, and the Native American Consultation Matrix is provided in Appendix B of this report.

6.3 – Paleontological Resources Records Search

Results of the paleontological resources records search through NHMLAC indicate that no vertebrate fossil localities from the NHMLAC records have been previously recorded within the Study Area or within a one-mile radius. Moreover, no paleontological resources were identified by MIG during the pedestrian survey. Nevertheless, the results of the literature review and the search at the NHMLAC indicate that the Study Area is situated upon surficial deposits of Quaternary Alluvium, derived primarily as alluvial fan deposits from the hills immediately to the northeast and also to the west. These Quaternary alluvial fan deposits are unlikely to contain significant fossil vertebrates, at least in the uppermost layers. Deeper and older Quaternary deposits that may well contain significant fossil vertebrate remains probably underlie the surficial Quaternary Alluvium deposits. Excavations in this older alluvium therefore have high potential to impact paleontologic resources. Further, a review of the City of Perris's General Plan indicate that the Study

[7] CRM Tech. 2007. Cultural Resources Technical Report: North Perris Industrial Specific Plan: City of Perris, Riverside County, California. Report prepared by CRM Tech, Colton, California 92324; prepared for Albert A. Webb Associates, Riverside, California 92506. Report on file at the Eastern Information Center, University of California, Riverside.

Area is located within a vicinity of low to high paleontological sensitivity, exhibiting surface exposures of younger Pleistocene valley deposits overlying older valley alluvium at depth; thus, requiring paleontological construction monitoring once subsurface excavations reach five (5) feet in depth, and monitoring levels reduced if appropriate, at the discretion of a certified Project Paleontologist. (City of Perris General Plan 2005, Mitigation Measure IV.A.4). As a result, recommended mitigation measures are provided in Chapter 9 to reduce potentially significant impacts to previously undiscovered paleontological resources or unique geological features that may be accidentally encountered during project implementation to a less than significant level. The paleontological resources records search results letter from the NHMLAC and the City of Perris's Paleontological Sensitivity Map are provided in Appendix C of this report.

6.4 – Pedestrian Survey

On June 1, 2016, MIG Senior Archaeologist Christopher Purtell, M.A., RPA conducted a cultural resources field survey of 100-percent of the proposed project site. The results of the field survey indicated that were no artifacts or cultural resources (prehistoric, historic, historic built environments or paleontological) discovered or recorded during the course of the field survey (see Figures 3a-c).

6.4.1 – OTHER STUDY AREA CONDITIONS

The Study Area exhibited shallow plowing or the disking of soils in a north-south direction. Approximately 90 percent of the ground cover consisted of low-lying ruderal plant species that were approximately 6 to 24 –inches in height (Figures 3a through 3b, Study Area Photographs). Ground surface visibility was excellent to good exhibiting a light tan to medium brown color sediment with a silty-sandy texture, showing little to no bioturbation. Sparse levels of modern-man-made trash consisting of, but not limited, to paper and plastic wrappers, construction materials including metal nuts, bolts, wooden grading stakes, paint roller, PVC pipe fragments, and bailing wire were observed. Additionally, a short-bed truck camper shell was located in the northern central portion of the project area; approximately 20-feet south of the north fence (see Figure 3c, Photograph 5). Sparse trash scatters were also observed in the center and southern portions of the undeveloped Study Area.

Photograph 1: Study Area, view towards the north

Photograph 2: Study Area, view towards the south

Figure 3a Photographs

Eastern Municipal Water District Well 204
Perris, California

Results 6

Photograph 3: Study Area, view towards the east

Photograph 4: Study Area, view towards the west

Results 6

Photograph 5: Short-bed camper shelf, view towards the south

Photograph 6: Paintroller,closeup

Results 6

EVALUATION 7

Evaluation of cultural resources is determined by conducting an "evaluation" of a resource's eligibility for listing in the California Register; determining whether it qualifies as a "unique archaeological resource" and determining whether the resource retains integrity. This is achieved by applying the California Register criteria (including criteria for a "unique archaeological resource") as defined in Chapter 2 of this report. If a resource is determined eligible for listing in the California Register or qualifies as a "unique archaeological resource" and retains integrity, then the resource is considered an archaeological resource or a historical resource pursuant to CEQA §15064.5 and any substantial adverse change to the resource is considered a significant impact on the environment. The CEQA guidelines do not provide criteria to evaluate paleontological resources.

7.1 – Archaeological Resources

As discussed previously in Chapter 6, no known archaeological resources from the EIC records were recorded within the Study Area. However, there are three (3) previously recorded archaeological resources (prehistoric and historic) and one (1) historic structure located within a one-mile radius (1-prehistoric, 2-historic, and 1-historic structure) of the Study Area. None of these resources will be impacted by the proposed project. There were no archaeological resources identified during the pedestrian survey. A search of the City of Perris's General Plan indicate that the Study Area lies in a vicinity of low sensitivity for cultural resources, consisting of one recorded cultural site (prehistoric or historic) per square mile (City of Perris General Plan 2005). Nevertheless, despite the heavy disturbances of the Study Area that may have displaced archaeological resources on the surface, it is possible that intact archaeological resources exist at depth. As a result, recommended mitigation measures are provided in Chapter 9 to reduce potentially significant impacts to previously undiscovered archaeological resources that may be accidentally encountered during project implementation to a less than significant level.

7.2 – Historical Resources

As discussed previously in Chapter 6, no known historical resources from the EIC records were recorded within the Study Area. However, there was one (1) previously recorded historic structure (CA-RIV- 005516H) located within a one-mile radius of the Study Area. This historic resource will not be impacted by the proposed project. There were no historic structures (built environments) identified during the pedestrian survey. Therefore, the proposed project would result in no adverse change in the significance of a historical resource.

7.3 – Paleontological Resources

As discussed previously in Chapter 6, no known paleontological resources from the NHMLAC records were recorded within the Study Area, or within a one-mile radius, and no resources were identified during the pedestrian survey. Moreover, no paleontological resources were identified by MIG during the pedestrian survey. Nevertheless, the results of the literature review and the search at the NHMLAC indicate that the Study Area is situated upon surficial deposits of Quaternary Alluvium, derived primarily as alluvial fan deposits from the hills immediately to the northeast and also to the west. These Quaternary alluvial fan deposits are unlikely to contain significant fossil vertebrates, at least in the uppermost layers. Deeper and older Quaternary deposits that may well contain significant fossil vertebrate remains probably underlie the surficial Quaternary Alluvium deposits. Excavations in this older alluvium therefore have high potential to impact paleontologic resources. Further, a review of the City of Perris's General Plan indicate that the Study Area is located within a vicinity of low to high paleontological sensitivity, exhibiting surface exposures of younger Pleistocene valley deposits overlying older valley alluvium at depth; thus, requiring paleontological construction monitoring once subsurface excavations reach five (5) feet in depth, and monitoring levels reduced if appropriate, at the discretion of a certified Project Paleontologist. (City of Perris General Plan 2005, Mitigation Measure IV.A.4). As a result, recommended mitigation measures are provided in Chapter 9 to reduce potentially significant impacts to previously undiscovered paleontological resources or unique geological features that may be accidentally encountered during project implementation to a less than significant level.

Evaluation 7

IMPACTS/EFFECTS ANALYSIS 8

The purpose of this chapter is to discuss the potential impacts to archaeological, historical, and paleontological resources, and human remains associated with implementing the proposed project.

8.1 – CEQA Significance Thresholds

8.1.1 – ARCHAEOLOGICAL RESOURCES

The current CEQA Guidelines state that a project will have a significant impact on the environment if it will cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. According to the CEQA Guidelines, an archaeological resource is further defined as a resource that qualifies as a "historical resource" pursuant to CEQA Guidelines Section 15064.5 or a "unique archaeological resource" pursuant to Section 21083.2 of the Public Resources Code. These terms are defined earlier in this report. Therefore, a project will have a significant impact on the environment if it will cause a "substantial adverse change" in the significance of a historical resource or "damage" to a unique archaeological resource. A "substantial adverse change" (as defined in the CEQA Guidelines) is caused when one or more of the following occurs:

- Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

- The significance of a historical resource is materially impaired when a project:

    - Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

    - Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

    - Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

The CEQA Guidelines do not define "damage" when it comes to unique archaeological resources, but it can be reasonably interpreted as having a meaning similar to that of "substantial adverse change" (as defined above).

8.1.2 – HISTORICAL RESOURCES

The current CEQA Guidelines state that a project will have a significant impact on the environment if it will cause a substantial adverse change in the significance of a historical resource as defined in §15064.5. According to the CEQA Guidelines, a historical resource is further defined as a resource that qualifies for listing in the California Register or another federal or local register. The criteria for listing are defined earlier in this report. Therefore, a project will have a significant impact on the environment if it will cause a "substantial adverse change" in the significance of a historical resource. The definition of "substantial adverse change" is provided in the previous section, 8.1.1.

The Secretary of the Interior's Standards for Rehabilitation (Standards) are codified in 36 Code of Federal Regulations (CFR) Section 67.7. In most circumstances, the Standards are relevant in assessing whether there is a substantial adverse change under CEQA. Section 15064.5b(3) of the CEQA Guidelines states in part that ". . . a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving,

Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historic resource."

8.1.3 – PALEONTOLOGICAL RESOURCES

The current CEQA Guidelines state that a project will have a significant impact on the environment if it will directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. The CEQA Guidelines do not define "directly or indirectly destroy," but it can be reasonably interpreted as the physical damage, alteration, disturbance, or destruction of a paleontological resource.

8.1.4 – HUMAN REMAINS

The current CEQA Guidelines state that a project will have a significant impact on the environment if it will disturb any human remains, including those interred outside of formal cemeteries. The CEQA Guidelines do not define "disturb" but it can be reasonably interpreted as the physical damage, alteration, disinterment, removal, disturbance, or destruction of any human remains.

8.2 – Potential Impacts

8.2.1 – PROJECT DESCRIPTION

As discussed earlier, the EMWD proposed project includes the construction and operation of a new portable groundwater production facility identified as Well No. 204, located on East Nance Street in the City of Perris, Riverside County, California. The proposed project will operate on 2.3-arces of land and includes the construction of one new groundwater production well (No. 204), well head facilities and appurtenances. The project's appurtenances include: a new field office, water supply line, and water discharge pump, settling tanks, drill rig, dog house, mud tank, blow off pond, pipe trailer, and material and cutting storage and laydown yards. The EMWD anticipates producing on the order of 1,000 acre-feet of potable water from this well at an approximate production rate between 400 gallons per minute (gpm) and 1, 500 gpm. Excavations associated with implementation of the proposed project would occur across the majority of the Study Area.

8.2.2 – ARCHAEOLOGICAL RESOURCES

Results from the CHRIS-EIC indicated that there were no previously recorded archaeological resources within the Study Area. However, there are three (3) previously recorded archaeological resources (prehistoric and historic) and one (1) historic structure located within a one-mile radius (1-prehistoric, 2-historic, and 1-historic structure) of the Study Area. None of these resources will be impacted by the proposed project. There were no archaeological resources identified during the pedestrian survey. A search of the City of Perris's General Plan indicate that the Study Area lies in a vicinity of low sensitivity for cultural resources, consisting of one recorded cultural site (prehistoric or historic) per square mile (City of Perris General Plan 2005). Nevertheless, despite the heavy disturbances of the Study Area that may have displaced archaeological resources on the surface, it is possible that intact archaeological resources exist at depth. As a result, recommended mitigation measures are provided in Chapter 9 to reduce potentially significant impacts to previously undiscovered archaeological resources that may be accidentally encountered during project implementation to a less than significant level.

8.2.3 – HISTORICAL RESOURCES

Results from the CHRIS-EIC indicated that there were no previously recorded historical resources within the Study Area. However, there was one (1) previously recorded historic structure (CA-RIV- 005516H) located within a one-mile radius, of the Study Area. This historic resource will not be impacted by the proposed project. There were no historic structures (built environments) identified during the pedestrian survey. Therefore, the proposed project would result in no adverse change in the significance of a historical resource.

8.2.4 – PALEONTOLOGICAL RESOURCES

Results of the paleontological resources records search through the NHMLAC indicated no known paleontological resources from the NHMLAC records were recorded within the Study Area, or within a one-mile radius, and no resources were identified during the pedestrian survey. Moreover, no paleontological resources were identified by MIG during the pedestrian survey. Nevertheless, the results of the literature review and the search at the NHMLAC indicate that the Study Area is situated upon surficial deposits of Quaternary Alluvium, derived primarily as alluvial fan deposits from the hills immediately to the northeast and also to the west. These Quaternary alluvial fan deposits are unlikely to contain significant fossil vertebrates, at least in the uppermost layers. Deeper and older Quaternary deposits that may well contain significant fossil vertebrate remains probably underlie the surficial Quaternary Alluvium deposits. Excavations in this older alluvium therefore have high potential to impact paleontologic resources. Further, a review of the City of Perris's General Plan indicate that the Study Area is located within a vicinity of low to high paleontological sensitivity, exhibiting surface exposures of younger Pleistocene valley deposits overlying older valley alluvium at depth; thus, requiring paleontological construction monitoring once subsurface excavations reach five (5) feet in depth, and monitoring levels reduced if appropriate, at the discretion of a certified Project Paleontologist. (City of Perris General Plan 2005, Mitigation Measure IV.A.4). As a result, recommended mitigation measures are provided in Chapter 9 to reduce potentially significant impacts to previously undiscovered paleontological resources or unique geological features that may be accidentally encountered during project implementation to a less than significant level.

8.2.5 – HUMAN REMAINS

No known human remains have been identified from the database within a one-mile radius of the Study Area. No human remains were identified during the pedestrian survey of the Study Area. However, these findings do not preclude the existence of previously unknown human remains located below the ground surface, which may be encountered during construction excavations associated with the proposed project. Similar to the discussion regarding archaeological resources above, it is also possible to encounter buried human remains during construction given the proven prehistoric occupation of the region, the identification of multiple surface archaeological resources within two-miles of the Study Area, and the favorable natural conditions that would have attracted prehistoric inhabitants to the area. As a result, mitigation measures are recommended in the following chapter that would reduce potentially significant impacts to previously unknown human remains that may be unexpectedly discovered during project implementation to a less than significant level.

Impacts/Effects Analysis 8

RECOMMENDED MITIGATION MEASURES 9

9.1 – Archeological Resources

In the event of the unanticipated discovery of archaeological resources during earthmoving operations the following mitigation measures are recommended to reduce potentially significant impacts to archaeological resources that are accidentally discovered during implementation of the proposed project to a less than significant level:

Mitigation Measure CULT-1: Conduct Archaeological Sensitivity Training for Construction Personnel. The Applicant shall retain a qualified professional archaeologist who meets U.S. Secretary of the Interior's Professional Qualifications and Standards, to conduct an Archaeological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training session shall be carried out by a cultural resources professional with expertise in archaeology, who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards. The training session will include a handout and will focus on how to identify archaeological resources that may be encountered during earthmoving activities and the procedures to be followed in such an event, the duties of archaeological monitors, and the general steps a qualified professional archaeologist would follow in conducting a salvage investigation if one is necessary.

Mitigation Measure CULT-2: Cease Ground-Disturbing Activities and Implement Treatment Plan if Archaeological Resources Are Encountered. In the event that archaeological resources are unearthed during ground-disturbing activities, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A buffer area of at least 50 feet shall be established around the find where construction activities shall not be allowed to continue until a qualified archaeologist has examined the newly discovered artifact(s) and has evaluated the area of the find. Work shall be allowed to continue outside of the buffer area. All archaeological resources unearthed by project construction activities shall be evaluated by a qualified professional archaeologist, who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards. Should the newly discovered artifacts be determined to be prehistoric, Native American Tribes/Individuals should be contacted and consulted and Native American construction monitoring should be initiated. The Applicant and City shall coordinate with the archaeologist to develop an appropriate treatment plan for the resources. The plan may include implementation of archaeological data recovery excavations to address treatment of the resource along with subsequent laboratory processing and analysis.

Mitigation Measure CULT-3: Monitor Construction Excavations for Archeological Resources in Younger Alluvial Sediments. The Applicant shall retain a qualified archaeological monitor, who will work under the direction and guidance of a qualified professional archaeologist, who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards. The archaeological monitor shall be present during all construction excavations (e.g., grading, trenching, or clearing/grubbing) into non-fill younger Pleistocene alluvial sediments. Multiple earth-moving construction activities may require multiple archaeological monitors. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known archaeological resources, the materials being excavated (native versus artificial fill soils), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the project archaeologist.

Mitigation Measure CULT-4: Prepare Report Upon Completion of Monitoring Services. The archaeological monitor, under the direction of a qualified professional archaeologist who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards, shall prepare a final report at the conclusion of archaeological monitoring. The report shall be submitted to the Applicant, the South Central Costal Information Center, the City, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures. The report shall include a description of resources unearthed, if any, evaluation of the resources with respect to the California Register and CEQA, and treatment of the resources.

9.2 – Historical Resources

The proposed project would not impact historical resources therefore no mitigation measures are recommended.

9.3 – Paleontological Resources

The following mitigation measures have been recommended to reduce potentially significant impacts to paleontological resources as recommended by the NHMLAC and required under in the City of Perris General Plan 2005, Mitigation Measure IV.A.4 during implementation of the proposed project to a less than significant level:

Mitigation Measure CULT-5: Conduct Paleontological Sensitivity Training for Construction Personnel. The Applicant shall retain a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology, shall conduct a Paleontological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training will include a handout and will focus on how to identify paleontological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event; the duties of paleontological monitors; notification and other procedures to follow upon discovery of resources; and, the general steps a qualified professional paleontologist would follow in conducting a salvage investigation if one is necessary.

Mitigation Measure CULT-6: Monitor Construction Excavations for Paleontological Resources is required at all depths and strata's below five (5) feet. The Applicant shall retain a qualified paleontological monitor, who will work under the guidance and direction of a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology. The paleontological monitor shall be present during all construction excavations including, but not limited to grading, trenching, boring, and clearing/grubbing). Multiple earth-moving construction activities may require multiple paleontological monitors. The frequency of monitoring shall be based on the rate of excavation and grading. Paleontological monitoring levels can be reduced if appropriate, at the discretion of a professional qualified paleontologist.

Mitigation Measure CULT-7: Cease Ground-Disturbing Activities and Implement Treatment Plan if Paleontological Resources Are Encountered. In the event that paleontological resources and or unique geological features are unearthed during ground-disturbing activities, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A buffer area of at least 50 feet shall be established around the find where construction activities shall not be allowed to continue until appropriate paleontological treatment plan has been approved by the Applicant and the City. Work shall be allowed to continue outside of the buffer area. The Applicant and City shall coordinate with a professional paleontologist, who meets the qualifications set forth by

the Society of Vertebrate Paleontology, to develop an appropriate treatment plan for the resources. Treatment may include implementation of paleontological salvage excavations to remove the resource along with subsequent laboratory processing and analysis or preservation in place. At the paleontologist's discretion and to reduce construction delay, the grading and excavation contractor shall assist in removing rock samples for initial processing.

Mitigation Measure CULT-8: Prepare Report Upon Completion of Monitoring Services. Upon completion of the above activities, the professional paleontologist shall prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report shall be submitted to the Applicant, the City, the Natural History Museum of Los Angeles County, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures.

9.4 – Human Remains

Components of the proposed project that require excavation activities, the following mitigation measure is recommended to reduce potentially significant impacts to previously unknown human remains that are unexpectedly discovered during excavations to a less than significant level:

Mitigation Measure CULT-9: Cease Ground-Disturbing Activities and Notify County Coroner If Human Remains Are Encountered. If human remains are unearthed during implementation of the Proposed Project, the City of Perris and the Applicant shall comply with State Health and Safety Code Section 7050.5. The City of Perris and the Applicant shall immediately notify the County Coroner and no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). After the MLD has inspected the remains and the site, they have 48 hours to recommend to the landowner the treatment or disposal, with appropriate dignity, the human remains and any associated funerary objects. Upon the reburial of the human remains, the MLD shall file a record of the reburial with the NAHC and the project archaeologist shall file a record of the reburial with the CHRIS-EIC. If the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.

REFERENCES CITED 10

Bean, Lowell J.
1978 *Cahuilla*. In R. F. Heizer, (ed.). Handbook of North American Indians. Vol. 8: California: 575-587. Washington, DC: Smithsonian Institute.

Bean, L.J., Smith, C., R.
1978 Serrano. In R. F. Heizer, (ed.). Handbook of North American Indians. Vol. 8: California: 575-587. Washington, DC: Smithsonian Institute.

Bean, L.J., Shipek, F., C.
1978 Serrano. In R. F. Heizer, (ed.). Handbook of North American Indians. Vol. 8: California: 550-563. Washington, DC: Smithsonian Institute.

Boscana, Geronimo
1846 Chinigchinich; A Historical Account of the Origin, Customs, and Traditions of the Indians at the Missionary Establishment of San Juan Capistrano, Alta California; Called the Acagchemem Nation. In Life in California, by Alfred Robinson, pp. 227-341. Wiley & Putnam, New York.

Boyd, James; Brown Jr., John
1922 History of San Bernardino and Riverside counties. Chicago: The Western Historical Association. p. 246. Chicago: The Lewis Publishing Company.

CRM Tech.
2007 Cultural Resources Technical Report: North Perris Industrial Specific Plan: City of Perris, Riverside County, California. Report prepared by CRM Tech, Colton, California 92324; prepared for; Albert A. Webb Associates, Riverside, California 92506. Report on file at the Eastern Information Center, University of California, Riverside.

California Department of Parks and Recreation.
2012 Primary Record for CA-RIV-007758. Site form on file at the Eastern Information Center, University of California, Riverside.

California Department of Parks and Recreation.
2007 Primary Record for CA-RIV-0000822. Site form on file at the Eastern Information Center, University of California, Riverside.

California Department of Parks and Recreation.
2005 Primary Record for CA-RIV-005516H. Site form on file at the Eastern Information Center, University of California, Riverside

California Department of Parks and Recreation.
1999 Primary Record for CA-RIV-005516H. Site form on file at the Eastern Information Center, University of California, Riverside.

City of Perris
2005 City of Perris General Plan, Conservation Element. Report file at City of Perris City Hall.

Chartkoff, J. L. and K. K. Chartkoff.
1984 The Archaeology of California. Menlo Park: Stanford University Press.

Erlandson, Jon M., Torben C. Rick, Terry L. Jones, and Judith F. Porcasi
2007 One If By Land, Two If By Sea: Who Were the First Californians? In T. Jones & K. Klar (eds.). California Prehistory: Colonization, Culture, and Complexity. Pages 53-62. Alta Mira Press.

Goldberg, Susan (editor)
2001 Metropolitan Water District of Southern California Eastside Reservoir Project: Final Report of Archaeological Investigations. Prepared for Metropolitan Water District of Southern California, Los Angeles. Applied Earthworks, Inc., Hemet, California.

Heizer, Robert F. (editor)
1978 California. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Keller, Jean K. and Daniel F. McCarthy.
1989 Data Recovery at the Cole Canyon Site (CA-RIV-139), Riverside, California. Pacific Coast Archaeological Society Quarterly. 25(1).

Laylander, Don, and Angie Pham
2012 Preliminary Cultural Resources Assessment for Five Off-Site Alternatives to the Gregory Canyon Landfill Project, San Diego County, California. Prepared by ASM Affiliates, Inc., Carlsbad, California. Prepared for U.S. Army Corps of Engineers, Los Angeles, California.

Meighan, C. W.
1954 A Late Complex in Southern California Prehistory. Southwestern Journal of Anthropology 10:215–227.

Meltzer, David J., Donald K. Grayson, Gerardo Ardila, Alex W. Barker, Dena F. Dincauze, C. Vance Haynes, Francisco Mena, Lautaro Nuñez, and Dennis J. Stanford
1997 On the Pleistocene Antiquity of Monte Verde, Southern Chile. American Antiquity 62(4):659-663.

Moratto, Michael J.
1984 California Archaeology. Academic Press, San Diego.

Norris, Robert M. and Robert W. Webb
1990 Geology of California. John Wiley & Sons, Inc., New York, New York.

Robinson, John W. and Bruce D. Risher
1996 The San Jacintos: The Mountain Country from Banning to Borrego Valley. Big Santa Anita Historical Society, Arcadia, California.

San Manuel Band of Mission Indians
2010 Cultural History. Electronically available at: www. http://www.sanmanuel-nsn.gov

Strong, William Duncan
1929 Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26:1-249. Berkeley.

U.S. Geological Survey Topographic Map
1967 7.5-minute series, Quadrant: Perris, California

Wallace, William J.
1955 A Suggested Chronology for Southern California Coastal Archaeology. Southwestern Journal of Anthropology 11:214-230.

Appendix A Resumes

Christopher W. Purtell, M.A., RPA

SENIOR ARCHAEOLOGIST

Christopher Purtell is an archaeologist and archaeological project manager with over ten years of professional experience. He is well-versed in project management, environmental compliance, subcontracting, archaeological survey, excavation, monitoring, data recovery, laboratory analysis, and in the development of mitigation and treatment plans.

Mr. Purtell has successfully coordinated cultural resource projects, mitigation measures, and recommendations pursuant to the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), and Sections 106 and 110 of the National Historic Preservation Act (NHPA). Mr. Purtell has worked with a variety of lead and regulatory agencies, including Los Angeles County, Riverside County, San Bernardino County, Ventura County, Orange County, Kern County, Inyo County, Bureau of Land Management, and the Bureau of Indian Affairs, among others. Mr. Purtell is a Registered Professional Archaeologist (RPA) and his training and background meet the U.S. Secretary of the Interior's Professional Qualifications Standards as a Principle Investigator and Field Director for prehistoric and historic archaeology.

His project management duties have included profit and loss responsibilities, budget management, scope preparation, project task administration, Native American scoping/consultation, subcontractor evaluation and procurement, coordination with lead agencies, clients, and project result meetings with the public and stakeholders both in public and in private forms. His experience also includes cultural resources staff management, review and oversight of cultural surveys results and site recordation to include GIS management and databases, preparation of technical reports and overseeing the quality control assurance of all deliverables.

AFFILIATIONS

- Register of Professional Archaeologist (ID No. 990027)
- Society for American Archaeology (SAA)
- Society for California Archaeology (SCA)

TRAINING

- OSHA 8-hr Annual HazWaste Operations Refresher Certification, March 2016
- OSHA 40-hr HazWaste Operations Certification (Certification No. 10052), January 2014

EDUCATION

- Master of Arts, Anthropology (Emphasis in Archaeology), California State University Fullerton, Fullerton, CA
- Bachelor of Arts, Anthropology/Archaeology, Minor in Geography, California State University Dominguez Hills, Carson, CA

RELEVANT EXPERIENCE

- Senior Archaeologist and Project Manager, Section 106 Evaluation Assessment for the Lytle Creek Ranch South Residential Commercial Development-City of Rialto, San Bernardino County
- Senior Archaeologist, PSEP SL32-21 Pasadena Hydro-test Project for Southern California Gas Company-City of Pasadena, County of Los Angeles
- Senior Archaeologist, PSEP SL 36-9-09 North Section Pismo Beach Hydro-test Project for Southern California Gas Company-City of Pismo Beach, County of San Luis Obispo
- Senior Archaeologist, Long Span P610466 & P613008 Project for San Diego Gas and Electric-City of Bonsall, County of San Diego
- Senior Cultural Resources Specialist, Grounding Rods and Laterals Installation at San Fernando Substation for Southern California Edison-City of San Fernando, County of Los Angeles
- Senior Archaeologist and Project Manager, Cultural Resources Assessment for the Proposed North San Diego County Recycled Water Project-San Diego County
- Senior Archaeologist and Project Manager, Archaeological Survey Report California Street Off-Ramp Project-City of Ventura, Ventura County
- Project Manager and Senior Cultural Resources Coordinator, Runway Safety Area Improvement to Runway 6L-24R Project-Los Angeles International Airport, Los Angeles County
- Archaeological Project Manager, Catalina Renewable

Appendix B NAHC Response and Native American Consultation Matrix

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
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West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX

May 16, 2016

Christopher W. Purtell, M.A., RPA
MIG

Sent by E-mail: cpurtell@migcom.com
Number of Pages: 6

RE: Proposed EMWD Well 204 Project (Project No. 13498), City of Perris, Perris USGS Quadrangle, Riverside County, California

Dear Mr. Purtell:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. A search of the SFL was completed for the USGS quadrangle information provided with negative results.

Our records indicate that the lead agency for this project has not requested a Native American Consultation List for the purposes of formal consultation. Please note that the intent of the referenced codes below is to mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects under AB-52.

As of July 1, 2015, Public Resources Code Sections 21080.3.1 and 21080.3.2 **require public agencies** to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose mitigating impacts to tribal cultural resources:

> **Within 14 days** of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.3.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.3.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - If the probability is low, moderate, or high that cultural resources are located in the APE.

- Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measurers.
   - All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process.

The results of these searches and surveys should be included in the "Tribal Cultural Resources" subsection of the Cultural Resources section of the environmental document submitted for review.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

Native American Contact List
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May 16, 2016

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Distribution of this list does not relieve any person or agency of statutory responsibility as defined in Public Resources Code Sections 21080.3.1 Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed EMWD Well 204 Project (Project No. 13498), City of Perris, Perris USGS Quadrangle, Riverside County, California.

Native American Contact List
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May 16, 2016

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Native American Contact List
Riverside County
May 16, 2016

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This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed EMWD Well 204 Project (Project No. 13498), City of Perris, Perris USGS Quadrangle, Riverside County, California.

Native American Contact List
Riverside County
May 16, 2016

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This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed EMWD Well 204 Project (Project No. 13498), City of Perris, Perris USGS Quadrangle, Riverside County, California.

Native American Consultation Record

Project Name: EMWD Groundwater Production Well No. 204 Project
Project Number: 13498
NAHC Contact Initiated: 5/13/2016
NAHC Letter Received: 5/16/2016

Results: The NAHC's SLF Search failed to identify Native American Cultural Resource within the Project Area or within a one-mile radius of the Project Area.
The NAHC recommended that we contact eighteen (18) Native American Tribes/Individuals listed below.

Matrix prepared by Chris Purtell Follow-up conducted by Katherine Zamora

Group/Name	Date Contact was Initiated	Method of Contact	Response
Augustine Band of Cahuilia Mission Indians Mary Ann Green, Chairperson 760-398-4722	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:00 p.m. No response as of June 9, 2016
Cabazon Band of Mission Indian Doug Welmas, Chairperson 760-342-2593	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:05 p.m. No response as of June 9, 2016
Los Coyotes Band of Cahuilla and Cupeno Indians Janice Elzendnga, Tribal Administrator 760-782-0711	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:10 p.m. No response as of June 9, 2016
Los Coyotes Band of Mission Indians Shane Chapparosa, Chairman 760-782-0711	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:15 p.m. No response as of June 9, 2016
Morongo Band of Mission Indians Denise Torres, Cultural Resources Manager 951-849-8807	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:20 p.m. No response as of June 9, 2016

Group/Name	Date Contact was Initiated	Method of Contact	Response
Pala Band of Mission Indians Robert H. Smith 760-891-3500	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:25 p.m. No response as of June 9, 2016
Pala Band of Mission Indians Shasta Gaughen, PhD, THOP 760-891-3515	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:30 p.m. No response as of June 9, 2016
Pauma Band of Luiseno Indians-Pauma & Yuma Temet Aguilar, Chairperson 760-742-1289	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:35 p.m. No response as of June 9, 2016
Ramon Band of Cahuilia Mission Indians Joseph Hamilton, Chairman 951-763-4105	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:40 p.m. No response as of June 9, 2016
Soboba Band of Mission Indians Carrie Garcia 951-654-2765	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:45 p.m. No response as of June 9, 2016
Torres-Martinez Desert Cahuilia Indians Mary Resvaloso, Chairperson 760-397-0300	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:50 p.m. No response as of June 9, 2016
Santa Rosa Band of Mission Indians Terry Hughes 951-659-2700	5/19/2016	U.S. Certified Mail	Telecom with Mr. Hughes on June 2, 2016 @ 12:55 p.m. stated that he wanted to be notified if Native American resources were discovered during earthmoving activities. The project area is out of their ancestral area.

Group/Name	Date Contact was Initiated	Method of Contact	Response
Rincon Band of Mission Indians Jim McPherson, Tribal Historic Preservation Officer 760-398-4722	5/19/2016	U.S. Certified Mail	Response letter received on May 23, 2016. The letter stated: that the Project is within the Luiseno Aboriginal Territory of the Luiseno People however, it is not within Rincon's Historic Boundaries. We do not have any additional information regarding this project, but we defer this project to the Pechanga Band of Luiseno Indians or Soboba of Luiseno Indians who are located closer to your project area.
San Luis Rey Band of Mission Indians Tribal Council 760-724-8505	5/19/2016	U.S. Certified Mail	Telecom with Ms. Machado on June 2, 2016, @ 12:57 p.m. stated that the Tribe deferred to the Pechanga or Soboba Tribes.
Pechanga Band of Mission Indians Mark Macarro, Chairperson 951-770-6100	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:58 p.m. No response as of June 9, 2016
Cahuilia Band of Indians Luther Salgado, Chairperson 760-763-5549	5/19/2016	U.S. Certified Mail	Certified letter was returned on 5-26-16,: Respondent was not at this address.
La Jolla Band of Mission Indians Lavoone Peck, Chairwoman 760-742-3771	5/19/2016	U.S. Certified Mail	Left voice mail on June 2, 2016 @ 12:59 p.m. No response as of June 9, 2016
Agua Caliente Band of Cahuilla Mission Indians Patricia Garica-Plotkin, Director 760-699-6907	5/19/2016	U.S. Certified Mail	Response letter received on June 6, 2016 stated: After reviewing the project information provided and conducting a records search of ACBCI cultural registry it was determined that more information is needed. In order for the ACBCI to provide informed comments and recommendations we request the following: Copies of any cultural resource documentation (report and site records) generated in connection with this project.

Appendix C Paleo Record Search

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

NATURAL HISTORY MUSEUM
LOS ANGELES COUNTY

Vertebrate Paleontology Section
Telephone: (213) 763-3325
Fax: (213) 746-7431
e-mail: smcleod@nhm.org

27 May 2016

MIG / Hogle-Ireland
1500 Iowa Avenue, Suite 110
Riverside, CA 92507

Attn: Christopher W. Purtell, Senior Archaeologist

re: Vertebrate Paleontology Records Check for paleontological resources for the proposed EMWD Well 204 Project, MIG Project No. 13498, in the City of Perris, Riverside County, project area

Dear Christopher:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed EMWD Well 204 Project, MIG Project No. 13498, in the City of Perris, Riverside County, project area as outlined on the portion of the Perris USGS topographic quadrangle map that you sent to me via e-mail on 13 May 2016. We do not have any fossil localities directly within the proposed project area, but we do have fossil localities from the same type of sediments that probably occur as subsurface deposits in the proposed project area, although at some distance.

The entire proposed project area has surficial deposits of Quaternary Alluvium, derived primarily as alluvial fan deposits from the hills immediately to the northeast and also to the west. These Quaternary alluvial fan deposits are unlikely to contain significant fossil vertebrates, at least in the uppermost layers. Deeper and older Quaternary deposits that may well contain significant fossil vertebrate remains probably underlie the surficial Quaternary Alluvium, however. Our closest fossil vertebrate localities from these older Quaternary deposits are LACM 5168 and 6059, near Lake Elsinore almost directly south and south-southwest of the proposed project area, that produced fossil horse, *Equus*, and camel, *Camelops hesternus*.

The uppermost layers of soil and Quaternary Alluvium in the proposed project area are unlikely to contain significant fossil vertebrates. Excavations that extend down into older Quaternary deposits, however, may well encounter significant fossil vertebrate remains. Therefore, any substantial excavations in the proposed project area should be monitored closely to quickly and professionally collect any vertebrate fossil remains without impeding development. Also, sediment samples from the proposed project area should also be collected and processed to determine the small fossil potential of the site. Any fossils collected during mitigation activities should be placed in an accredited scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

Warren, Claude M.
1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In Archaic Prehistory in the Western United States, edited by Cynthia Irwin-Williams, pp. 1-14. Eastern New Mexico University Contributions in Anthropology No. 1. Portales.

White, Raymond C.
1963 Luiseño Social Organization. University of California Publications in American Archaeology and Ethnology 48:91-194. Berkeley.

Appendix D:

Groundwater Development Initial Siting Study

Prepared for:

Eastern Municipal Water District
2270 Trumble Road
Perris, California 92572
(951) 928-3777

North Perris Groundwater Development Initial Siting Study

Perris, California

Prepared by:

Geosyntec consultants

engineers | scientists | innovators

1650 Iowa Street, Suite 180
Riverside, CA 92507
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www.geosyntec.com

Project Number: HY1494

4 December 2014

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EXECUTIVE SUMMARY

The Eastern Municipal Water District (District) is interested in evaluating the potential for groundwater development in the area west of the Perris Dam Reservoir. This North Perris Groundwater Development Initial Siting Study (Study) provides preliminary estimates of groundwater production potential in the area and provides recommendations for property acquisition to support siting an exploratory borehole to further the groundwater development evaluation process.

The study area location is shown in Figure 1. The study area is an approximately 1,426-acre area located in the northern portion of the City of Perris, California. The study area and features are shown on Figure 2. The study area vicinity is currently used for agricultural, industrial, residential, and recreational purposes.

This Study relied upon available reports, maps, well data, and drilling logs to evaluate subsurface geologic and hydrogeologic conditions in the area and its compatibility with District groundwater development objectives. No field work was performed.

For this Study, the reviewed records included dam siting reports, previous investigation reports, habitat conservation area maps, geologic maps, Riverside County Flood Control District maps and aerial photographs, groundwater well boring logs, and well completion details.

A review of groundwater flow and estimates of aquifer yield were also evaluated. Calculation of potential groundwater flow within the study area was developed. The calculated flow rate was used to develop potential well production estimates for the proposed exploratory well location options.

Based on the Study analyses, the following findings were made:

- Alluvium thickness in the study area increases from east to west, ranging from approximately 480 to 700 feet;
- The northeast corner of the study area is projected to have better groundwater development potential (i.e., a thicker interval of saturated alluvium material);
- The estimated groundwater flow originating from the east of the study area is in the approximate range of 766 to 937 acre-feet per year (AFY), with additional supplemental groundwater flow derived from the south and north;
- Endangered species habitat conservation areas are located along the eastern boundary of the study area and may affect, limit, or exclude development;

- Three subareas, designated as Subareas A-1, A-2 and A-3, were identified for the siting of an exploratory boring. The subareas are ranked in order, with Subarea A-1 estimated to have better groundwater development potential than Subareas A-2 and A-3; and
- Groundwater supply potential in the saturated alluvium is estimated to range from a lower range of approximately 650 AFY (400 gpm) in Subarea A-3 to higher range of approximately 3,000 AFY (1,840 gpm) in Subarea A-1.

Based on the Study results, the following recommendations are provided:

- The Study findings suggest that groundwater development opportunities are indeed available in the study area. However, the Study is based upon estimates from available data and records and as such, further site-specific exploration is recommended to field-verify the estimates provided herein. Geosyntec recommends that an exploratory boring be advanced in Subarea A-1 if possible, as it provides better groundwater development potential than Subareas A-2 and A-3;
- Upon selection of an exploratory boring location, Geosyntec recommends that the following be implemented:
  a) the boring be logged by a State licensed geologist;
  b) a down-hole geophysical log be performed; and
  c) a pumping test be performed to evaluate aquifer transmissivity and potential well production estimates (i.e., potential well yield, drawdown during pumping, and water quality conditions).

1. INTRODUCTION

Geosyntec Consultants (Geosyntec) is pleased to submit this North Perris Groundwater Development Initial Siting Study (Study) report to the Eastern Municipal Water District (District). The purpose of this transmittal is to document the methods, findings and recommendations for the Study. The general study area region was defined by the District and is located west of the northern portion of the Perris Reservoir Dam in Perris, California [Figure 1]. The work was performed to support the District with the following two key project objectives:

- Evaluate the general groundwater development potential for the study area; and
- Propose location options where an exploratory borehole can be sited and drilled to perform a direct investigation of the optimal groundwater supply capacity within the study area.

The work was conducted in accordance with Geosyntec's proposal dated August 8, 2014 and approved by the District on September 22, 2014. The District's Purchase Order 91097 was issued to the Multi-Year Contract Agreement Number 82200.

2. BACKGROUND

The study area is located west of the Perris Reservoir Dam and comprises an area of approximately 1,426 acres (Figure 2). Constraints within and along the study area boundary include existing groundwater production well fields, private water wells, a Regional Wastewater Reclamation Facility, storm drain channels, and habitat preserves for endangered species.

The study area is currently being used for agricultural, industrial, recreational, and residential purposes. The District would like to determine if the study area conditions will meet the required conditions for the siting of the exploratory borehole for the ultimate purpose of identifying potential groundwater development opportunities.

Spacing and setback criteria for the location of the proposed exploratory borehole are provided in the following Table 1. Some of these criteria were included within our initial study, such as existing production wells, Regional Wastewater Reclamation Facility, storm drains, and private wells. Additional criteria for defining the exploratory borehole locations included identifying open parcels of land outside of residential neighborhoods. Septic systems, animal fowl enclosures, and aboveground and underground storage tanks were not evaluated as part of this study. A specific clearance

study, including site visit, utility clearance, and USA Dig Alert review, should be conducted prior to drilling at any location.

Table 1 - Department of Water Resources Water Well Standards - Offsets

Feature	Minimum Separation Distance (feet)	Source (DWR)
Sewer	50	Bulletin 74-81
Watertight Septic Tank	50	Bulletin 74-81
Pit Privy	50	Bulletin 74-81
Subsurface Sewage Leaching Field	100	Bulletin 74-81
Cesspool or Seepage Pit	150	Bulletin 74-81
Animal or Fowl Enclosure	100	Bulletin 74-81
Any Sewer Line (sanitary, industrial, or storm; main or lateral)	50	Bulletin 74-90
Watertight Septic Tank or Subsurface Sewage Leaching Field	100	Bulletin 74-90
Cesspool or Seepage pit	150	Bulletin 74-90
Animal or Fowl Enclosure	100	Bulletin 74-90
Sewage and Industrial Waste Ponds	site specific	Bulletin 74-90
Barnyard and Stables	site specific	Bulletin 74-90
Feedlots	site specific	Bulletin 74-90
Solid Waste Disposal Sites	site specific	Bulletin 74-90
Above and Below Ground Storage Tanks and Pipelines of Fuel or Chemicals	site specific	Bulletin 74-90
Storage and Preparation Areas for Pesticides, Fertilizers, and Other Chemicals	site specific	Bulletin 74-90
Production Water Wells	2000	District
Perris Drain	100	District
Community Water Supply Well	50	Bulletin 74-81/90

The study area and buffer zones for existing features are shown on Figures 2 and 3.

3. STUDY INFORMATION

3.1 Document Review

The District provided electronic copies of the documents listed below. References to these documents are provided in the Section 7.

- Historical aerial photographs prior to 1970 (Riverside Flood Control);
- Historical topographic maps of the area that precede the Perris Dam construction (circa 1973);
- DWR Perris Dam siting study reports and other applicable studies which contain the following data which may be available:
  - Groundwater report completed in support of the Perris Dam Remediation Project (completed in 2006);
  - Lithologic information from the DWR dam siting (1970) studies (actual driller logs were not available);
  - Borrow area boring logs from within the lakebed area prior to dam construction;
  - Trench studies from the dam axis study;
  - Bedrock fracture data from borings and remote sensing studies;
  - Geophysical surveys of the Perris Dam Site; and
  - Text, tables, figures, plates, and appendices from the DWR reports.
- Engineering Geology of Perris Dam and Lake [DWR, August 1970];
- Review Report of Safety of Perris Dam [Board of Consultants, 7 October 1982];
- Biological Assessment Barratt Property, Lake Perris [Nelson, Steven G., April 1987];
- Draft Environmental Impact Report for McCanna Ranch Specific Plan [City of Perris, September 1987];
- Delineation of a Buried Channel Southwest of Perris Dam, Riverside County, California, A Geophysical Study [Biehler, Shawn and Lee, Tien C., 11 May 1993];
- DWR Draft Geologic Data Report Perris Dam Seismic Remediation of Dam Embankment, Project Geology Report D-212; October 2013;

- Riverside County Habitat Conservation Agency; and
- California Department of Fish and Wildlife.

The drill hole logs from the 1970 Well Siting study, which were included in the *Office Report, Engineering Geology Perris Dam and Lake, Project Geology Report 58-11-05 Appendix C: Drill Hole Logs Part 2 of 2* [DWR, 1970], were not available for review to verify the cross sectional area for underflow from Perris Reservoir. Geosyntec's assessment of the Perris Dam underflow conditions are primarily based on the DWR (1970) Dam Siting Study and the DWR (2013) Draft Geologic Data Report.

3.2 Proposed Subarea Naming Convention

The following proposed location naming convention will be used for Geosyntec's recommended drilling locations. As requested, we have ranked the recommendations by numerical order. These recommended locations were identified based on available data, interpretation of driller and well construction data, and interpretation of geophysical data. A primary factor in choosing the proposed borehole locations is based on areas where relatively increased saturated alluvial thickness is expected to be encountered for potential well construction.

- All proposed subareas are identified with an "A":
  - "A-1"
  - "A-2"
  - "A-3"

4. STUDY RESULTS

The following section presents the results of Geosyntec's document review and groundwater development analysis. The proposed subareas for the borehole locations were based on the findings summarized below.

4.1 Documents Review Summary

- Based on information provided by the California Department of Fish and Wildlife, the proposed subareas for the siting of the exploratory borehole are outside the boundary of the known occupied habitat for the Stephens Kangaroo Rat (SKR). In addition, the Riverside County Habitat Conservation Agency maps for the San Jacinto core reserve were reviewed to verify that the proposed subareas were outside restricted habitat areas (Figure 3).

- Depth of alluvium was determined by the review of a combination of sources:
  - Existing well logs: lithologic data and well construction data were reviewed to determine the depth to bedrock for the specific wells;
  - The depth to bedrock points were input and processed in Geographic Information System (GIS) with a kriging algorithm. The interpolated bedrock elevation surface was plotted in GIS;
  - A difference plot (Figure 3) was developed based on existing ground surface elevation, DWR 2013 basement map, and interpolated bedrock elevation surface based on lithologic and well construction data from the well data; and
  - Previous geophysical investigations.
- A difference plot (Figure 4) was developed based on existing ground surface elevation and the elevation of bedrock from the "Delineation of a Buried Channel Southwest of Perris Dam, Riverside County, California, A Geophysical Study," [Biehler and Lee, 11 May 1993].
- A bedrock depth contour plot was developed and provided by the District. An alluvium thickness estimate was also developed from this data source (Figure 5). The three alluvium thickness interpretations (Figure 3, 4, and 5), using different data sources, provide general similar estimates of alluvium thickness. For the purpose of this Study and to provide consistency with other District projects, Geosyntec used the alluvium thickness estimate developed by the District (Figure 5) for groundwater production estimates and calculations. Geosyntec recommends site-specific exploratory drilling to verify the alluvium thickness estimates in the study area.
- 1967 USGS Topographic Map for Perris shows historical water channels that may indicate the presence of groundwater and historical stream channels (Figure 3).
- A groundwater contour map was developed from groundwater elevation data provided by the District for the October 2012 sampling event. Figure 6 shows the groundwater contours for the existing wells. The groundwater flow direction appears southwest.

4.2 Cross Sections

The cross section alignments are shown on Figure 3. Cross section A-A′ (Figure 7) is located outside of the western boundary of the study area and extends from the north at

the location of groundwater well Vogel Engineers and traverses south intersecting groundwater wells EMWD 59 Indian, EMWD 56 New Perry, AG Sod Barret, AG Sod New Dawes, and AG Sod Main House. Based on the well logs, the estimated alluvium thickness range is approximately 432 feet to 880 feet, with the deepest section of alluvium occurring within the center of the cross section. Cross section B-B′ (Figure 8) crosses the northwestern portion of the study area and extends outside of the western boundary starting at groundwater well EMWD 56 New Perry and transverses northeast, intersecting groundwater wells Cocke, Mendez 01, and EMWD MVRWRF South. Based on the well logs, the estimated maximum alluvium thickness is 880 feet at EMWD 56 New Perry and shallows to the northeast to approximately 110 feet. Cross section C-C′ (Figure 9) is located along the western boundary of the study area and extends from the northwestern portion at groundwater well Cocke to the southwestern portion of the study area intersecting groundwater well Garat, and passing by groundwater wells Cooke Margaret, AG Sod New Dawes, and AG Sod Main House. Cross section B-B', which traverses closest to the Subarea A1 boring locations, shows the alluvial thickness between wells Cocke (550 feet) and Mendez 01 (400 feet) to be approximately 480 feet thick at a proposed exploratory borehole location (Figure 10).

4.3 Lithology

Based on the review of the lithologic logs, the study area is underlain by alluvial and fluvial clays, silts and sands, and bedrock. The soils from available drillers logs appeared to consist mainly of well-graded to poorly graded sand and silty sand with lenses of silt/clay units. Depth to bedrock encountered was based on the synthesis of the lithologic logs, drillers' well reports, and well construction data provided by the District and encountered during the documents review. Bedrock maps from a variety of sources were also blended into the interpretation of the alluvial thickness. These bedrock maps covered the right abutment area of the Perris Reservoir Dam which is adjacent to the study area.

4.4 Groundwater

Depth to groundwater data is shown on the cross sections (Figures 7-9). Based on the available data, groundwater depth in the study area ranged from approximately 30 feet to 138.8 feet below ground surface (ft bgs). Shallow ground water occurs at the northernmost well EMWD MVRWRF South (at 30 ft bgs) and is the deepest at groundwater well EMWD 59 Indian (136 ft bgs), which is located due west of the study area. Groundwater data is based on the 2012 groundwater levels provided by the District. The DWR Draft Geologic Data Report Perris Dam Seismic Remediation of Dam Embankment, Project Geology Report D-212; October 2013 indicates that

groundwater is 5 to 15 ft bgs in areas immediately adjacent to the dam. Figure 6 shows groundwater contours of the existing wells. The groundwater flow direction appears southwest.

Based on a review of the different alluvial thickness plots developed in Figures 3, 4, and 5, the proposed Subarea A-1 (Figure 10), has an estimated 30% variance in aquifer thickness. The alluvial thickness ranges from approximately 700 feet (Figure 5) to 480 feet (Figure 3).

4.5 Groundwater Flow Volume Calculations

Based on the DWR Perris Dam Siting Report [DWR, 1970], two pumping tests were performed west of the dam alignment to estimate local transmissivity (T) values. Review of the boring / well logs indicates that the well production zones were screened in alluvial materials. Based on this work, the local average transmissivity for alluvium was estimated at 11,600 gallons per day per foot (gpd/ft), using a test well with 120 feet of saturated screen section (b).

The hydraulic conductivity (k) in the study area may be calculated by using the following formula: $k = T/b$. Based on the above average transmissivity (T) value of 11,600 gpd/ft and 120 feet of saturated screen interval, the hydraulic conductivity (k) is approximately 97 gallons per day per square foot (gpd/ft^2) or 13 feet/day. The estimate of the average k value seems in reasonable agreement with the materials described as being encountered in this portion of the aquifer.

Using the saturated cross sectional area between groundwater wells Cocke and Cooke, Margaret (Figure 3 and 6), the reported average saturated water column thickness (b) in alluvium is approximately 400 feet.

The groundwater flow volume in the study area may be estimated using the saturated cross sectional area (A) approximately perpendicular to the groundwater flow direction described by Figure 6 between groundwater wells Cocke and Cooke, Margaret (Figure 3). These wells are approximately 2,800 feet apart with an average saturated thickness of 400 feet. Based on these measurements, the average saturated cross sectional surface area (A) is 2,800 feet by 400 feet or 1,120,000 square feet (ft^2).

Based on the District's records, the groundwater elevations decline an average of 20 feet over 2,800 feet from east to west. Based on this data, the groundwater flow gradient (i) in the study area may be calculated by dividing the fall of 20 feet by the distance of 2,800 feet, which is 0.007.

Based on the calculated hydraulic conductivity (k), the perpendicular saturated surface area (A), and the calculated hydraulic gradient, the groundwater discharge rate or underflow rate (Q) can be estimated by using Darcy's Law: Q = k i A.

Based on the above, the groundwater underflow originating from east of the study area may be calculated as follows. The estimated underflow rate in alluvium in the vicinity of the study area is the hydraulic conductivity of 97 gpd/ft^2 times the hydraulic gradient of 0.007 times the saturated cross sectional area of 1,120,000 ft^2. This flow rate is 760,480 gallons per day, or approximately 528 gallons per minute (gpm), or 852 acre feet per year (AFY). Assuming a 10 % variability in hydraulic conductivity (k), the estimated underflow originating from the east may range between 475 and 581 gpm or 766 and 937 AFY.

The anticipated groundwater production well specific capacity (volume of water pumped per foot of drawdown), or (q/s), can be estimated by Jacob's equation:

$q/s = T/(264 \log (0.3\ T\ t/r^2\ S))$

where:

- q = yield of the well in gpm
- s = drawdown of the well in ft
- T = transmissivity of the well in gpd/ft
- t = time of pumping in days
- r = radius of well in ft
- S = storage coefficient of the aquifer.

If typical values are assumed for the variables in the log function of the above equation such as t = 1 day, r = 0.5 ft, S = 0.075 (unconfined aquifer), and T = 11,600 gpd/ft, the specific capacity for the unconfined alluvial aquifer is given by:

q/s = T/1391 or approximately 8 gpm/ft.

Based on the above pumping test data results, the estimated specific capacity of a proposed production well is approximately 8 gallons per minute per foot (gpm/ft) of drawdown. Assuming a 100-ft drawdown and the calculated specific capacity of 8 gpm/ft, the estimated pump rate is approximately 800 gpm or approximately 1,290 AFY.

The existing production wells EMWD 56, EMWD 57, and EMWD 59, located west of the study area, have an average well specific capacity of 16 gpm/ft. Using the estimated

saturation interval in the study area of 665 feet to 450 feet, estimated screen lengths of 400 feet to 300 feet and available drawdown range of 115 feet to 25 feet, the calculated production rate estimate in the study area ranges between 1,840 gpm (3,000 AFY) to 400 gpm (650AFY). See Table 2 below for a description of parameters used in the groundwater production estimates.

Table 2 – Estimates of Groundwater Production Potential for Selected Subareas

Proposed Area	Average Surface Elevation (ft)	Bedrock Elevation (ft MSL)	Alluvium Thickness Range (ft)	Groundwater Elevation (ft MSL)	Saturated Interval Range (ft)	Average Saturated Interval (ft)	Estimated Screen Length (ft)	Estimated Available Drawdown to top of screen (ft)	Well Capacity Range for EMWD 56, 57 and 59 (gpm/ft)	Estimated Production Rate (gpm)
A-1	1455	750 to 1050	705 to 405	1415	665 to 365	515	400	115	8 to 16	920 to 1840
A-2	1455	855 to 1200	600 to 250	1410	555 to 210	380	300	80	8 to 16	640 to 1280
A-3	1450	950 to 1200	450 to 250	1400	450 to 200	325	300	25	8 to 16	200 to 400

ft – feet
MSL - mean sea level
gpm - gallon per minute

Potential groundwater production quantities may be somewhat greater due to groundwater production contribution from the underlying weathered bedrock or fracture flow within the crystalline bedrock basement materials. However, quantification of this potential additional contribution is uncertain at this time due to lack of available study area-specific hydrologic data.

5. STUDY FINDINGS

Based on the results of this study, the proposed Subareas A-1 through A-3 (Figure 10) are suitable for the advancement of an exploratory borehole that can ultimately be used for the purpose of evaluating a potential groundwater supply well. The study area conditions are discussed below:

- The groundwater flow direction in the study area appears to be predominantly to the southwest from the Lake Perris area.
- The estimated groundwater supply originating from east of the study area is in the approximate range of 766 to 937 AFY.
- A potential production zone of saturated alluvium thickness is estimated to be found in the northwestern quadrant of the study area (Subarea A-1) and along the western boundary (Figure 10). Alluvium thickness shallows towards the east and southeastern portions of the study area.

- Groundwater supply potential in the saturated alluvium is estimated to range from approximately 400 gpm (650 AFY) in Subarea A-3 to approximately 1,850 gpm (3,000 AFY) in Subarea A-1.
- A three-dimensional model of the study was prepared using lithologic logs and well construction logs of existing wells, and alluvium thickness plots. Figure 11 shows these components integrated in the determination of the proposed Subareas, A-1, A-2, and A-3 marked on the figure. A representative proposed exploratory borehole location lies within the Subarea A-1, which suggests an area of relatively increased saturated alluvium thickness as compared with surrounding areas.
- Figure 12 is a representation of the difference between the bedrock elevations in relation to current ground surface elevation. The proposed prioritized Subareas (A-1, A-2, and A-3) for an exploratory borehole are located where there are significant zones of saturated alluvium thickness.
- The proposed exploratory borehole location (Subarea A-1) meets the following siting criteria:
  - Greater than 2,000 feet from existing production wells;
  - At least 500 feet from the identified private and monitoring wells;
  - Greater than 100 feet from Perris Storm Drain and other storm drains; and
  - Greater than 1000 feet from Moreno Valley Regional Water Reclamation Facility (MVRWRF) storage ponds.
- The proposed locations are outside of the endangered species habitat for SKR, and no other endangered species were identified in the proposed areas.
- The land use in the immediate area of the proposed areas appears to be open land or industrial operations.

6. RECOMMENDATIONS

This initial Study found that substantial groundwater development opportunities appear to be available in the study area. However, the Study findings are based on evaluation of available data from diverse sources. As such, Geosyntec recommends that the District conduct a site-specific subsurface investigation to evaluate if the initial findings presented herein can be verified. The Study provides a recommendation for suitable locations for the advancement of an exploratory borehole (Subarea A-1) that can be used to evaluate groundwater production potential. The proposed, ranked Subareas

A-1, A-2, and A-3 (Figure 12) are based on the anticipated saturated alluvium thickness, groundwater flow direction, and potential groundwater volumes.

If the District ultimately proceeds with exploratory drilling, Geosyntec recommends that the exploratory boring includes a down-hole geophysical log and is logged by a State-licensed geologist to verify lithology. It is further recommended that a pumping test be performed to evaluate pumping capacity, aquifer transmissivity, and water quality conditions. The District may determine to evaluate additional conditions at a future date.

7. ASSUMPTIONS AND LIMITATIONS

This study followed generally accepted industry practices that combine the review of subsurface borings, well construction data, and relevant study area documents.

The following assumptions and limitations apply to this study:

- This Study was performed based upon review of available data and records prepared by others. As such, Geosyntec is unable to ascertain the reliability of the available data. Furthermore, alluvium thickness estimates are based upon review of driller's logs prepared by others. Geosyntec accepts no responsibility for the reliability of these logs.
- Some level of variability in subsurface conditions may exist that was not encountered in the above-described investigations.
- This well siting analysis is based on groundwater supply potential. No evaluation of water quality was performed.
- For this Study, no evaluation was made of the impact of new wells in the study area on existing groundwater plumes (such as March Air Reserve Base) or impaired water quality areas (such as elevated fluoride and aluminum in the Moreno Valley). Further evaluation of these issues may be warranted in the future.
- The groundwater production estimates produced in this Study do not consider the potential negative impact of current or future groundwater production quantities in neighboring supply wells.
- The groundwater supply estimates are based upon current groundwater conditions (i.e., recharge sources and piezometric water level elevations) which are subject to seasonal and long-term fluctuations.

- The estimated underflow values for Perris Dam are based upon simplifying assumptions and may be biased toward higher than actual flow rates because the calculation assumes uniform aquifer permeability and saturation that may not actually exist in the subsurface.
- The potential underflow from Perris Reservoir may be altered by recent and ongoing retrofit construction at the Dam.
- The specific capacity and anticipated pumping rate values include simplifying assumptions, including 100% well efficiency and uniform aquifer parameters. Actual pumping rate conditions may be lower. In addition, part of the aquifer is dewatered during pumping, resulting in a lower transmissivity as the saturated thickness decreases which further decreases the actual achievable pump rate.

8. REFERENCES

Biehler, Shawn and Lee, Tien C. [1993]. "Delineation of a Buried Channel Southwest of Perris Dam, Riverside County, California, A Geophysical Study" 11 May 1993.

Board of Consultants (Campbell, D., Johnson, H., and Tayler, K) [1982]. "Review Report of Safety of Perris Dam" 7 October 1982.

Department of Water Resources [1970]. "Engineering Geology of Perris Dam and Lake" August 1970. (Note Appendix C – Borehole Logs of this Report was not available from this report.)

Department of Water Resources [2006]. "Perris Dam Remediation Groundwater Study" August 2006.

Department of Water Resources [2013]. "Geologic Data Report, Perris Dam Seismic Remediation of Dam Embankment" October 2013.

Douglas Wood and Associates [1987]. "Draft Environmental Impact report for McCanna Ranch Specific Plan" September 1987.

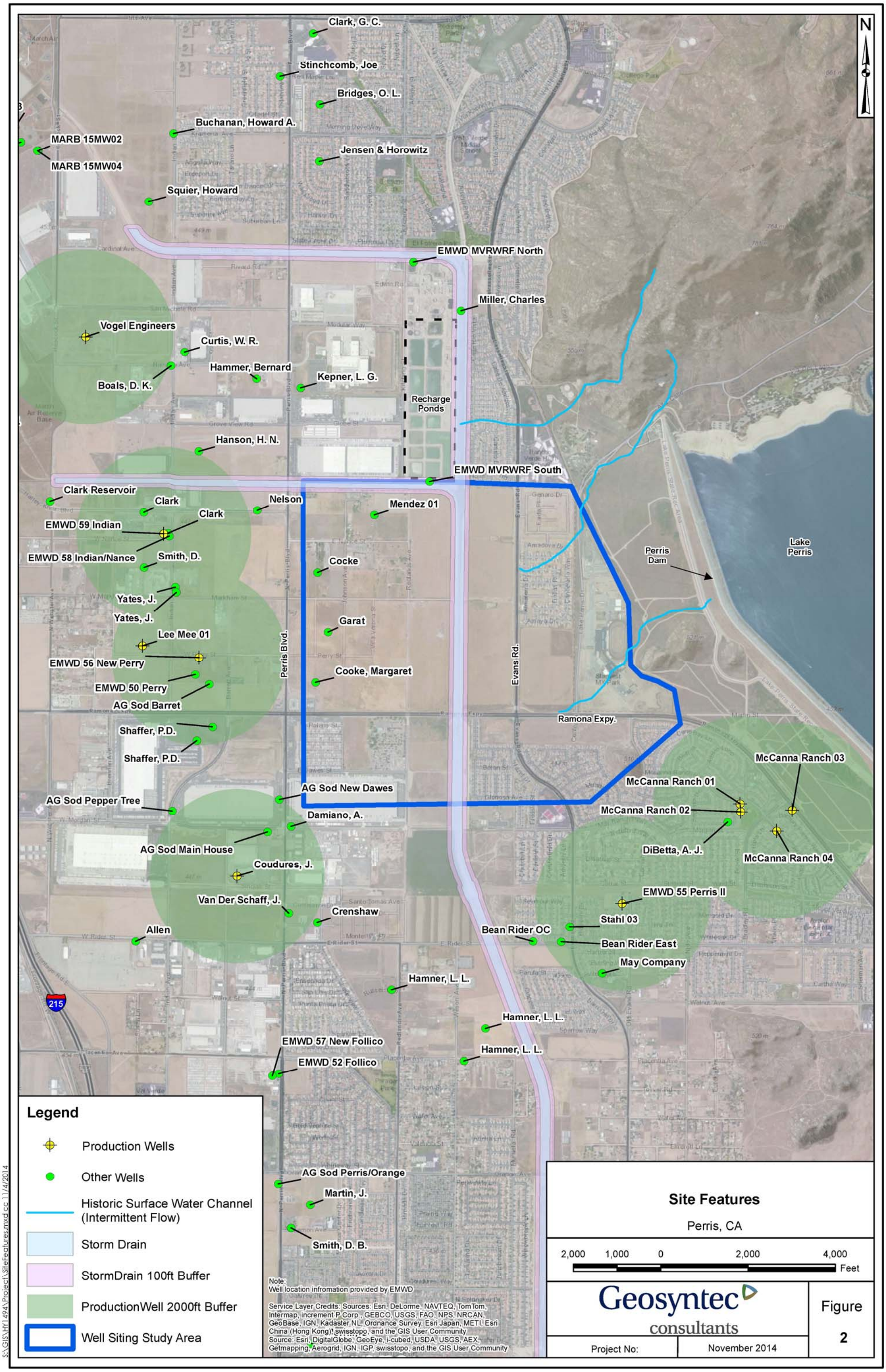
Driscoll, F.G., 1986, Groundwater and Wells

Nelson, Steven G. [1987]. "Biological Assessment Barratt Property, Lake Perris" April 1987.

Riverside County Habitat Conservation Agency [1995]. Habitat Conservation Agency, San Jacinto Core Reserve.

FIGURES

S:\GIS\HY1494\Project\SiteLocation.mxd cc 11/4/2014


Clark, G. C.
Stinchcomb, Joe
Bridges, O. L.
Buchanan, Howard A.
MARB 15MW02
MARB 15MW04
Jensen & Horowitz
Squier, Howard
EMWD MVRWRF North
Miller, Charles
Vogel Engineers
Curtis, W. R.
Hammer, Bernard
Boals, D. K.
Kepner, L. G.
Recharge Ponds
Hanson, H. N.
EMWD MVRWRF South
Clark Reservoir
Clark
Nelson
Mendez 01
Clark
EMWD 59 Indian
EMWD 58 Indian/Nance
Smith, D.
Cocke
Lake Perris
Perris Dam
Yates, J.
Yates, J.
Garat
Lee Mee 01
EMWD 56 New Perry
Perris Blvd.
Evans Rd.
Cooke, Margaret
EMWD 50 Perry
AG Sod Barret
Ramona Expy.
Shaffer, P.D.
Shaffer, P.D.
McCanna Ranch 03
McCanna Ranch 01
AG Sod New Dawes
AG Sod Pepper Tree
McCanna Ranch 02
Damiano, A.
DiBetta, A. J.
McCanna Ranch 04
AG Sod Main House
Coudures, J.
EMWD 55 Perris II
Van Der Schaff, J.
Crenshaw
Stahl 03
Allen
Bean Rider OC
Bean Rider East
May Company
Hamner, L. L.
215
Hamner, L. L.
EMWD 57 New Follico
Hamner, L. L.
EMWD 52 Follico
AG Sod Perris/Orange
Martin, J.
Smith, D. B.
N
Legend
Production Wells
Other Wells
Historic Surface Water Channel (Intermittent Flow)
Storm Drain
StormDrain 100ft Buffer
ProductionWell 2000ft Buffer
Well Siting Study Area
Note:
Well location infromation provided by EMWD
Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Site Features
Perris, CA
2,000 1,000 0 2,000 4,000
Feet
Geosyntec consultants
Figure
2
Project No:
November 2014
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N

Clark, G. C.
Stinchcomb, Joe
Bridges, O. L.
15MW03
Buchanan, Howard A.
MARB 15MW02
MARB 15MW04
Jensen & Horowitz
Squier, Howard
150
200
250
300
400
EMWD MVRWRF North
Miller, Charles
600
A
Vogel Engineers
Curtis, W. R.
ra W.
Hammer, Bernard
Jim
Boals, D. K.
Kepner, L. G.
600
k, Ira W.
Hanson, H. N.
550
450
B'
EMWD MVRWRF South
Clark Reservoir
Clark
Nelson
Mendez 01
Clark
EMWD 59 Indian
A-1
C
50
350
EMWD 58 Indian/Nance
Smith, D.
Cocke
500
600
650
700
Yates, J.
Yates, J.
800
750
Garat
Lee Mee 01
A-2
850
B
EMWD 56 New Perry
Cooke, Margaret
EMWD 50 Perry
AG Sod Barret
Shaffer, P.D.
550
A-3
50
Shaffer, P.D.
McCanna Ranch 03
100
McCanna Ranch 01
AG Sod New Dawes
AG Sod Pepper Tree
500
A'
McCanna Ranch 02
Damiano, A.
450
300
200
DiBetta, A. J.
AG Sod Main House
McCanna Ranch 04
C'
Coudures, J.
EMWD 55 Perris II
Van Der Schaff, J.
500
Crenshaw
Stahl 03
Allen
Bean Rider OC
Bean Rider East
May Company
Hamner, L. L.
Hamner, L. L.
Hamner, L. L.
EMWD 57 New Follico
EMWD 52 Follico
AG Sod Perris/Orange
Martin, J.
Smith, D. B.
Merrill, G.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Legend

- Proposed Areas for Well Siting
- Production Wells
- Other Wells
- Alluvium Thickness Contours
- Cross Section Location
- Historic Surface Water Channel (Intermittent Flow)
- Storm Drain
- StormDrain 100ft Buffer
- ProductionWell 2000ft Buffer
- Stephens' Kangaroo Rat Habitat
- Well Siting Study Area

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Alluvium Thickness Interpretation from Boring Log Data

Perris, CA

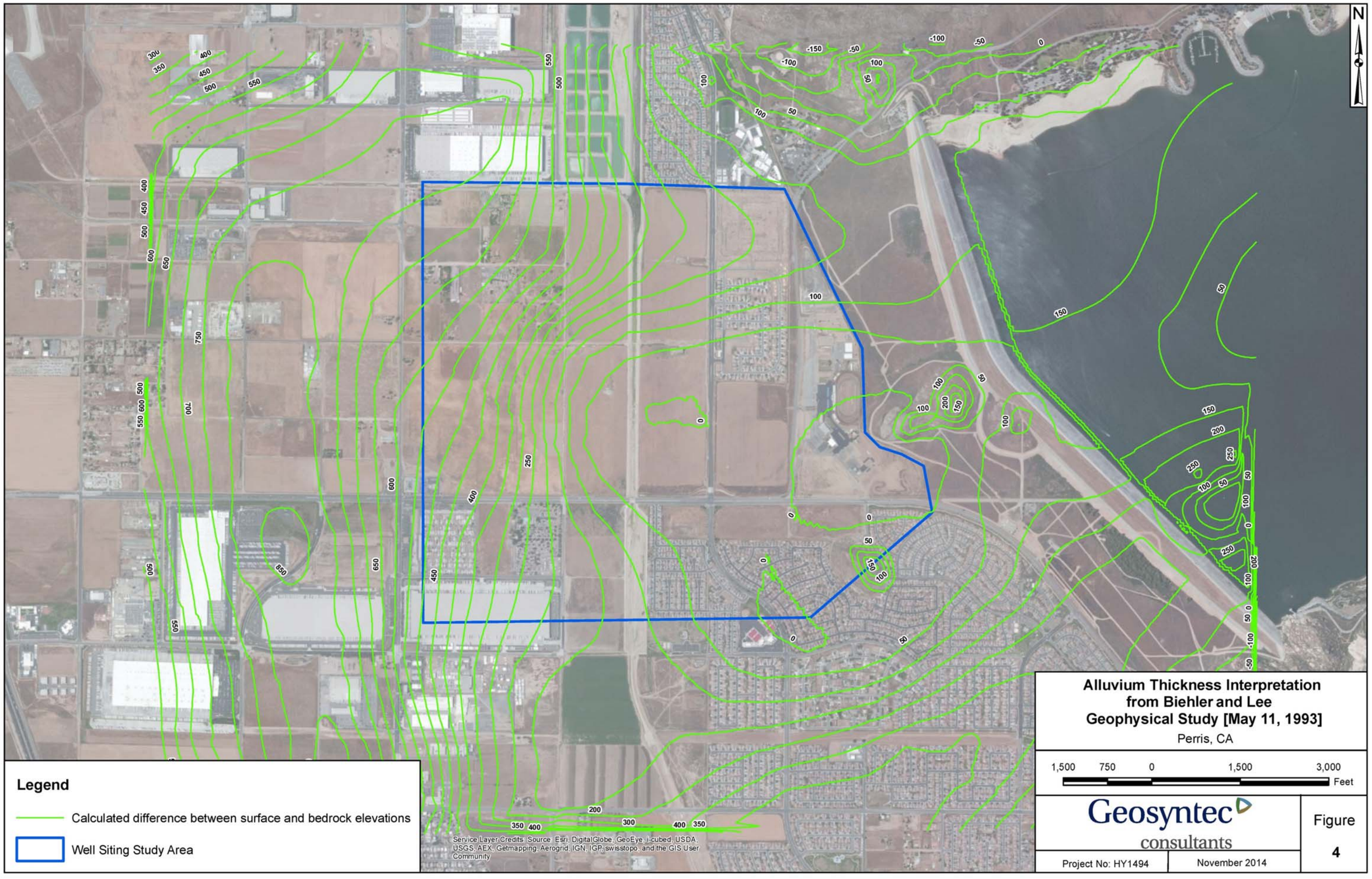
2,000 1,000 0 2,000 4,000 Feet

Geosyntec consultants

Figure 3

Project No: HY1494

November 2014



Alluvium Thickness Interpretation from Biehler and Lee Geophysical Study [May 11, 1993]

Perris, CA

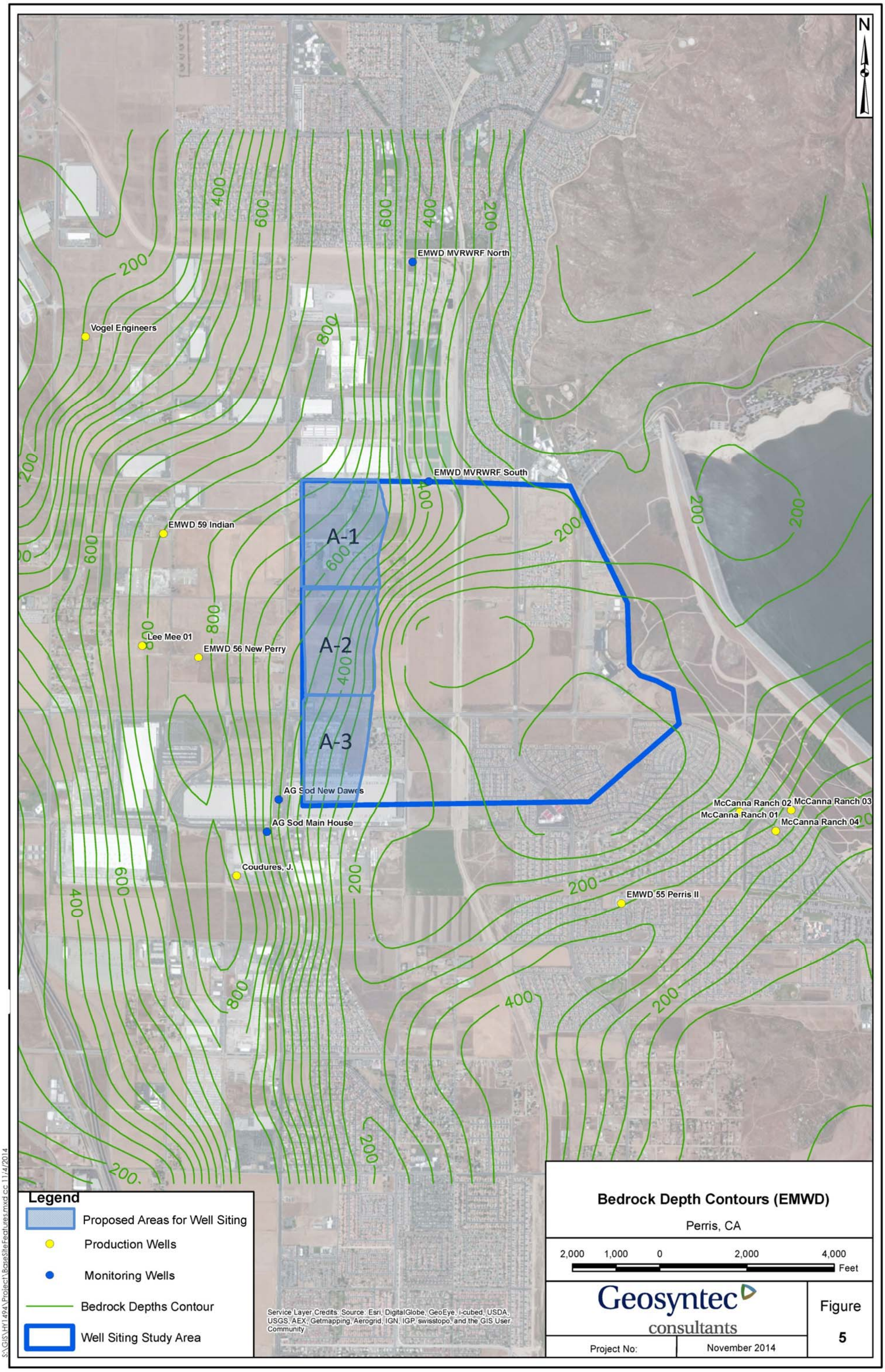
1,500 750 0 1,500 3,000 Feet

Geosyntec consultants

Project No: HY1494 | November 2014

Figure 4

S:\GIS\HY1494\Project\DiffElev.mxd cc 11/10/2014


N
EMWD MVRWRF North
Vogel Engineers
EMWD MVRWRF South
EMWD 59 Indian
A-1
A-2
A-3
Lee Mee 01
EMWD 56 New Perry
AG Sod New Dawes
AG Sod Main House
Coudures, J.
McCanna Ranch 02
McCanna Ranch 03
McCanna Ranch 01
McCanna Ranch 04
EMWD 55 Perris II
200
400
600
800
Legend
Proposed Areas for Well Siting
Production Wells
Monitoring Wells
Bedrock Depths Contour
Well Siting Study Area
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Bedrock Depth Contours (EMWD)
Perris, CA
2,000 1,000 0 2,000 4,000
Feet
Geosyntec consultants
Figure 5
Project No:
November 2014
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N

EMWD MVRWRF North
1440.6

EMWD MVRWRF South
1430.7

Clark
1401.8

Clark

EMWD 59 Indian

EMWD 56 New Perry
1355

AG Sod Barret
1346.1

AG Sod New Dawes
1393.2

AG Sod Main House
1376.8

EMWD 55 Perris II
1284.7

EMWD 57 New Follico
1348

EMWD 52 Follico
1365.9

Shallow
Bedrock

1440
1430
1420
1410
1400
1390
1380
1370
1360
1350
1340
1330
1320
1310
1300
1290

Legend

- Groundwater Wells
- Groundwater Contours [2012]
- Historic Surface Water Channel (Intermittent Flow)
- Storm Drain
- Stephens' Kangaroo Rat Habitat
- Well Siting Study Area

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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Groundwater Contours

Perris, CA

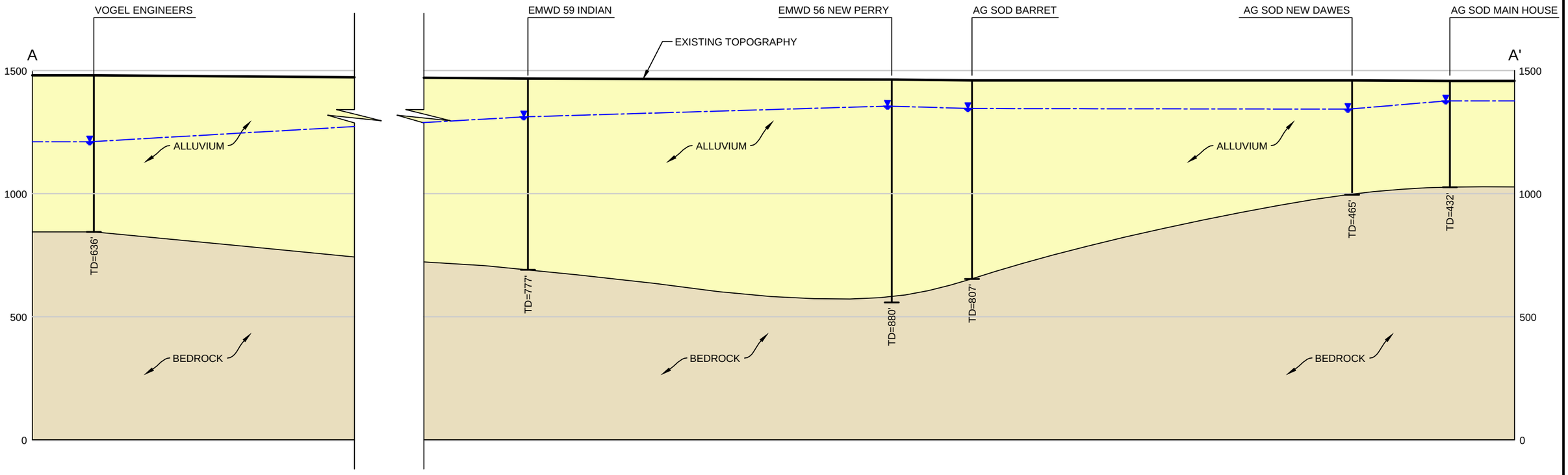
2,000 1,000 0 2,000 4,000 Feet

Geosyntec consultants

Figure 6

Project No: HY1494

November 2014



LEGEND

- GROUNDWATER LEVEL (OCTOBER, 2012)
- ALLUVIUM
- CRYSTALLINE BEDROCK

400'
0
0
800'
SCALE IN FEET

DRAFT
FOR DISCUSSION PURPOSES ONLY

CROSS SECTION A-A'
WELL SITING STUDY
PERRIS, CALIFORNIA

Geosyntec consultants

Project No: HY1494

October, 2014

Figure 7

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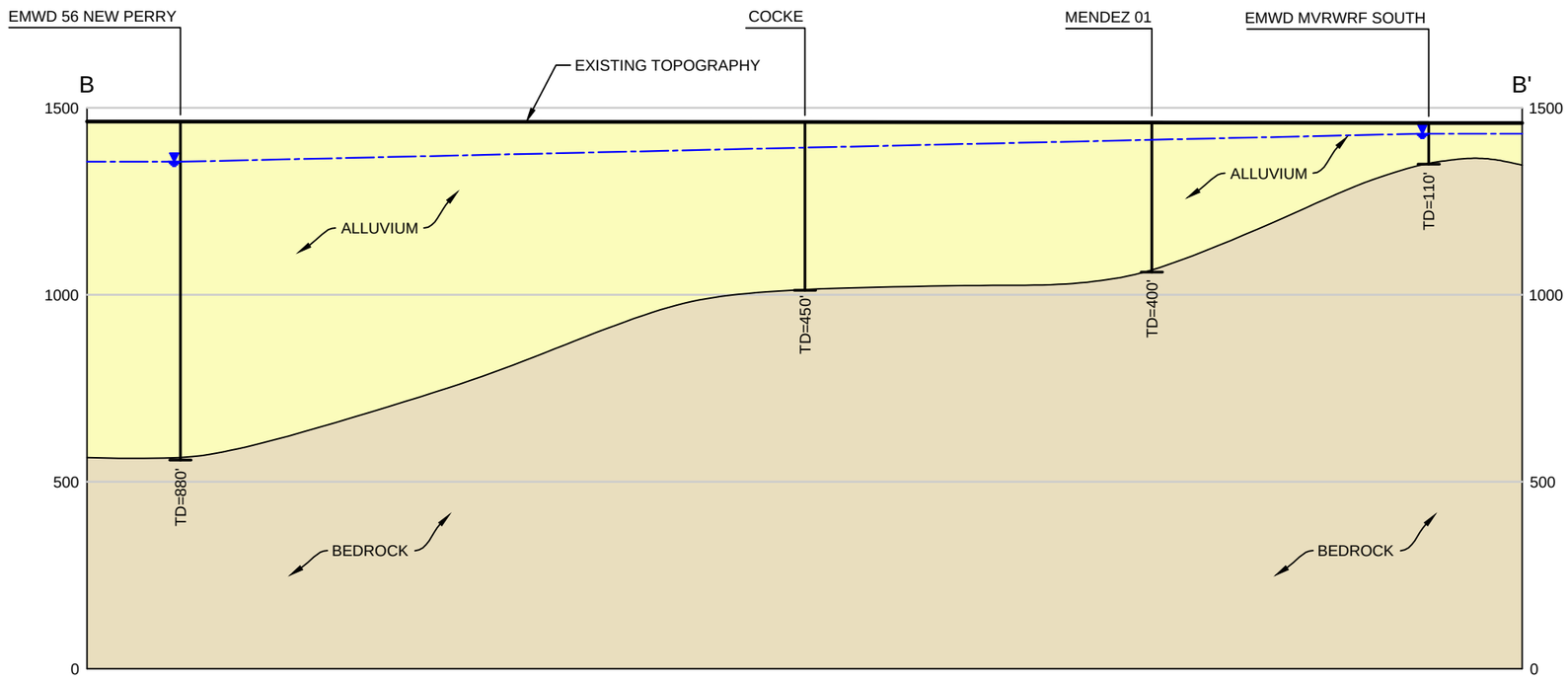

LEGEND

- GROUNDWATER LEVEL (OCTOBER, 2012)
- ALLUVIUM
- CRYSTALLINE BEDROCK

400'
0
0
800'
SCALE IN FEET

DRAFT
FOR DISCUSSION PURPOSES ONLY

CROSS SECTION B-B'
WELL SITING STUDY
PERRIS, CALIFORNIA

Geosyntec consultants

Figure **8**

Project No: HY1494 | October, 2014

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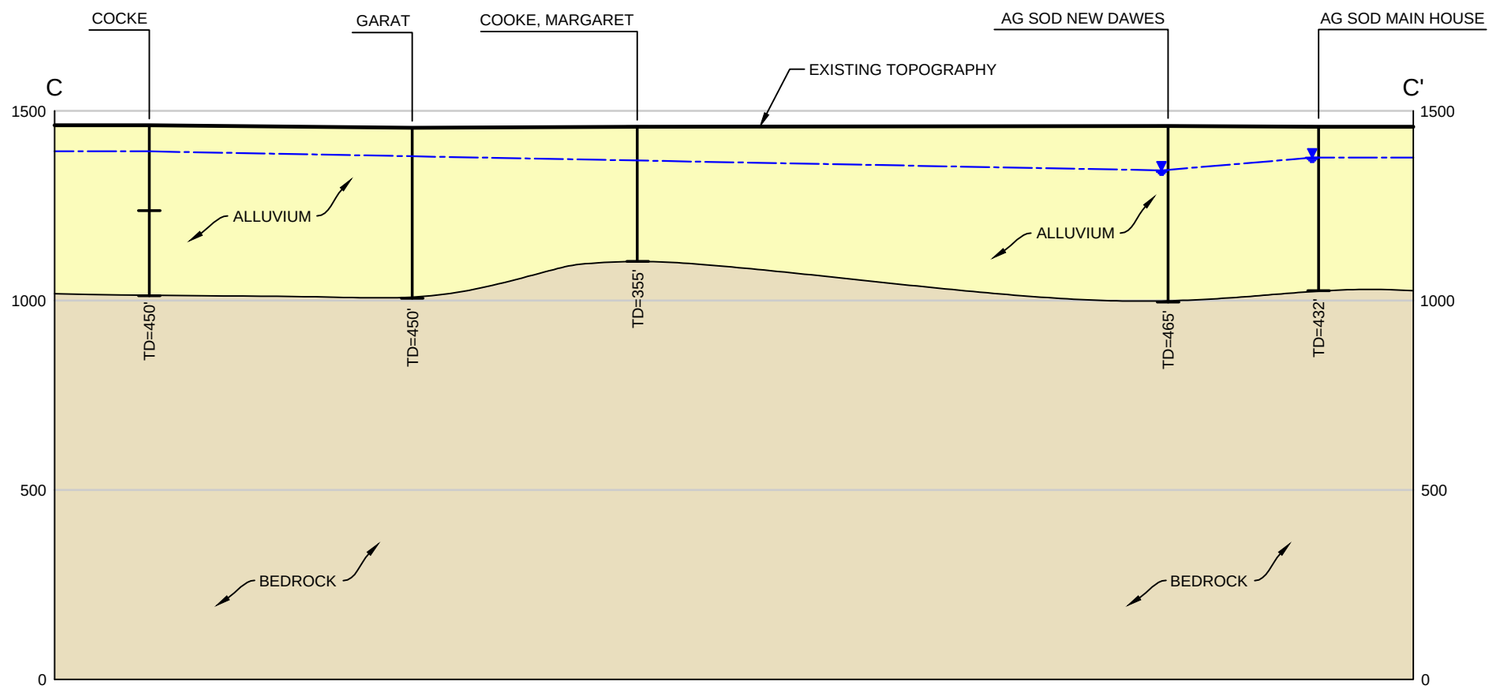


LEGEND

- GROUNDWATER LEVEL (OCTOBER, 2012)
- ALLUVIUM
- CRYSTALLINE BEDROCK

400'
0
0
800'
SCALE IN FEET

DRAFT
FOR DISCUSSION PURPOSES ONLY

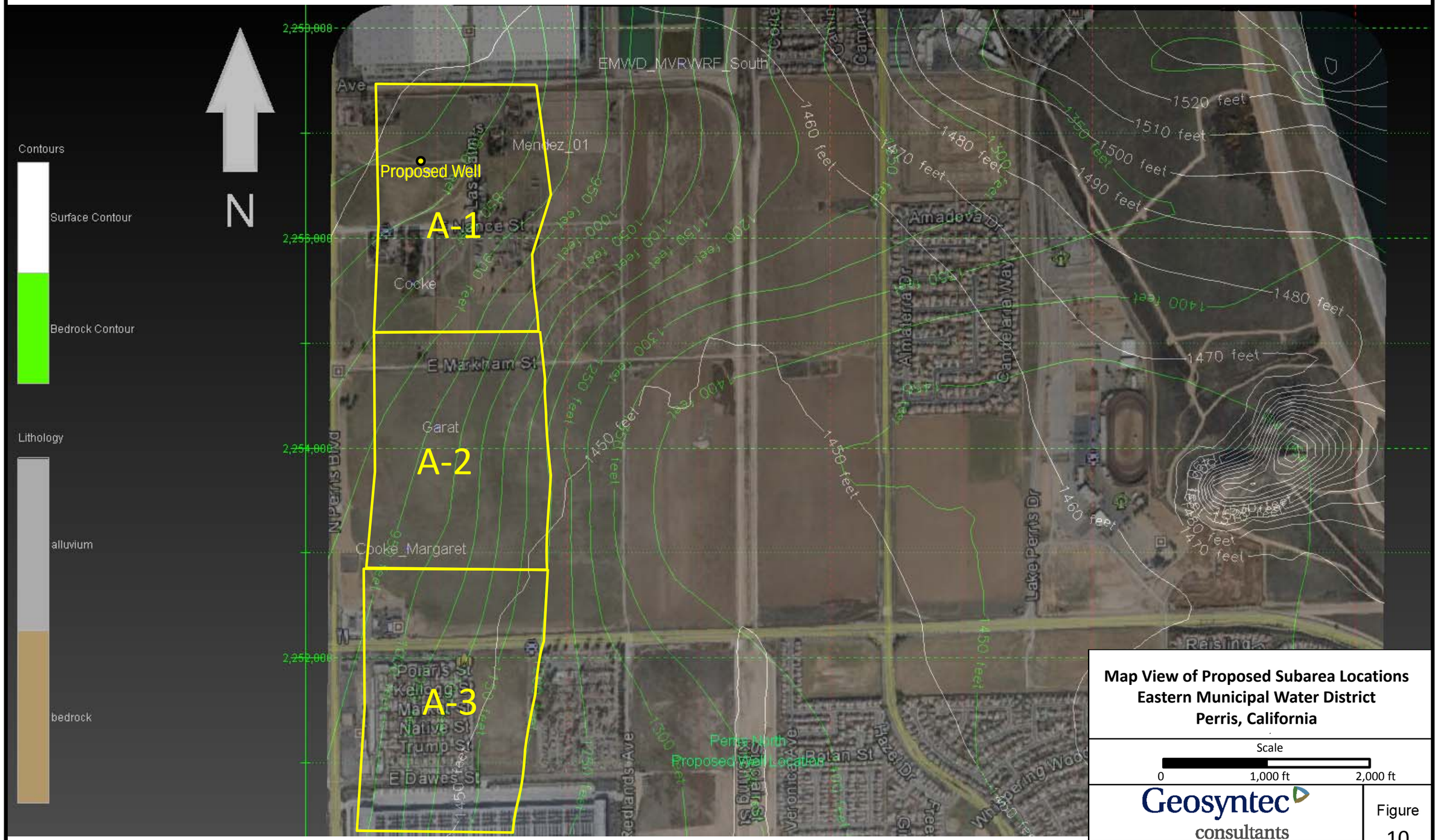
CROSS SECTION C-C'
WELL SITING STUDY
PERRIS, CALIFORNIA

Geosyntec consultants

Project No: HY1494 | October, 2014

Figure 9

N:\CAD\NNORTH PERRIS\NORTH PERRIS - HY1494\FIGURES\1494F001.dwg 10/29/14 10:12 sberdy



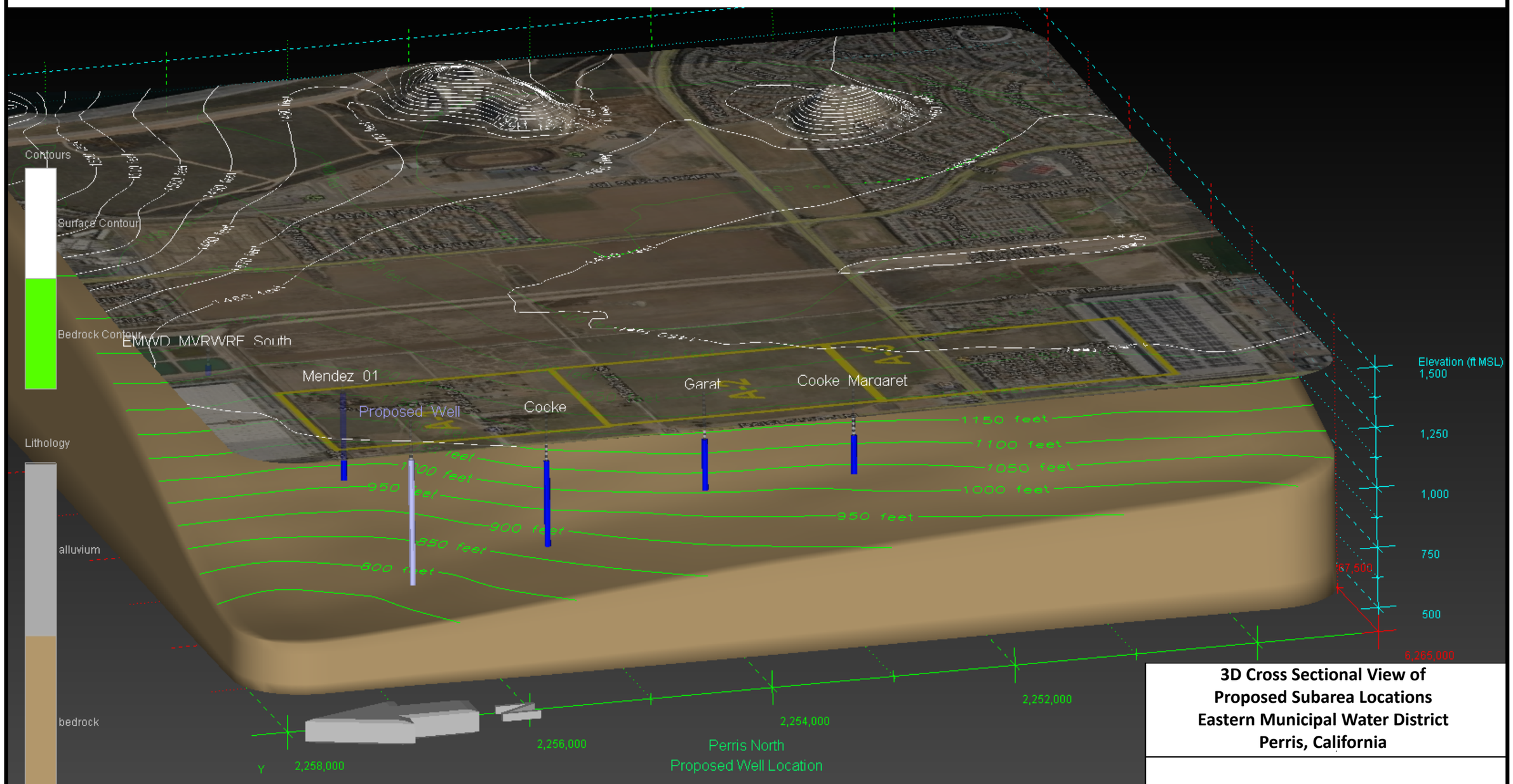
Map View of Proposed Subarea Locations
Eastern Municipal Water District
Perris, California

Scale
0 1,000 ft 2,000 ft

Geosyntec consultants

Project No: HY1494 | October 2014

Figure 10



3D Cross Sectional View of
Proposed Subarea Locations
Eastern Municipal Water District
Perris, California

Geosyntec consultants

Project No: HY1494 | October 2014

Figure 11

N

Clark, G. C.
Stinchcomb, Joe
Bridges, O. L.
15MW03
Buchanan, Howard A.
MARB 15MW02
MARB 15MW04
Jensen & Horowitz
Squier, Howard
150
200
250
300
400
EMWD MVRWRF North
Miller, Charles
600
A
Vogel Engineers
Curtis, W. R.
ra W.
Hammer, Bernard
Kepner, L. G.
Jim
Boals, D. K.
600
k, Ira W.
Hanson, H. N.
550
450
B1
EMWD MVRWRF South
Clark Reservoir
Clark
Nelson
Mendez 01
Clark
EMWD 59 Indian
A-1
350
EMWD 58 Indian/Nance
Smith, D.
Cocke
500
600
650
700
Yates, J.
Yates, J.
800
750
Gara
A-2
Lee Mee 01
850
B
EMWD 56 New Perry
Cooke, Margaret
EMWD 50 Perry
AG Sod Barret
Shaffer, P.D.
550
A-3
Shaffer, P.D.
50
100
McCanna Ranch 03
McCanna Ranch 01
AG Sod New Dawes
AG Sod Pepper Tree
A1
500
450
Damiano, A.
McCanna Ranch 02
300
200
AG Sod Main House
C1
DiBetta, A. J.
McCanna Ranch 04
Coudures, J.
EMWD 55 Perris II
Van Der Schaff, J.
500
Crenshaw
Stahl 03
Allen
Bean Rider OC
Bean Rider East
May Company
Hamner, L. L.
Hamner, L. L.
Hamner, L. L.
EMWD 57 New Follico
EMWD 52 Follico
AG Sod Perris/Orange
Martin, J.
Smith, D. B.
Merrill, G.
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Mutual Water Co.

Legend

- Production Wells
- Proposed Areas for Well Siting
- Other Wells
- Alluvium Thickness Contours
- Cross Section Location
- Historic Surface Water Channel (Intermittent Flow)
- Storm Drain
- StormDrain 100ft Buffer
- ProductionWell 2000ft Buffer
- Stephens' Kangaroo Rat Habitat
- Well Siting Study Area

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Proposed Subareas for Exploratory Boring

Perris, CA

2,000 1,000 0 2,000 4,000 Feet

Geosyntec consultants

Project No: HY1494 | November 2014

Figure 12

Appendix E:

Phase I Environmental Site Assessment

SDVOSB
Service Disabled Veteran Owned Small Business

EnGEN CORPORATION

41625 Enterprise Circle South,
B-2, Temecula California 92590
951.296.3511 - Fax: 951.296.3711
www.engencorp.com

IN MEMORY OF

Chris Stevens *Tyrone Woods*
Sean Smith *Glen Doherty*
Ann Smedingoff

PHASE I ENVIRONMENTAL SITE ASSESSMENT

2.39 Acres Approximately 775 Feet East of Perris Boulevard and South of Nance Street
APN: 302-110-028, Parcel Map 13884
City of Perris, County of Riverside, California

Project Number: 4189EA1

October 9, 2015

Prepared for:

Eastern Municipal Water District
Post Office Box 8300
Perris, California 92572-3800

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2.0 Introduction 2

3.0 Site Description 3

4.0 User Provided Information 4

5.0 Records Review 5

6.0 Site Reconnaissance 8

7.0 Interviews 8

8.0 Findings 8

9.0 Opinion 13

10.0 Conclusions 13

11.0 Recommendations 14

12.0 Deviations 14

13.0 Additional Services 14

14.0 General Limitations 15

15.0 Closure 16

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Photographic Survey 1

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Aerial Photographs 2

APPENDIX C 3
Historical Topographic Maps 3

APPENDIX D 4
Regulatory Environmental Records Documentation (EDR Report) 4

APPENDIX E 5
Environmental Professional Qualifications 5

October 9, 2015

Mr. Michael D. Nusser
Water Resources Planning Manager
Eastern Municipal Water District
2270 Trumble Road
Perris, California 92572
(951) 928-3777 x4514 • FAX (951) 928-6177

Regarding: **Phase I Environmental Site Assessment**
2.39 Acres Approximately 775 feet East of Perris Boulevard and South of Nance Street,
APN: 302-110-028, Parcel Map 13884
City of Perris, County of Riverside, California
Project Number: 4189EA1

Dear Mr. Nusser:

This report presents the results of our Phase I Environmental Site Assessment (ESA) performed at the site identified for the purposes of this report as Perris Boulevard and Nance Street, consisting of 2.39 Acres located in the City of Perris, County of Riverside, California. The scope of work for this assessment is described in Section 2.0 of this report.

The Executive Summary provides a broad overview of the findings and recommendations of this ESA, which are detailed in the subsequent sections of this report.

1.0 EXECUTIVE SUMMARY

1.1 **Government Database Search:** The target property is not listed in any of the governmental databases searched which document environmental risk associated with hazardous materials or petroleum hydrocarbons. The conclusions of this report are based on these findings.

1.2 **Environmental Records Search:** The environmental database records search reveals no properties located within the American Society for Testing and Materials (ASTM) search radius of up to a distance of 5,280-feet (1-mile) of the target property that are known to be associated with the use and/or storage of hazardous materials or petroleum hydrocarbons.

1.3 **Site Inspection:** A site inspection was conducted at the target property on January 11, 2015 by an environmental professional of this firm. The property is located east of Perris Boulevard and south of Nance Street in the Perris area of Riverside County, California. The ***Target Property*** is currently undeveloped land being utilized as a storage yard for construction equipment and supplies.

1.4 **Surrounding Property Use:** Surrounding property uses consist of undeveloped land to the north, east and south of the Target Property with a single-family residence adjacent to the

northwest property boundary. Nance Street is located directly north of the Target Property with vacant land and light commercial use directly north of Nance Street. Some of the undeveloped parcels have been used as storage yards for various construction equipment and supplies (see Photo Survey).

1.5 **Environmental Health Department File Review:** A file review was conducted by the County of Riverside Department of Environmental Health (CRDEH), Hazardous Materials Management Division (HMMD) for the target property. There were no records in their files on the ***Target Property***.

1.6 **Findings:** Based on the site reconnaissance, database and file research performed for the ***Target Property***, there are no Recognized Environmental Conditions (**RECs**) associated with the ***Target Property*** that would limit the District's intended use. De minimis conditions were observed in the form of minor spills from stored waste oil and hydraulic fluid drums on site. It is our professional opinion that these conditions will require routine cleanup and removal. No other conditions were observed that would indicate to a trained observer of instances of significant concern from a hazardous materials standpoint.

1.7 **Recommendations:** Based on the findings of this ESA, no further action is required at this time. The District may wish to take steps to locate and properly abandon any on-site sewage effluent disposal system that may be present at the Target Property depending on future intended use.

Table I - Summary of Findings & Recommendations

Assessment Component	Acceptable	Routine Solution	Phase II	Estimated Cost	Section Ref.
Historical Review	•				
On-Site Operations		•			
Hazardous Materials		•			
PCBs	•				
Asbestos	•				
Lead in Drinking Water	•				
Storage Tanks (UST-AST)		•			
Surface Areas	•				
Regulatory Database Review	•				
Adjoining Properties	•				
Lead-Based Paint	•				
Radon	•				
Mold	•				
Other (Infectious Waste)	•				

2.0 Introduction

2.1 **Purpose of Work:** The purpose of a Phase I ESA is to present any identified past or present environmentally related events and conditions which may negatively impact the subject property.

2.2 **Scope of Services:** The assessment includes: 1) a search of available environmental records in governmental databases; 2) completion of an on-site inspection; 3) interviews with the property owner(s) or tenant(s) as appropriate; 4) a permits search; 5) contacts with regulatory agencies; and 6) review of historical aerial photographs.

2.3 **Assumptions:** There is a possibility, even with the proper application of these methodologies, there may exist on the target property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. **EnGEN Corporation** believes that the information obtained from the record review and the interviews concerning the site is reliable. However, **EnGEN Corporation** cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete.

2.4 **Project Specific Limitations and Exceptions:** The findings and conclusions contain all of the limitations inherent in these methodologies that are referred to in ASTM 1527-05. The general limitations are further discussed in Section 14 of this report. Specific limitations and exceptions to this Phase I ESA are more specifically described below: **EnGEN Corporation** was limited by the available records that were provided or readily accessible to the public and their inherent accuracy. This report was also limited by the contractual allowable time frame to provide this report.

2.5 **Special Terms and Conditions:** Authorization to perform this work was in the form of a contract requested by Mr. Michael Nusser, of Eastern Municipal Water District executed and signed on March 12, 2015.

2.6 **User Reliance: EnGEN Corporation** hereby certifies to Easter Municipal Water District that this report was prepared in conformance with all applicable laws, statutes, ordinances, rules, and regulations, and promulgated by all applicable governmental authorities concerning the topic of the report. The conclusions and recommendations provided in the report are in no way influenced or controlled by the client for which the work was performed.

3.0 SITE DESCRIPTIONS

3.1 **Site Location and Legal Descriptions:** This ESA was performed for the target property identified as 2.39 Acres approximately 775 feet East of Perris Boulevard and South of Nance Street. The legal description of the ***Target Property*** is APN: 302-110-028, in the City of Perris, County of Riverside, California.

3.1.1 **General**: The target property comprises a rectangular shaped approximately 2.39 acre parcel located approximately 775 feet East of Perris Boulevard and South of Nance Street in the City of Perris, County of Riversides, California.

3.1.2 **Site and Vicinity General Characteristics:** The topography across the target property is relatively flat with a surface gradient to the north at less than 2 percent.

3.1.3 **Current Property Use:** The current use of the ***Target Property*** is for the storage of construction equipment and supplies (see Photographic Survey).

3.1.4 **Descriptions of Structures, Roads, and Other Improvements on the Site:** There are no structures for human occupancy or other improvements on the ***Target Property***. During the site inspection conducted on August 11th, 2015 the only improvements were the construction of a corrugated metal fence along the property boundaries.

3.1.5 **Current Uses of Adjoining Property:**

North of Target Property: East Nance Street bounds the northerly property with vacant, undeveloped land to the north of East Nance Street.

West of Target Property: A private residence is located adjacent to the ***Target Property*** with vacant land and North Perris Blvd. to the west of the private residence.

South of Target Property: A vacant, undeveloped lot is located south of the ***Target Property***, with East Markham Street south of the vacant lot.

East of Target Property: A vacant undeveloped lot is located east of the ***Target Property*** with vacant land currently being used as a storage yard for construction equipment and a single-family residence located east of the vacant lot.

4.0 USER PROVIDED INFORMATION

4.1 **Title Records:** No title records were provided for the target property.

4.2 **Environmental Liens or Activity and Use Limitations:** No records were provided.

4.3 **Specialized Knowledge:** No specialized knowledge related to any potential or known environmental impacts were provided to **EnGEN Corporation**. Further, **EnGEN Corporation** has no specialized knowledge related to any potential or known environmental impacts related to the target property.

4.4 **Commonly Known or Reasonably Ascertainable Information:** No additional information for the target property is known by **EnGEN Corporation** that is not presented in this report. No additional sources of reasonably ascertainable information were revealed within the scope of services for this study.

4.5 **Valuation Reduction for Environmental Issues:** No specialized knowledge related to any potential or known environmental impacts affecting the target property's property value was provided to **EnGEN Corporation**. Because purchase price is sometimes considered confidential,

the user should evaluate whether the purchase price was below the fair market value for the property as a result of contamination.

4.6 **Reason for Performing this Phase I ESA:** To the best of our knowledge, the reason for performing this Phase I ESA is to determine the suitability of Target Property for purchase by ***Easter Municipal Water District***.

5.0 RECORDS REVIEW

5.1 **Standard Environmental Record Sources:** Standard records searched for the purposes of this Phase I ESA included the readily available federal and state government databases described in ASTM 1527-05, was performed by Environmental Data Resources (EDR). For more detail on the included federal and state government or tribal databases that were readily available for this search please refer to the EDR report attached in the Appendix.

5.2 **Additional Environmental Record Sources:** Additional records searched for the purposes of this Phase I ESA included a database search of the readily available government databases described in ASTM 1527-05, was performed by EDR. For more detail on the included local or regional government databases that were readily available for this search please refer to the EDR report attached in the Appendix. When the property descriptor includes a known street address, the governmental database search by EDR is complimented by performing manual verification of any existing Building Permits from the appropriate government entity, Regional Water Quality Control Board file review, and County Department of Environmental Health file review. The results are summarized below and presented in further detail in subsequent sections of this report.

Building permits were requested from Riverside County Building Department and the City of Perris. No building permits were found. A file review was requested from the Santa Ana Regional Water Quality Control Board. No files were found on record as a result of the search.

County of Riverside Environmental Health files for the target property were requested. No files were found on record as a result of the search.

5.3 Physical Setting Sources

5.3.1 **Topography:** Select historical United State Geological Survey (USGS) Quadrangle Topographic Maps covering the target property were reviewed for this Phase I ESA.

The reviewed maps and general topographic setting of the target property was:

Table – II Historical Topography Maps Reviewed			
Date	Quadrangle	Scale	Topographic Setting
1901	Elsinore	1:125,000	Topographic relief to the north at <2%
1901	S. Calif., Sheet. 1	1:125,000	Topographic relief to the north at <2%
1943	Perris	1:62,500	Topographic relief to the north at <2%
1953	Perris	1:24,000	Topographic relief to the north at <2%
1967	Perris	1:24,000	Topographic relief to the north at <2%
1973	Perris	1:24,000	Topographic relief to the north at <2%
1979	Perris	1:24,000	Topographic relief to the north at <2%

5.3.2 **Regional Geology:** The site is located in the Northern Peninsular Range on the southern sector of the structural unit known as the Perris Block. The Perris Block is bound on the northeast by the San Jacinto Fault Zone, on the southwest by the Elsinore Fault Zone, and on the north by the Cucamonga Fault Zone. The southern boundary of the Perris Block is not as distinct, but is believed to coincide with a complex group of faults trending southeast from the Murrieta, California area. The Peninsular Range is characterized by large Mesozoic age intrusive rock masses flanked by volcanic, metasedimentary, and sedimentary rocks. Various thicknesses of alluvial sediments derived from the erosion of the elevated portions of the region fill the low-lying areas. Alluvium underlies the target property and surrounding area.

5.3.3 **Soil Conditions:** Based on information from this firm's review of the target property and pertinent geotechnical data as well as samples and borings reviewed from other geotechnical studies conducted within the near vicinity of the target property, the surface soils are expected to be comprised of interbedded sandy loam (alluvium) to an undetermined depth.

5.3.4 **Groundwater Conditions:** The approximate depth to groundwater at the target property is unknown at this writing, however based on the State Department of Water Resources (SDWR) groundwater level data library (See Table-III) from well 05S01E06L002S, located approximately .85 miles south of the target property was recorded at a depth of approximately 351.4 feet below ground surface elevation (1650 AMSL) in March of 1991. Groundwater depth at the target property is anticipated to be in excess of 150.0 feet from surface elevation. However, it is our understanding that based on the current government efforts to protect the water supply, well locations are not accurate and therefore no interpretation of groundwater depth or quality is provided.

Table - III Historical Water Levels Records Near Perris Blvd. and Nance Street				
Date Measured	G.S. Elevation (AMSL)	WSE	Distance	Well Name
03-04-1991	1650.0	351.4	.85 Miles South	05S01E06L002S

5.3.5 **Historical Use Information:** Research within the limits of this Phase I Site Assessment including aerial photo review, historical topographic maps, government database search were utilized in evaluating past property uses.

5.3.6 **Historical Aerial Photograph Review**: Table VI summarizes the historical photographic review for the target property.

Table - IV - Historical Photograph Review			
Date	Flyer	Scale	Description
2012	USDA/NAIP	1"=500	Eight Various Sized Sheds Two Rows of Containers/Construction Equipment
2010	USDA/NAIP	1"=500	One Structure, Seven Various Sized Sheds Two Rows of Containers/Construction Equipment
2009	USDA/NAIP	1"=500	One Structure, Four Small Sheds, Two Rows of Containers/Construction Equipment
2006	USDA/NAIP	1"=500	Vacant Property, One Structure, Five Various Sized Sheds
2005	USDA/NAIP	1"=500	Vacant Property – Apparent Agricultural Use
2002	USGS/DOQQ	1"=500	Vacant Property – Apparent Agricultural Use
1994	USGS	1"=500	Vacant Property – Apparent Agricultural Use
1989	USGS	1"=500	Vacant Property – Apparent Agricultural Use
1985	USGS	1"=500	Vacant Property – Apparent Agricultural Use
1978	USGS	1"=500	Vacant Property – Apparent Agricultural Use
1967	USGS	1"=500	Vacant Property – Apparent Agricultural Use
1961	USGS	1"=500	Vacant Property – Apparent Agricultural Use
1953	USGS	1"=500	Vacant Property – Apparent Agricultural Use
1938	USGS	1"=500	Vacant Property – Apparent Agricultural Use

5.3.7 **Fire Insurance Maps:** There were no historical fire insurance maps (Sanborn Maps) located during the governmental database search for the target property (EDR, 2013).

5.3.8 **City Directories:** The target property is not listed in the City Directory.

5.3.9 **Chain of Title:** A chain-of-title search of current and historic land ownership was not included within **EnGEN Corporation's** agreed upon proposed scope of services. Historical research of the target property was performed using other resources, such as aerial photograph review, topographic map review, and government records.

5.3.10 **Additional Environmental Record Sources:** No additional environmental reports or surveys were provided to **EnGEN Corporation** nor are any known to be readily ascertainable.

5.3.11 **Historical Use on Adjoining Properties:** Adjoining properties to the north, east, west and south of the target property have all had apparent historical agricultural uses.

6.0 SITE RECONNAISSANCE

6.1 **General:** An inspection of the target property was conducted on August 11th, 2015. The site inspection included reconnaissance and surface observations throughout the target property and a photographic survey to document the site inspection operations. The photographic survey can be found in Appendix A of this report.

6.2 **Site Conditions:** The target property comprises approximately **2.39** acres located approximately 775 feet East of Perris Boulevard and South of Nance Street in the City, of Perris, County of Riverside, California and is currently in undeveloped land. Currently the ***Target Property*** is being utilized as a storage facility for construction equipment and supplies. Access was obtained through the permission of the District. The target property is relatively flat with surface drainage to the north at a gradient of less than 2 percent. There was visual evidence of minor spills from stored oil, waste oil and hydraulic fluid in the form of stains in the surface soils in isolated areas at the northerly portion of the ***Target Property***, during our field reconnaissance.

7.0 INTERVIEWS

7.1 **Interview with Local Government Officials:** Telephone Interviews were conducted with local and state governmental agency personnel to obtain relevant information on the Target Property pertinent to this ESA. Additional information was obtained through other means included in this report, such as, governmental database records research.

8.0 FINDINGS

8.1 **General:** Based on the available government database records and site reconnaissance, the following findings are presented of the ***Target property***: The **Target Property**, does not have any REC's, but does have some De minimis conditions in the form of stained surface soils associated with the storage of small quantities of oil, waste oil and hydraulic fluid on site. However, these conditions can be remedied through routine site clean-up.

8.2 **Hazardous Waste Manifests:** Hazardous waste manifests are used when transporting hazardous wastes for legal disposal. LUST and UST records did not indicate that there were possible operations historically on the target property that would require the use of hazardous waste manifests documentation.

8.3 **Air Emissions:** There are no known operations on the subject property which require an Air Quality Management District (AQMD) permit. At the time of the site inspection, no unusual odors

were encountered on the subject property and no other conditions were observed that would be a concern from an air emissions standpoint.

8.4 **Pesticides and Herbicides:** At the time of the site inspection the target property was not in use for agricultural purposes. The use of the target property has been verified in historical aerial photographs reviewed for this ESA, (see Aerial Photographs, Appendix B) as having been cultivated for agricultural purposes in the past. Pesticides may have been utilized during this time. Pesticides may have been utilized during this time. It is the opinion of this firm that although it is highly likely that biocides were routinely applied as part of the agricultural practice at the time, *it is unlikely significant concentrations of these compounds are present in the soil underlying the Target Property*. Should the client wish to have further assurance regarding the possible presence and/or concentration levels of pesticides and herbicides at the Target Property, **EnGEN** can provide these services for an additional fee. Based on the evidence uncovered within the scope of this site assessment, no negative impact to the target property from pesticides or herbicides is anticipated.

8.5 **Wastewater:** At the time of the site inspection, there was no observed evidence of stormwater facilities, drains or drainage ditches on the target property. Although there are no records on file with the Riverside Department of Environmental Health for the installation of an on-site sewage effluent disposal system, it must be assumed that the residential structure utilized one. The District should determine the need to further investigate the location of the on-site sewage effluent disposal system based on District policy governing the proposed future use of the site.

8.6 **Waste Generation, Storage and Disposal:** At the time of the site inspection, there was no evidence observed on the target property that would indicate the site had past or current use for the generation, storage, treatment, or disposal of hazardous waste. There were no records uncovered during this EAS that would indicate the site had been used for the use and/or storage of hazardous materials in the past.

8.7 **Material Safety Data Sheets (MSDS):** Material Safety Data Sheets (MSDS) document the on-site use of hazardous materials. Currently, there are no MSDS for the target property.

8.8 **Building Permits:** There were no building permits found in the County of Riverside Building and Safety Department records for previous construction observed in the historical aerial photographs. An additional records search was requested from the City of Perris, but none were found in their files. The city indicated that records prior to 2000 may be available, but it would be a manual search that could not be completed prior to the deadline established for this report. Should additional information become available that would indicate a potential environmental liability to the Target Property, a supplement to this ESA will be provided. Based on the historical aerial

photographs reviewed for this EAS, it appears that the structure was built sometime around or before 1938 with the primary use of single-family and agricultural use.

8.9 **California Regional Water Quality Control Board, Santa Ana Region (CRWQCB, SAR):** Based on the available government database information, the Target Property have no known violation or cases with the California Regional Water Quality Control Board, Santa Ana Region (CRWQCB, SA).

8.10 **HMMD File Review:** HMMD has completed a review of their files for the site identified for this report. HMMD has no records contained within their files on the target property.

8.11 Asbestos

8.11.1 **Background:** Asbestos is a naturally occurring mineral fiber utilized in a multitude of building material products due to its high tensile strength and excellent fire resistant properties. The EPA has defined asbestos materials as being either friable or non-friable materials.

8.11.2 **Friable:** Material is defined as being easily broken or crushed by hand pressure (i.e., soft acoustical ceilings or blown-on fireproofing). Friable asbestos-containing building materials were banned for manufacture and sale in the United States in 1978 and all stocks remaining on the shelves are presumed to have been depleted by 1980.

8.11.3 **Non-friable**: Material is generally found in pre-manufactured products that bind the asbestos in an adhesive material such as roofing felts, floor tile, transite pipe and mastics. This is significant due to the ability to create a fiber release and cause human exposure during normal activities. The EPA currently does not require the removal of asbestos-containing materials that do not present a problem for human exposure. After friable asbestos was banned, significant labeling requirements went into effect for non-friable asbestos-containing materials and many substitutes became available. Asbestos-containing flooring materials and mastic were used less and less in construction after 1978. By 1984, their use in buildings constructed in the United States was nearly non-existent due to the labeling requirements and potential liability to both the manufacturer and real estate developer. While never banned from use in roofing materials, labeling and liability concerns resulted in the voluntary removal of asbestos from roof mastic/sealants by the major manufacturers in 1989.

8.11.4 **High/Low Risk Material**: On October 11, 1994, a new FED-OSHA ruling became effective, which redefined building materials perceived as asbestos-containing into four classes of work and modified the way in which these asbestos-containing materials are handled. Under this ruling, “thermal system insulation and sprayed-on or troweled on or otherwise applied surfacing materials installed before 1980 are considered PACM (presumed asbestos-containing material)” unless sampled and identified by a certified individual as to asbestos content. These materials

are considered high-risk materials for abatement and their removal is classified under Class I Removal Activities. Other building materials, such as "floor or ceiling tiles, siding, roofing, transit panels (floor sheeting, floor or roof mastics) are also considered PACM (presumed asbestos-containing material)" unless sampled and identified by a certified individual as to asbestos content, but are considered low risk materials for abatement and their removal is classified under Class II, III and IV Removal and Repair and Maintenance Operations.

8.11.5 **Small Scale Short Term Duration**: Significant under these new regulations is the deletion of the category of "Small Scale Short Term Duration" removal activities which regularly allowed Class I, II, III and IV activities to proceed with less regulatory oversight. Under the NESHAPS laws of 1976 and as later amended, asbestos does not have to be removed from a facility until such time as it undergoes major renovations or is demolished. Until that time, the present emphasis by the EPA is to recommend repair of any damaged areas and management of the asbestos-containing materials. Prior to any renovation work being done involving asbestos-containing materials of 260 lineal feet or 160 square feet or more in area, the local branch of the EPA must be notified. Prior to the demolition of any building or house, mandatory bulk sampling must be accomplished and if asbestos is present, notification must be made to the local branch of the EPA and Air Quality Management District. In California, for the removal of any asbestos-containing materials greater than 0.1% by weight, notifications must also be made to CAL-OSHA and a licensed contractor with an asbestos certification is required for any work which exceeds 100 square feet.

8.12 Poly-Chlorinated Biphenyls (PCBs)

8.12.1 **Background**: PCBs were materials widely used as a coolant in electrical equipment from the 1920s to the 1970s. They were banned from use in most electrical equipment in the latter part of the 1970s and 1980s, after it was determined that PCBs could cause health problems if ingested, and cancer when they underwent a chemical change as a result of a fire or explosion. Small amounts of PCBs were used as a coolant in fluorescent light tube fixture ballast until 1978, at which time they were banned. No other potential PCBs or PCB sources appear to exist on the subject property.

8.13 **Above-Ground Fuel Storage Tanks**: There were no permanent above ground fuel storage tanks observed on the target property. However, several empty portable storage tanks were observed stored near the northeasterly area of the ***Target Property***. These tanks are typically used in the construction industry to refuel equipment from a pick-up truck. They do not represent a significant threat to the ***Target Property*** and can be disposed of by a licensed contractor familiar with the proper procedure and protocol for disposal of such material.

8.14 **Underground Fuel Storage Tanks (UST's):** There was no visual evidence of UST's on the target property at the time of the site reconnaissance.

8.15 **Summary of Government Records Search Findings:**

8.15.1 **General**: A search of environmental records in governmental databases was completed using the services of Environmental Data Resources Inc. (EDR). These databases document the occurrence, use, disposal, discharge and/or transport of hazardous materials and petroleum hydrocarbons. The records search focuses on investigating critical or "border zone" sites near the subject property. The State of California, Department of Health Services, has defined these sites as being within 2,000-feet (approximately 0.4-mile) of the subject property. Other sites at more distant locations may be listed also but are not considered critical. A search report prepared by EDR is included in Appendix D. The report meets the governmental records search requirements of ASTM Standard Practice for ESAs, ASTM E 1527-05 significant findings are summarized in the subsequent sections of this report.

8.15.2 **Site Findings (Government Records Search)**: The target property is not identified in any of the governmental databases searched.

8.15.3 **EPA ID Number**: An Environmental Protection Agency Identification Number (EPA ID) is assigned to and used by a facility to dispose of hazardous chemicals over a certain specified quantity. There is no EPA ID Number for the site.

8.15.4 **Off-Site Findings (Government Records Search)**: The environmental database records search revealed that there are no off-site properties located within the American Society for Testing and Materials (ASTM) search radius of up to a distance of 5,280-feet (1-mile) of the target property that is known to be associated with the use and/or storage of hazardous materials or petroleum hydrocarbons.

8.15.5 **Radon**: Radon comes from the natural breakdown (radioactive decay) of uranium. The Environmental Protection Agency (EPA) estimates that the average soil in the United States contains only about one part per million of uranium. Uranium is found in about 150 materials, including granite, phosphate and shale. Granite is a major concern for the presence of radon, as some deposits have been found to contain extremely high levels of uranium. According to Mr. David Quinton of the State Department of Radon, the chance of radon being a hazard in Southern California is less than one percent.

8.15.7 **Regulators Actions**: A search of available environmental records revealed no evidence of regulatory actions on or associated with the target property.

8.15.8 **Known Site Problems**: Based on the work conducted within the scope of this Phase I ESA, there are no known site problems from a hazardous materials standpoint.

8.15.9 **Regional or Adjacent Problems**: There are no regional or adjacent problems that would have an impact on the target property from a hazardous materials standpoint.

9.0 PROFESSIONAL OPINION

9.1 **Professional Opinion on Possible Contamination**: The potential environmental conditions revealed for the target property includes pesticides and herbicides from past agricultural use, potential lead paint and asbestos. Based on our experience in this part of southwest Riverside County, properties with similar histories such as past agricultural use typically yield low concentrations of pesticides and herbicides that are below regulatory thresholds. There is a potential for the existence of lead based paint and low risk asbestos containing material present in the soils immediately area surrounding the previous residential structure at the Target Property when the structure was demolition or removed from the Target Property. Based on the site reconnaissance observations and confirmation that there are no reported environmental cases within the ASTM search radius of the target property, it is our interpretation that it is very unlikely that the Target Property is negatively affected from off-site sources as outlined in subsequent sections of this report.

9.2 **Vapor Encroachment Conditions (VEC):** We have reviewed available regulatory and client provided data to assess Tier 1 non-numeric screening for the site and completed a VEC study for the site using Tier 1 criteria as recommended by ASTM E 2600-10. The Tier 1 screening identifies surrounding facilities that pose a possible vapor intrusion source to the site based on the results of the Phase I ESA investigations and certain criteria outlined by ASTM. These criteria include a certain distance from the target site (referred to by ASTM as within the “area of concern”); the types of chemicals used (referred to by ASTM as the “chemicals of concern”); and a plume test to determine if the plume associated with a source of contamination is close enough to the site to impact indoor air quality. Based on our review of regulatory records, files, databases, and/or client furnished data and reports, there are no conditions that represent a potential vapor encroachment threat to the Target Property.

9.3 **Infectious Waste:** There was evidence uncovered that would indicate that the ***Target Property*** is impacted by infectious waste.

10.0 CONCLUSIONS

10.1 **General**: Other than the ***Target Property*** potential past agricultural use, which may have introduced pesticides or herbicides to the near surface soils at the ***Target Property***, only De minimis conditions were observed in the form of drums of oil, waste oil and hydraulic fluid and empty portable fuel storage tanks stored on at the ***Target Property*** (see Photographic Survey)

that indicate minor surface spills which can be remedied by routine measures. These are not considered REC's due to small quantity stored on site. There were no other conditions revealed that would indicate a recognized liability from a hazardous materials standpoint. The presence of chemical compounds in soil cannot be confirmed without sampling and analytical testing, which is not within the scope of this study. Based on the site reconnaissance and government database research conducted for this ESA, there were no conditions that would indicated the site is impacted by hazardous materials.

10.1.1 **Environmental Records Search**: An environmental records search revealed no known environmental problems associated with hazardous materials within the target property.

10.3 **Conformance Statement**: We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E of the site identified for the purposes of this report to be Perris Boulevard and Nance Street, consisting of 2.39 Acres in the City of Perris, County of Riverside, California. Any exceptions to, or deletions from this practice are described in the appropriate sections of this report. This report has revealed no evidence of recognized environmental conditions except for that identified and reported.

11.0 RECOMMENDATIONS

11.1 Based on the assessment findings, there is no documented evidence that the site is impacted by hazardous materials from on or off-site sources. Because there was no evidence observed of contaminates beyond that mentioned in this report, during the physical inspection of the target property, and government data-base searches of historical source sites revealed that there are no sites which impact the target property, No further action is required at this time. It is recommended that the stored petroleum products and minor surface spills associated with them be removed by a licensed contractor familiar with the proper handling and disposal of these products at the discretion of the District.

12.0 DEVIATIONS

This Phase I ESA is in general accordance with the scope of services and ASTM 1527-05, with the excluding the exceptions and/or limiting conditions as discussed in the Limitations and Exceptions as described within Section 2.4, 14 and 15 of this report.

13.0 ADDITIONAL SERVICES

This Phase I ESA did not include any additional services such as confirmatory sampling. This firm will be available should the client wish to coordinate a work plan for future services in consideration of a subsurface exploration and sampling program.

14.0 GENERAL LIMITATIONS

14.1 **ASTM Standards**: This report is intended to satisfy the requirements of a Phase I ESA as outlined in the ASTM standards. This standard is intended to define the scope of due diligence necessary in a real estate transaction to provide for the "innocent buyer's defense" under the SARA amendments to CERCLA.

14.2 **Time, Scope and Date Limitations**: The findings set forth in this Phase I ESA are strictly limited in time and scope to the date of evaluation(s). Government records searched are limited to the accuracy of the agency-prepared lists. It should be the decision of the owner and/or client to proceed to further sampling and analysis based on their comfort level, legal requirements, and/or project needs. If the client wishes to test for contaminant levels associated with petroleum hydrocarbons, pesticide, or herbicide use, this office can provide these services. Should the client wish to confirm air quality, this office does not perform these services. Any additional subsurface investigation and sampling to confirm the conclusions of this report is not within the scope of this report Phase I ESA.

14.3 **Scientific Task Limitations**: The conclusions presented in the report are based solely on the services described herein and not on scientific tasks or procedures beyond the scope of the agreed upon Phase I ESA.

14.4 **Acknowledgements**: It is hereby acknowledged that, within the scope of this survey, no level of assessment can ensure the real property is completely free of chemicals or toxic substances.

15.0 CLOSURE

15.1 **Intended Parties Use**: This report has been prepared for use by the parties or project named or described in this document. It may or may not contain sufficient information for other parties or purposes.

15.2 **Project Changes**: In the event that changes in the assumed nature, design, or location of the proposed development as described in this report are planned, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and the conclusions and recommendations of this report modified or verified in writing.

15.3 **Standards of Care**: This study was conducted in general accordance with the applicable standards of our profession and the accepted geotechnical engineering principles and practices at the time this report was prepared. No other warranty, implied or expressed beyond the representations of this report, is made.

15.4 **Undisclosed Conditions**: Although every effort has been made to obtain information regarding the geotechnical and subsurface conditions of the site, limitations exist with respect to the

knowledge of unknown regional or localized off-site conditions which may have an impact at the site. The recommendations presented in this report are valid as of the date of the report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or to the works of man on this and/or adjacent properties. If conditions are observed or information becomes available during the design and construction process which are not reflected in this report, **EnGEN Corporation** should be notified so that supplemental evaluations can be performed and the conclusions and recommendations presented in this report can be modified or verified in writing.

15.5 **Intended Use**: This report is not intended for use as a bid document. Any person or company using this report for bidding or construction purposes should perform such independent studies and explorations as he deems necessary to satisfy himself as to the surface and subsurface conditions to be encountered and the procedures to be used in the performance of the work on this project.

15.6 **Changes in Standards of Care**: Changes in applicable or appropriate standards of care or practice occur, whether they result from legislation or the broadening of knowledge and experience. Accordingly, the conclusions and recommendations presented in this report may be invalidated, wholly or in part, by changes outside the control of **EnGEN Corporation** which occur in the future.

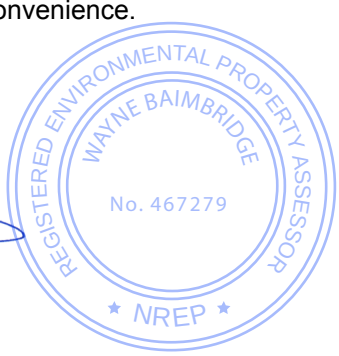
This public records search was conducted with available Federal, State, County and City agency departments, according to recognized procedures and current availability of records. Conclusions resulting from these searches are solely a result of the same. EDR, Inc., the source of environmental risk data submitted with this assessment, assumes no responsibility for events that are not part of these public records.

We declare that to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312 and we have the specific qualifications based on education, training and experience to assess a property of the nature, history and setting of the target property. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

We hope this report meets your present needs. Should you have any questions, or if clarification is needed, please contact this office at your convenience.

Respectfully submitted,
EnGEN Corporation

H. Wayne Baimbridge, Principal
REPA 467279



REFERENCES

1. California Code of Regulations, Title 22, Chapter 30 Regulations for Hazardous Waste Transport and Disposal, California Highway Patrol.

2. California Environmental Protection Agency, State Water Resources Control Board, 2008, Geotracker, Your link to environmental data for regulated facilities in California, website: http://geotracker.swrcb.ca.gov/, 2015

3. California Geologic Survey, 2002, California Geomorphic, Provinces, Note 36.

4. Environmental Data Resources, Inc., 2015, Sanborn Map Report, report dated December, 2013.

5. Environmental Data Resources, Inc., 2015b, The EDR-Radius Map with GeoCheck, report dated August 2015

6. Environmental Data Resources, Inc., 2015c, The EDR-Historical Topographic, report dated August, 2015.

7. Environmental Data Resources, Inc., 2015d, The EDR-Aerial Photography Print Service, report dated August, 2015.

8. FEDERAL, 29 CFR, Part 1910.120; 40 CFR Part 761, DOT; 49 CFR Parts 172.516; Toxic Substance Control Act.

9. Morton, D. M., and Matti, J. C. 2003-04, Preliminary Digital Geologic Map of the Hemet 7.5 Quadrangle, Riverside County California, Version 1.1, United States Geological Survey, Open File Report 04-1455.

APPENDIX A

Photographic Survey

APPENDIX B

Aerial Photographs

INQUIRY #: 4347356.9
YEAR: 1938
= 500'
N
EDR

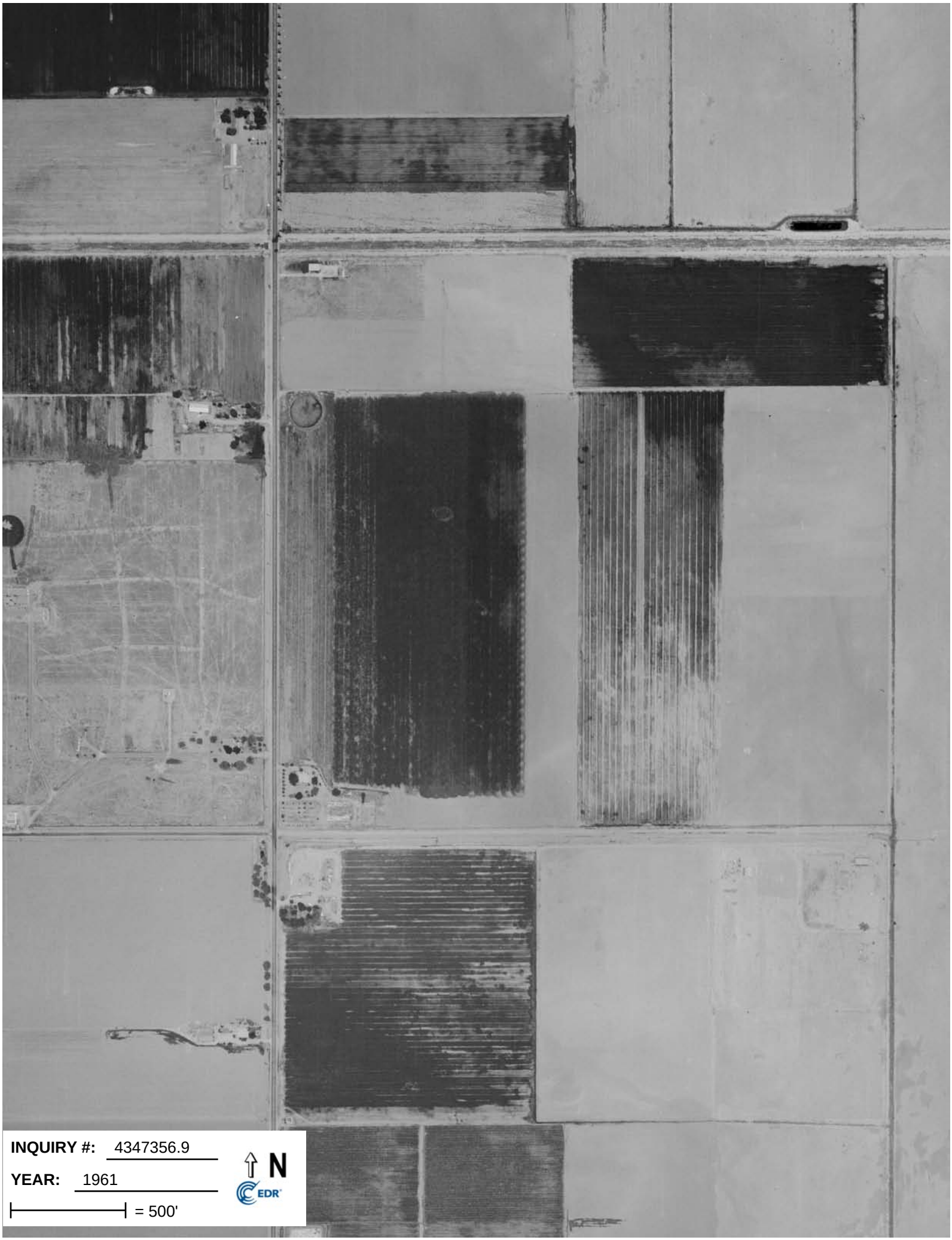
INQUIRY #: 4347356.9

YEAR: 1953

= 500'

N

EDR



INQUIRY #: 4347356.9

YEAR: 1961

= 500'

N

EDR

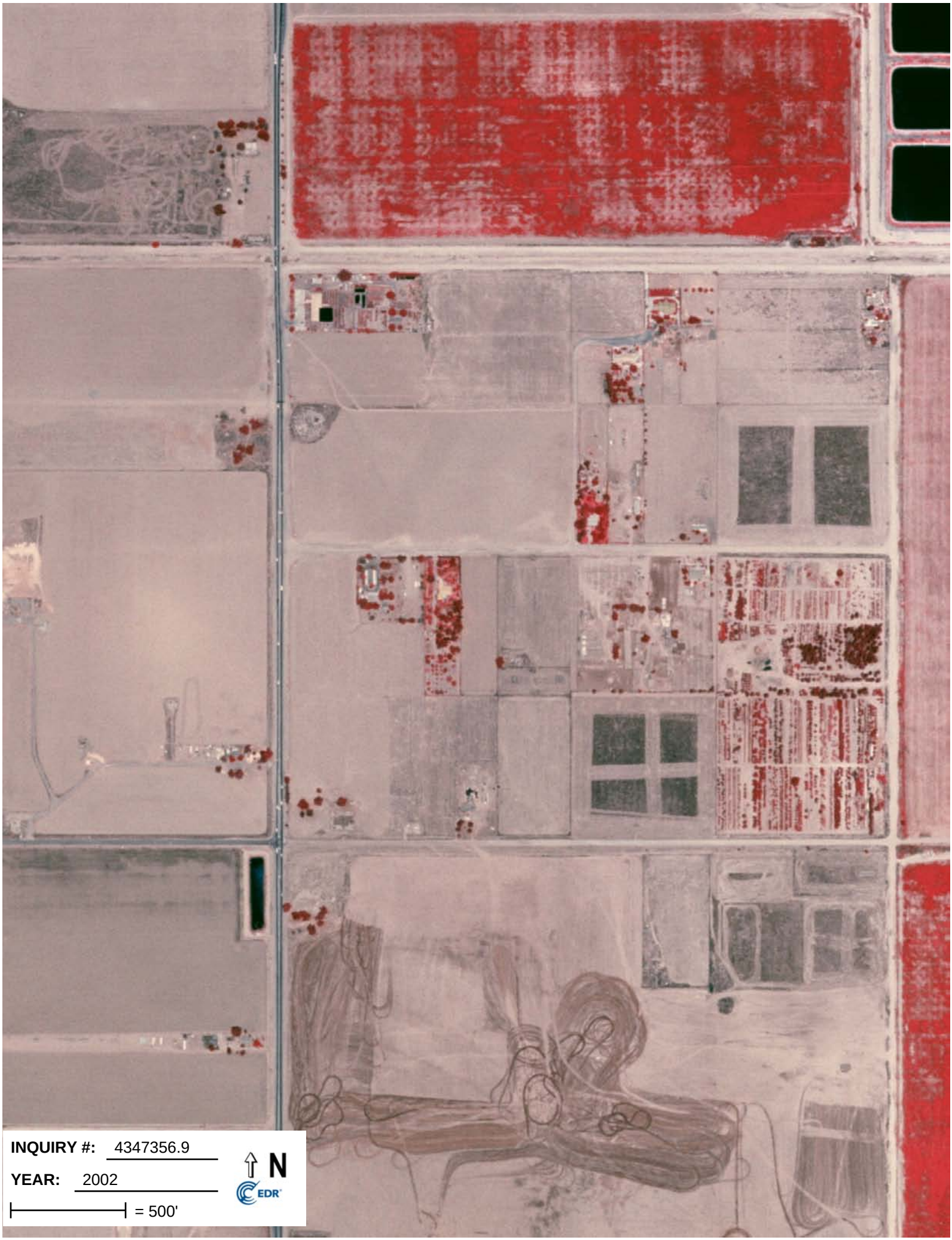
INQUIRY #: 4347356.9
YEAR: 1967
= 500'
N
EDR

INQUIRY #: 4347356.9
YEAR: 1978
= 500'
N
EDR

INQUIRY #: 4347356.9
YEAR: 1985
= 500'
N
EDR

INQUIRY #: 4347356.9
YEAR: 1989
= 500'
N
EDR

INQUIRY #: 4347356.9
YEAR: 1994
= 500'
N
EDR


INQUIRY #: 4347356.9
YEAR: 2002
= 500'
N
EDR

INQUIRY #: 4347356.9

YEAR: 2005

= 500'

N

EDR

INQUIRY #: 4347356.9
YEAR: 2006
= 500'
N
EDR

INQUIRY #: 4347356.9
YEAR: 2009
= 500'
N
EDR

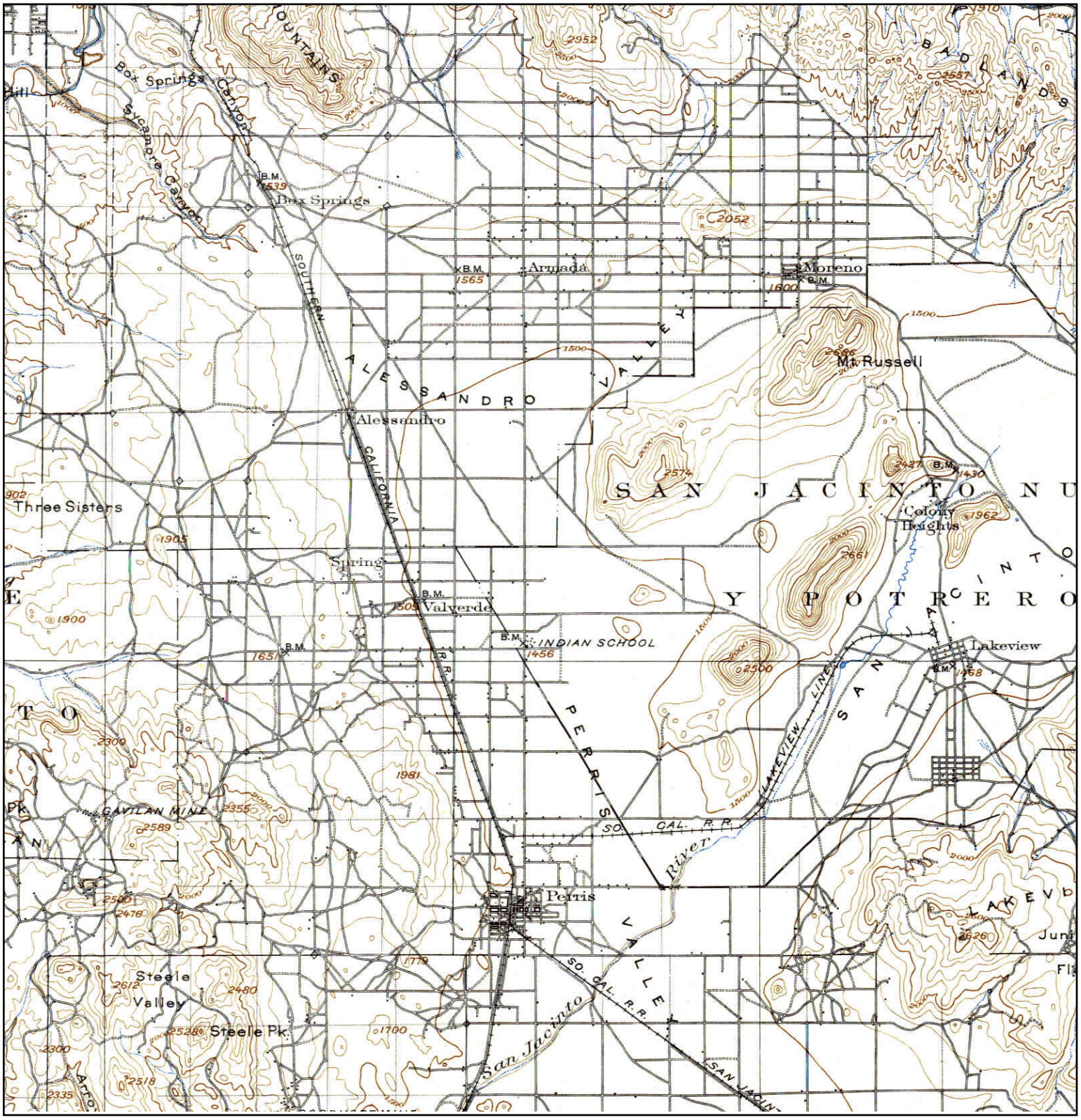
INQUIRY #: 4347356.9
YEAR: 2010
= 500'
N
EDR

INQUIRY #: 4347356.9
YEAR: 2012
= 500'
N
EDR

APPENDIX C

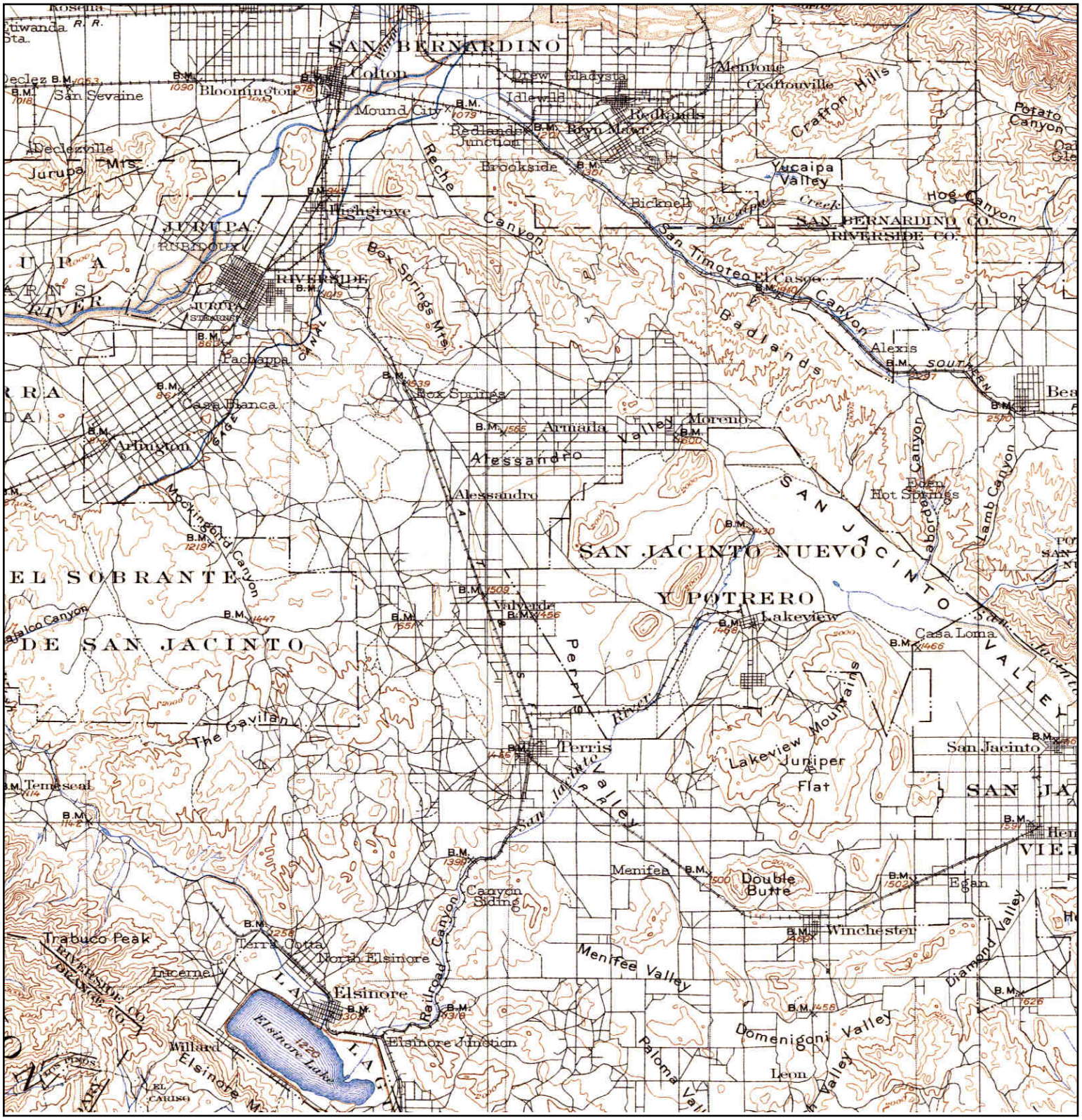
Historical Topographic Maps

Historical Topographic Map



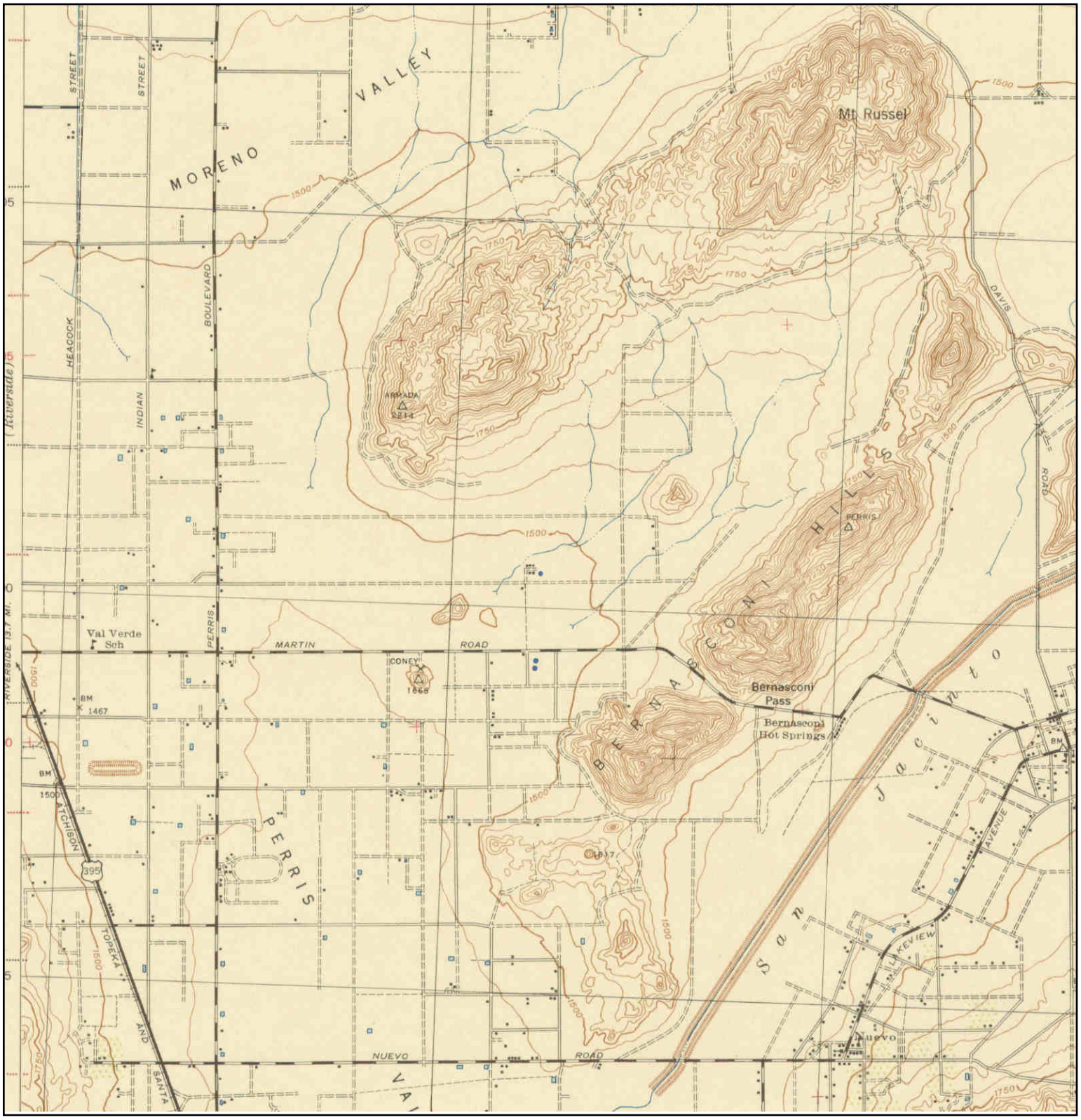
N	TARGET QUAD NAME: ELSINORE MAP YEAR: 1901 SERIES: 30 SCALE: 1:125000	SITE NAME: NORTH PERRIS GROUNDWATER ADDRESS: East Nance Street PERRIS, CA 92571 LAT/LONG: 33.8546 / -117.2231	CLIENT: Engen Corporation CONTACT: Cat Hardell INQUIRY#: 4347356.4 RESEARCH DATE: 07/07/2015

Historical Topographic Map



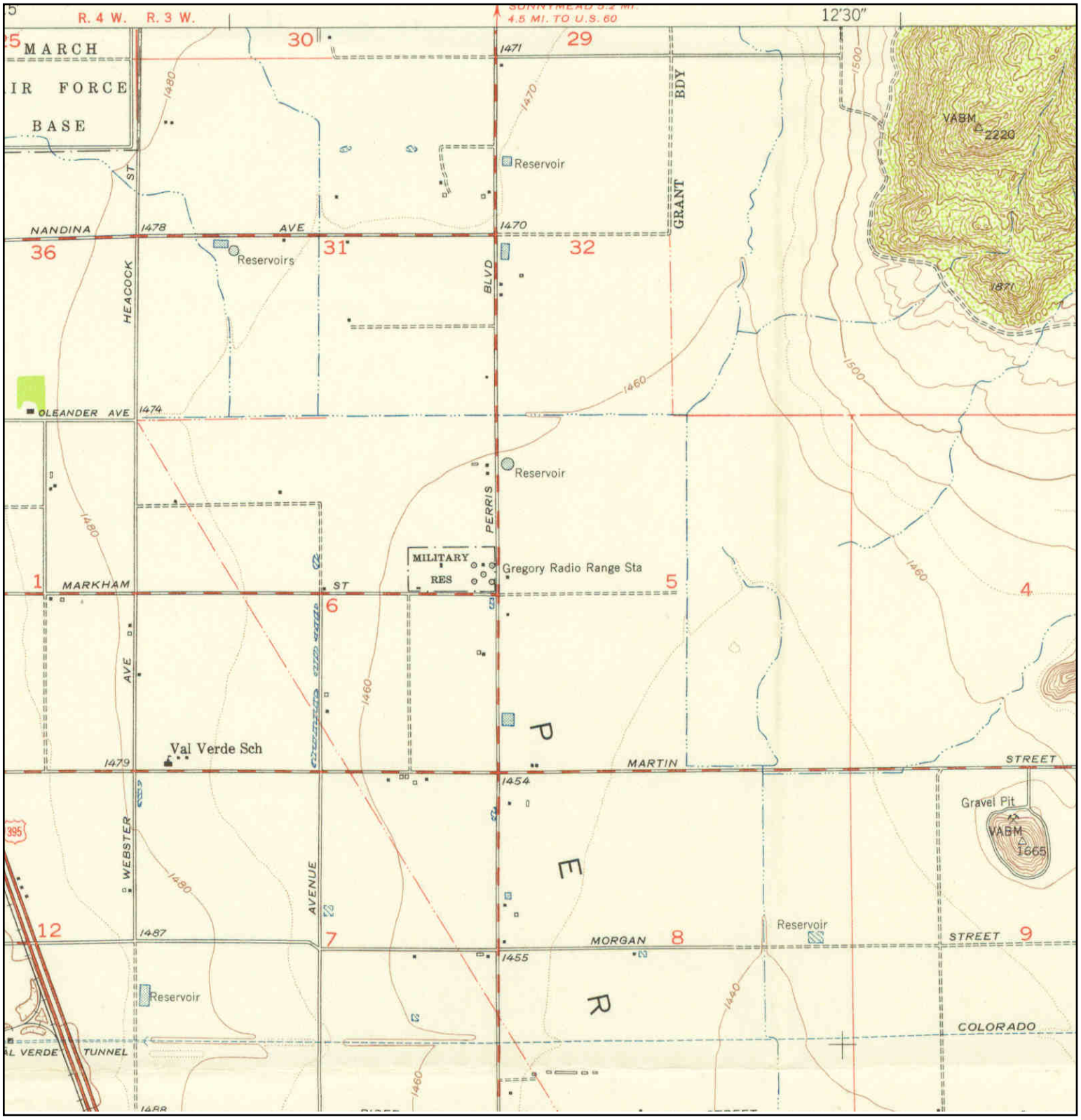
N	TARGET QUAD NAME: SOUTHERN CA SHEET 1 MAP YEAR: 1901 SERIES: 60 SCALE: 1:250000	SITE NAME: NORTH PERRIS GROUNDWATER ADDRESS: East Nance Street PERRIS, CA 92571 LAT/LONG: 33.8546 / -117.2231	CLIENT: Engen Corporation CONTACT: Cat Hardell INQUIRY#: 4347356.4 RESEARCH DATE: 07/07/2015

Historical Topographic Map



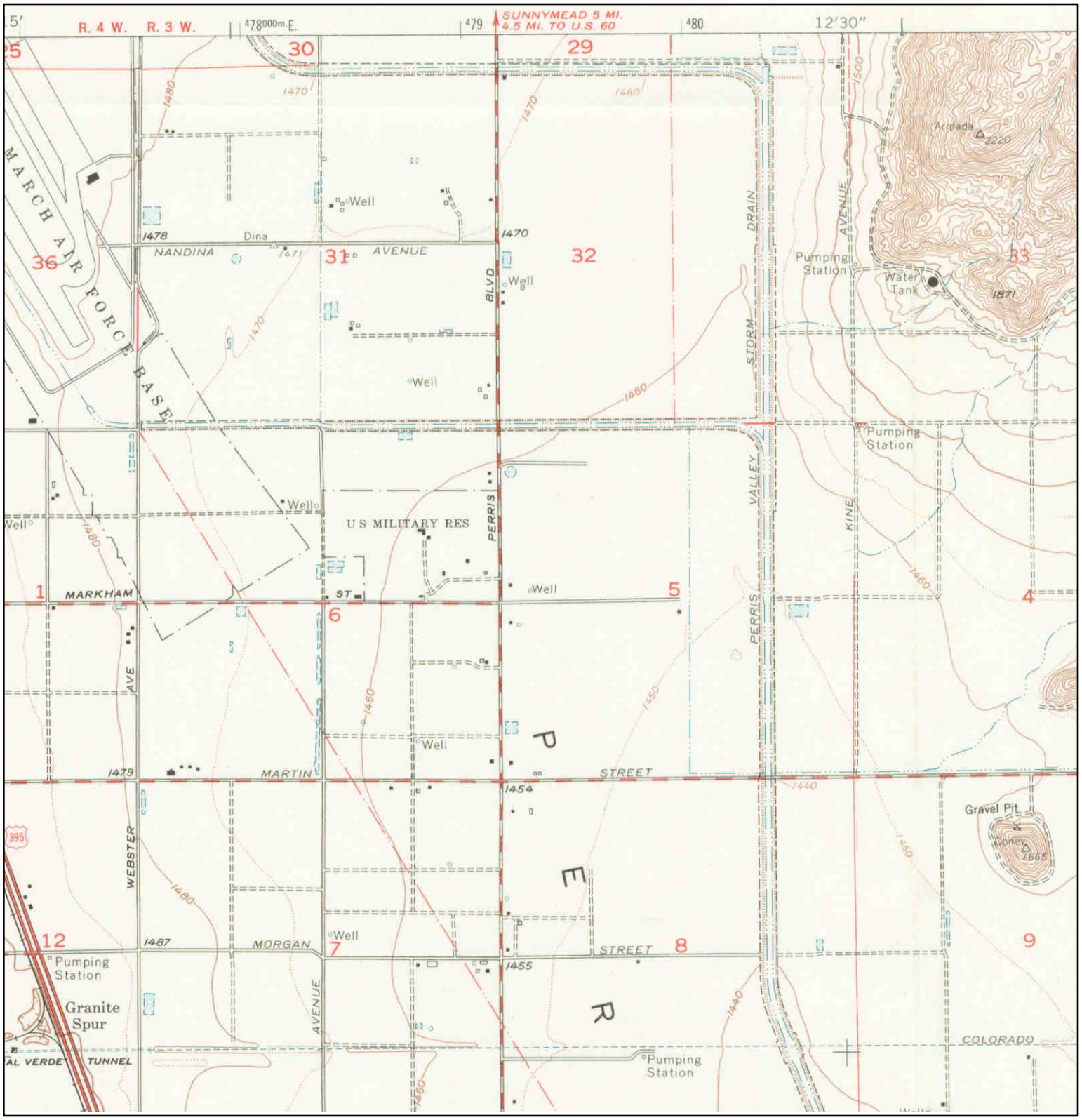
N	TARGET QUAD NAME: PERRIS MAP YEAR: 1943 SERIES: 15 SCALE: 1:62500	SITE NAME: NORTH PERRIS GROUNDWATER ADDRESS: East Nance Street PERRIS, CA 92571 LAT/LONG: 33.8546 / -117.2231	CLIENT: Engen Corporation CONTACT: Cat Hardell INQUIRY#: 4347356.4 RESEARCH DATE: 07/07/2015	

Historical Topographic Map



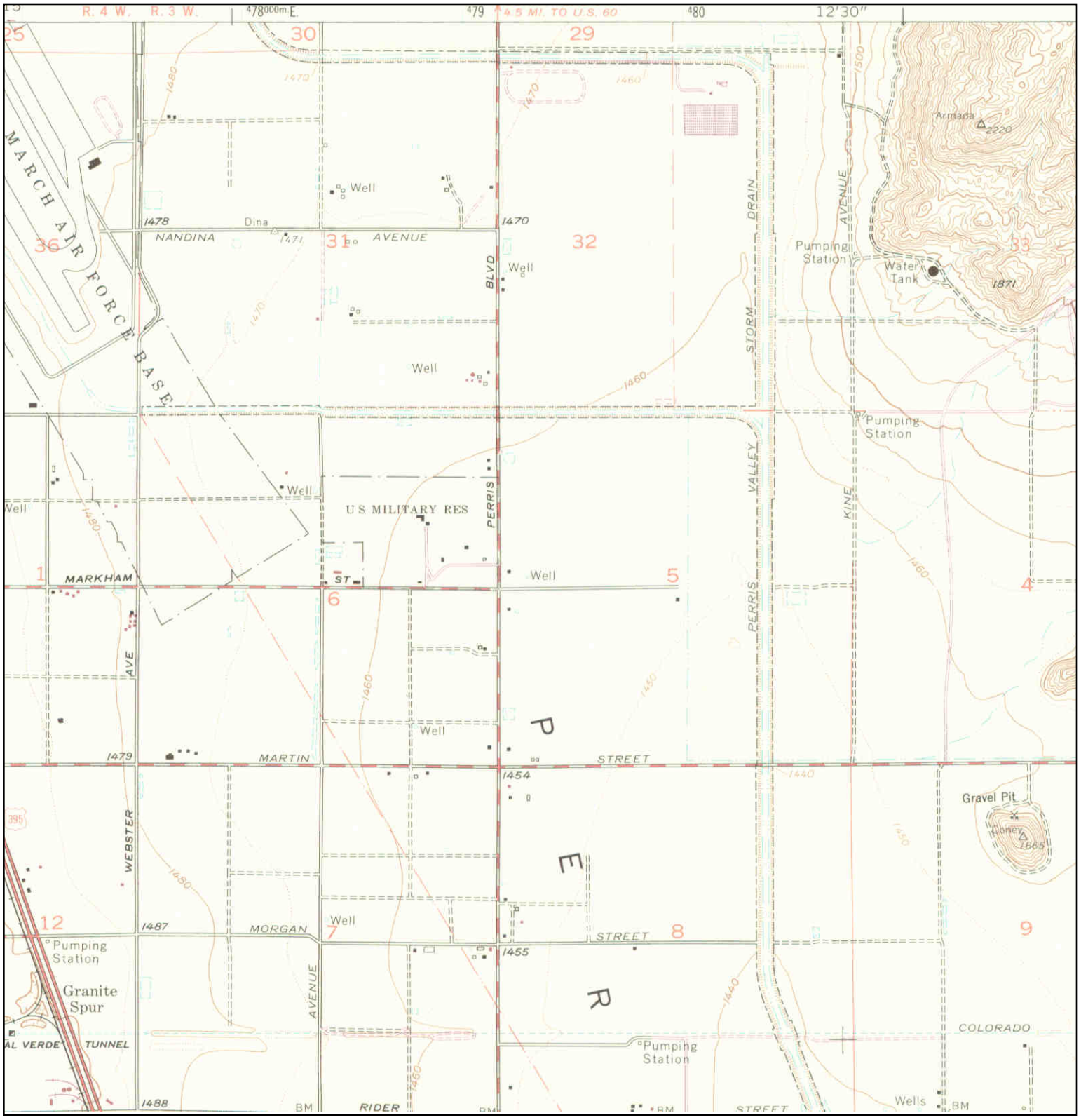
N	TARGET QUAD		SITE NAME:	NORTH PERRIS GROUNDWATER	CLIENT:	Engen Corporation
	NAME:	PERRIS			CONTACT:	Cat Hardell
	MAP YEAR:	1953	ADDRESS:	East Nance Street PERRIS, CA 92571	INQUIRY#:	4347356.4
	SERIES:	7.5	LAT/LONG:	33.8546 / -117.2231	RESEARCH DATE:	07/07/2015
	SCALE:	1:24000				

Historical Topographic Map



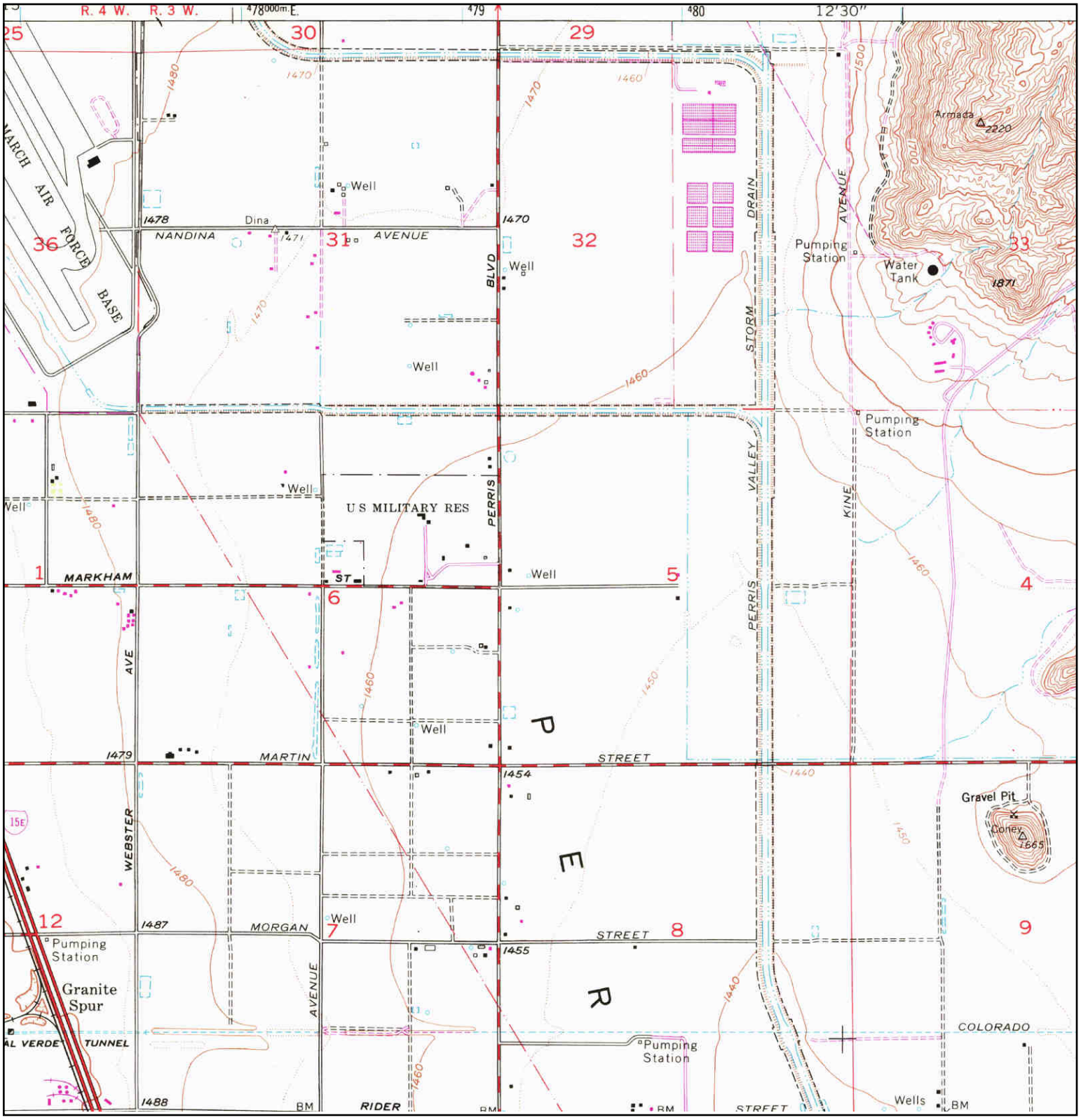
N	TARGET QUAD NAME: PERRIS MAP YEAR: 1967 SERIES: 7.5 SCALE: 1:24000	SITE NAME: NORTH PERRIS GROUNDWATER ADDRESS: East Nance Street PERRIS, CA 92571 LAT/LONG: 33.8546 / -117.2231	CLIENT: Engen Corporation CONTACT: Cat Hardell INQUIRY#: 4347356.4 RESEARCH DATE: 07/07/2015

Historical Topographic Map



N	TARGET QUAD NAME: PERRIS MAP YEAR: 1973 PHOTOREVISED FROM :1967 SERIES: 7.5 SCALE: 1:24000	SITE NAME: NORTH PERRIS GROUNDWATER ADDRESS: East Nance Street PERRIS, CA 92571 LAT/LONG: 33.8546 / -117.2231	CLIENT: Engen Corporation CONTACT: Cat Hardell INQUIRY#: 4347356.4 RESEARCH DATE: 07/07/2015

Historical Topographic Map



N	TARGET QUAD NAME: PERRIS MAP YEAR: 1979 PHOTOREVISED FROM :1967 SERIES: 7.5 SCALE: 1:24000	SITE NAME: NORTH PERRIS GROUNDWATER ADDRESS: East Nance Street PERRIS, CA 92571 LAT/LONG: 33.8546 / -117.2231	CLIENT: Engen Corporation CONTACT: Cat Hardell INQUIRY#: 4347356.4 RESEARCH DATE: 07/07/2015

APPENDIX D

Regulatory Environmental Records Documentation (EDR Report)

NORTH PERRIS GROUNDWATER DEVELOPMENT - FUTURE WELL
East Nance Street
PERRIS, CA 92571

Inquiry Number: 4347356.2s
July 07, 2015

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Detail Map	3
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Map Findings	8
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Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

EAST NANCE STREET
PERRIS, CA 92571

COORDINATES

Latitude (North):	33.8546000 - 33° 51' 16.56''
Longitude (West):	117.2231000 - 117° 13' 23.16''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	479361.7
UTM Y (Meters):	3745863.0
Elevation:	1460 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	33117-G2 PERRIS, CA
Most Recent Revision:	1979

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20120519
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
EAST NANCE STREET
PERRIS, CA 92571

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

CERCLIS ---------- Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ---------- CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

LUCIS ---------- Land Use Control Information System

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---------- State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR ---------- EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

LUST ---------- Geotracker's Leaking Underground Fuel Tank Report
SLIC ---------- Statewide SLIC Cases
INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST ---------- Active UST Facilities
AST ---------- Aboveground Petroleum Storage Tank Facilities
INDIAN UST ---------- Underground Storage Tanks on Indian Land
FEMA UST ---------- Underground Storage Tank Listing

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing
VCP ---------- Voluntary Cleanup Program Properties

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory
SWRCY ---------- Recycler Database
HAULERS ---------- Registered Waste Tire Haulers Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
WMUDS/SWAT ---------- Waste Management Unit Database

Local Lists of Hazardous waste / Contaminated Sites

US CDL ---------- Clandestine Drug Labs

HIST Cal-Sites ---- Historical Calsites Database
SCH ---- School Property Evaluation Program
Toxic Pits ---- Toxic Pits Cleanup Act Sites
CDL ---- Clandestine Drug Labs
US HIST CDL ---- National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

CA FID UST ---- Facility Inventory Database
HIST UST ---- Hazardous Substance Storage Container Database
SWEEPS UST ---- SWEEPS UST Listing

Local Land Records

LIENS 2 ---- CERCLA Lien Information
LIENS ---- Environmental Liens Listing
DEED ---- Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System
CHMIRS ---- California Hazardous Material Incident Report System
LDS ---- Land Disposal Sites Listing
MCS ---- Military Cleanup Sites Listing
SPILLS 90 ---- SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ---- RCRA - Non Generators / No Longer Regulated
DOT OPS ---- Incident and Accident Data
DOD ---- Department of Defense Sites
FUDS ---- Formerly Used Defense Sites
CONSENT ---- Superfund (CERCLA) Consent Decrees
ROD ---- Records Of Decision
UMTRA ---- Uranium Mill Tailings Sites
US MINES ---- Mines Master Index File
TRIS ---- Toxic Chemical Release Inventory System
TSCA ---- Toxic Substances Control Act
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
SSTS ---- Section 7 Tracking Systems
ICIS ---- Integrated Compliance Information System
PADS ---- PCB Activity Database System
MLTS ---- Material Licensing Tracking System
RADINFO ---- Radiation Information Database
FINDS ---- Facility Index System/Facility Registry System
RAATS ---- RCRA Administrative Action Tracking System
RMP ---- Risk Management Plans
CA BOND EXP. PLAN ---- Bond Expenditure Plan
NPDES ---- NPDES Permits Listing
UIC ---- UIC Listing
Cortese ---- "Cortese" Hazardous Waste & Substances Sites List
HIST CORTESE ---- Hazardous Waste & Substance Site List
CUPA Listings ---- CUPA Resources List

Notify 65	Proposition 65 Records
DRYCLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
ENF	Enforcement Action Listing
HAZNET	Facility and Manifest Data
EMI	Emissions Inventory Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
WDS	Waste Discharge System
Financial Assurance	Financial Assurance Information Listing
PROC	Certified Processors Database
HWT	Registered Hazardous Waste Transporter Database
HWP	EnviroStor Permitted Facilities Listing
MWMP	Medical Waste Management Program Listing
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
EPA WATCH LIST	EPA WATCH LIST
US FIN ASSUR	Financial Assurance Information
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
COAL ASH DOE	Steam-Electric Plant Operation Data
2020 COR ACTION	2020 Corrective Action Program List
PRP	Potentially Responsible Parties

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR US Hist Auto Stat	EDR Exclusive Historic Gas Stations
EDR US Hist Cleaners	EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST	Recovered Government Archive Leaking Underground Storage Tank
RGA LF	Recovered Government Archive Solid Waste Facilities List

SURROUNDING SITES: SEARCH RESULTS

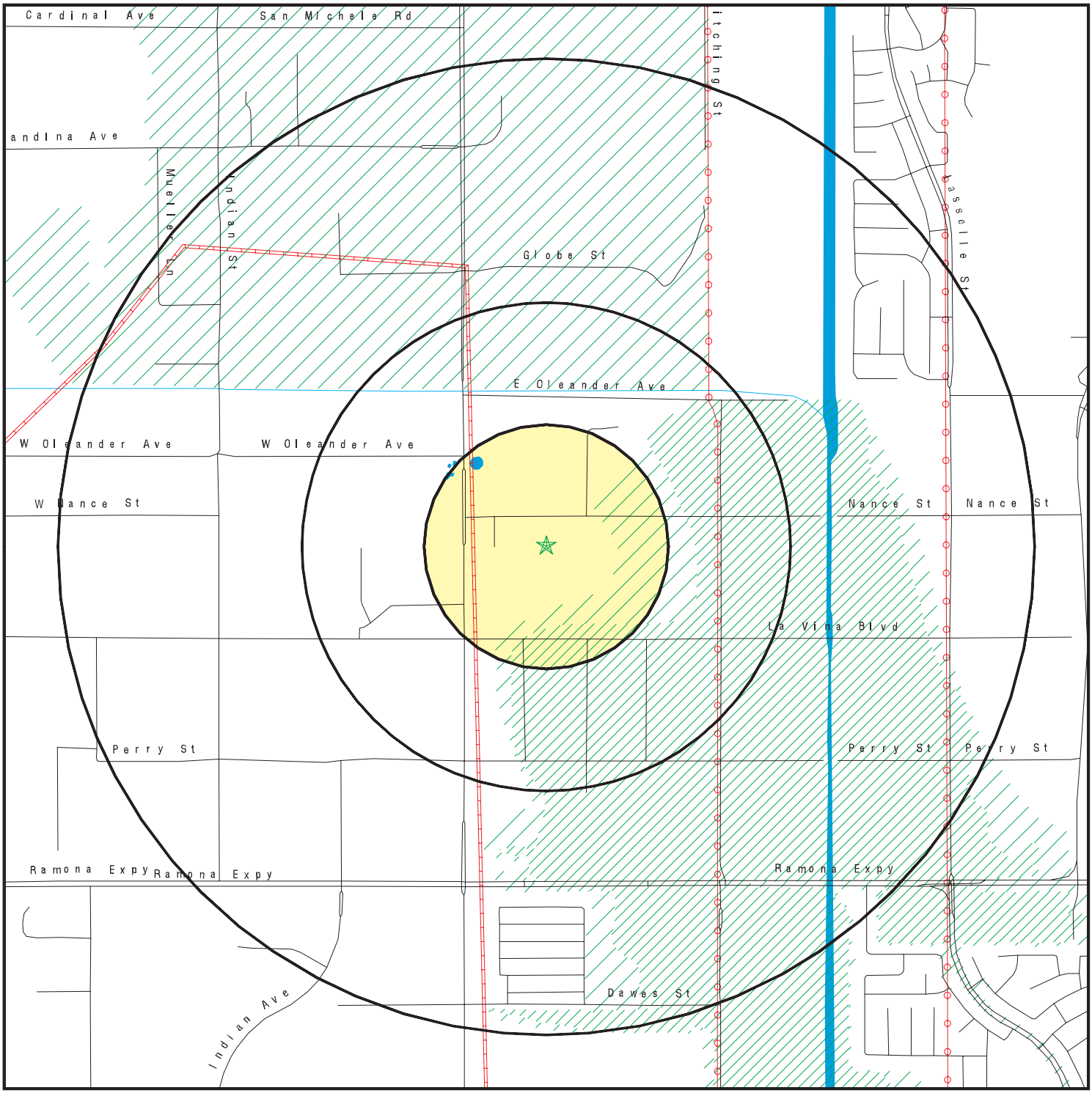
Surrounding sites were not identified.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 4347356.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: NORTH PERRIS GROUNDWATER DEVELOPMENT - FUTURE WELL	CLIENT: Engen Corporation
ADDRESS: East Nance Street PERRIS CA 92571	CONTACT: Cat Hardell
LAT/LONG: 33.8546 / 117.2231	INQUIRY #: 4347356.2s DATE: July 07, 2015 5:52 pm

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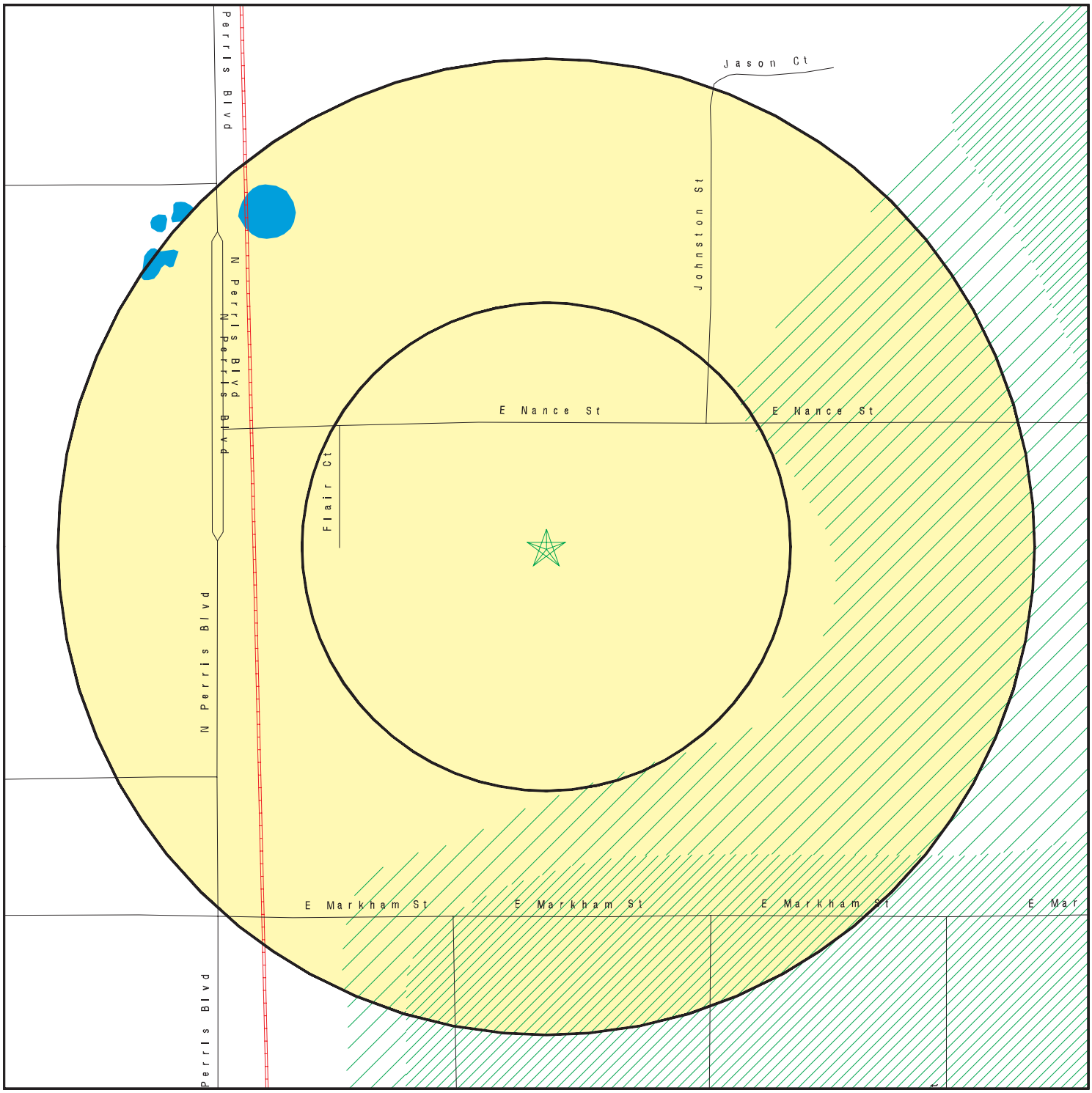
DETAIL MAP - 4347356.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: NORTH PERRIS GROUNDWATER DEVELOPMENT - FUTURE WELL	CLIENT: Engen Corporation
ADDRESS: East Nance Street PERRIS CA 92571	CONTACT: Cat Hardell
LAT/LONG: 33.8546 / 117.2231	INQUIRY #: 4347356.2s DATE: July 07, 2015 5:59 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
SWEEPS UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		0	0	NR	NR	NR	0
EDR US Hist Cleaners	0.250		0	0	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LUST	TP		NR	NR	NR	NR	NR	0
RGA LF	TP		NR	NR	NR	NR	NR	0
- Totals --		0	0	0	0	0	0	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number

MAP FINDINGS

NO SITES FOUND

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 03/26/2015
Date Data Arrived at EDR: 04/08/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 75

Source: EPA
Telephone: N/A
Last EDR Contact: 04/08/2015
Next Scheduled EDR Contact: 07/20/2015
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 03/26/2015
Date Data Arrived at EDR: 04/08/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 75

Source: EPA
Telephone: N/A
Last EDR Contact: 04/08/2015
Next Scheduled EDR Contact: 07/20/2015
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 03/26/2015
Date Data Arrived at EDR: 04/08/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 75

Source: EPA
Telephone: N/A
Last EDR Contact: 04/08/2015
Next Scheduled EDR Contact: 07/20/2015
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 05/29/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 03/26/2015
Date Data Arrived at EDR: 04/08/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/08/2015
Next Scheduled EDR Contact: 07/20/2015
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 05/29/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/10/2015
Date Data Arrived at EDR: 03/31/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 72

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/26/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/10/2015
Date Data Arrived at EDR: 03/31/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 72

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/26/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/10/2015
Date Data Arrived at EDR: 03/31/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 72

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/26/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/10/2015
Date Data Arrived at EDR: 03/31/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 72

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/26/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/10/2015
Date Data Arrived at EDR: 03/31/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 72

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/26/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/16/2015
Date Data Arrived at EDR: 03/17/2015
Date Made Active in Reports: 06/02/2015
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 06/01/2015
Next Scheduled EDR Contact: 09/14/2015
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/16/2015
Date Data Arrived at EDR: 03/17/2015
Date Made Active in Reports: 06/02/2015
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 06/01/2015
Next Scheduled EDR Contact: 09/14/2015
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2015
Date Data Arrived at EDR: 05/29/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 13

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/18/2015
Next Scheduled EDR Contact: 08/31/2015
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/30/2015
Date Data Arrived at EDR: 03/31/2015
Date Made Active in Reports: 06/02/2015
Number of Days to Update: 63

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/26/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 05/04/2015
Date Data Arrived at EDR: 05/05/2015
Date Made Active in Reports: 05/14/2015
Number of Days to Update: 9

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/05/2015
Next Scheduled EDR Contact: 08/17/2015
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 05/04/2015
Date Data Arrived at EDR: 05/05/2015
Date Made Active in Reports: 05/14/2015
Number of Days to Update: 9

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/05/2015
Next Scheduled EDR Contact: 08/17/2015
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/18/2015
Date Data Arrived at EDR: 05/20/2015
Date Made Active in Reports: 06/05/2015
Number of Days to Update: 16

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/20/2015
Next Scheduled EDR Contact: 08/31/2015
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 03/13/2015
Date Data Arrived at EDR: 03/18/2015
Date Made Active in Reports: 03/24/2015
Number of Days to Update: 6

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/17/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Quarterly

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 03/13/2015
Date Data Arrived at EDR: 03/18/2015
Date Made Active in Reports: 03/24/2015
Number of Days to Update: 6

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/17/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/03/2015
Date Data Arrived at EDR: 02/12/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 29

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/30/2015
Date Data Arrived at EDR: 05/05/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 48

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/30/2015
Date Data Arrived at EDR: 04/28/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 55

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/30/2015
Date Data Arrived at EDR: 05/29/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 24

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 03/17/2015
Date Data Arrived at EDR: 05/01/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 52

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 09/30/2014
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/03/2015
Date Data Arrived at EDR: 04/30/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 53

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/03/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/08/2015
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/15/2015
Date Data Arrived at EDR: 06/17/2015
Date Made Active in Reports: 07/06/2015
Number of Days to Update: 19

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/17/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/03/2015
Date Data Arrived at EDR: 04/30/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 53

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/28/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 09/30/2014
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/30/2015
Date Data Arrived at EDR: 05/26/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 27

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 03/17/2015
Date Data Arrived at EDR: 05/01/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 52

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 65

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/30/2015
Date Data Arrived at EDR: 05/05/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 48

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 12/14/2014
Date Data Arrived at EDR: 02/13/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 28

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 05/06/2015
Date Data Arrived at EDR: 05/19/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 34

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Quarterly

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/13/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/29/2014
Date Data Arrived at EDR: 10/01/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 36
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/26/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 05/04/2015
Date Data Arrived at EDR: 05/05/2015
Date Made Active in Reports: 05/14/2015
Number of Days to Update: 9
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/05/2015
Next Scheduled EDR Contact: 08/17/2015
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/23/2015
Date Data Arrived at EDR: 03/24/2015
Date Made Active in Reports: 06/02/2015
Number of Days to Update: 70
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/24/2015
Next Scheduled EDR Contact: 10/05/2015
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137
Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/23/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 03/16/2015
Date Data Arrived at EDR: 03/18/2015
Date Made Active in Reports: 03/26/2015
Number of Days to Update: 8
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/17/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 05/26/2015
Date Data Arrived at EDR: 05/28/2015
Date Made Active in Reports: 06/05/2015
Number of Days to Update: 8
Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/18/2015
Next Scheduled EDR Contact: 08/31/2015
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52
Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 05/01/2015
Next Scheduled EDR Contact: 08/17/2015
Data Release Frequency: Varies

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30
Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 05/06/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: No Update Planned

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/25/2015
Date Data Arrived at EDR: 03/10/2015
Date Made Active in Reports: 03/25/2015
Number of Days to Update: 15

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/29/2015
Next Scheduled EDR Contact: 09/14/2015
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 05/04/2015
Date Data Arrived at EDR: 05/05/2015
Date Made Active in Reports: 05/14/2015
Number of Days to Update: 9

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/05/2015
Next Scheduled EDR Contact: 08/17/2015
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 03/10/2015
Date Made Active in Reports: 03/18/2015
Number of Days to Update: 8

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/13/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/25/2015
Date Data Arrived at EDR: 03/10/2015
Date Made Active in Reports: 03/25/2015
Number of Days to Update: 15

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/29/2015
Next Scheduled EDR Contact: 09/14/2015
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 06/01/2015
Next Scheduled EDR Contact: 09/14/2015
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/11/2015
Date Data Arrived at EDR: 03/13/2015
Date Made Active in Reports: 03/24/2015
Number of Days to Update: 11

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/05/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/09/2015
Date Data Arrived at EDR: 03/10/2015
Date Made Active in Reports: 03/18/2015
Number of Days to Update: 8

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/09/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/30/2015
Date Data Arrived at EDR: 03/31/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 72

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/26/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 04/14/2015
Date Data Arrived at EDR: 04/29/2015
Date Made Active in Reports: 05/21/2015
Number of Days to Update: 22

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 03/13/2015
Date Data Arrived at EDR: 03/18/2015
Date Made Active in Reports: 03/24/2015
Number of Days to Update: 6

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/17/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 03/13/2015
Date Data Arrived at EDR: 03/18/2015
Date Made Active in Reports: 03/24/2015
Number of Days to Update: 6

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/17/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/10/2015
Date Data Arrived at EDR: 03/31/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 72

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/26/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/05/2015
Next Scheduled EDR Contact: 08/17/2015
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/14/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 06/06/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 8

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 06/12/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/02/2015
Number of Days to Update: 46

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/12/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/26/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 12/30/2014
Date Data Arrived at EDR: 12/31/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 29

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/03/2015
Next Scheduled EDR Contact: 09/14/2015
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 02/12/2015
Date Made Active in Reports: 06/02/2015
Number of Days to Update: 110

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 01/29/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/25/2015
Next Scheduled EDR Contact: 10/05/2015
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 05/20/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 05/20/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/10/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/23/2015
Date Data Arrived at EDR: 02/06/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 04/09/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 10/15/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 33

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/17/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/31/2015
Date Data Arrived at EDR: 04/09/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 63

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 06/04/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/07/2015
Date Data Arrived at EDR: 04/09/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/09/2015
Next Scheduled EDR Contact: 07/20/2015
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 01/18/2015
Date Data Arrived at EDR: 02/27/2015
Date Made Active in Reports: 03/25/2015
Number of Days to Update: 26

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/10/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 02/01/2015
Date Data Arrived at EDR: 02/13/2015
Date Made Active in Reports: 03/25/2015
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/29/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 11/19/2014
Date Data Arrived at EDR: 12/15/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 45

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/19/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 05/18/2015
Date Data Arrived at EDR: 05/20/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 22
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/20/2015
Next Scheduled EDR Contact: 08/31/2015
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 03/10/2015
Date Data Arrived at EDR: 03/31/2015
Date Made Active in Reports: 04/10/2015
Number of Days to Update: 10
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 06/26/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List
The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/17/2015
Next Scheduled EDR Contact: 10/05/2015
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 02/18/2015
Date Data Arrived at EDR: 02/20/2015
Date Made Active in Reports: 03/12/2015
Number of Days to Update: 20
Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 06/05/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Annually

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/30/2015
Date Data Arrived at EDR: 05/01/2015
Date Made Active in Reports: 05/13/2015
Number of Days to Update: 12

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 10/15/2014
Date Made Active in Reports: 11/19/2014
Number of Days to Update: 35

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/17/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 03/25/2014
Date Made Active in Reports: 04/28/2014
Number of Days to Update: 34

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/25/2015
Next Scheduled EDR Contact: 10/05/2015
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/14/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/21/2015
Next Scheduled EDR Contact: 08/31/2015
Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 05/20/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Quarterly

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 05/14/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: Quarterly

LEAD SMELTER 2: Lead Smelter Sites
A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EPA WATCH LIST: EPA WATCH LIST
EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/07/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List
The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/14/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites
A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/10/2015
Next Scheduled EDR Contact: 07/20/2015
Data Release Frequency: Varies

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/16/2015
Date Data Arrived at EDR: 03/18/2015
Date Made Active in Reports: 03/24/2015
Number of Days to Update: 6

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/17/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Quarterly

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/01/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 04/30/2015
Date Data Arrived at EDR: 05/01/2015
Date Made Active in Reports: 05/13/2015
Number of Days to Update: 12

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/18/2015
Date Data Arrived at EDR: 05/22/2015
Date Made Active in Reports: 06/05/2015
Number of Days to Update: 14

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/18/2015
Next Scheduled EDR Contact: 08/31/2015
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/14/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: N/A

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/12/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information
All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/09/2015
Date Data Arrived at EDR: 03/10/2015
Date Made Active in Reports: 03/25/2015
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 05/14/2015
Next Scheduled EDR Contact: 08/31/2015
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 01/16/2015
Date Data Arrived at EDR: 03/10/2015
Date Made Active in Reports: 03/18/2015
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/09/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Varies

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 04/15/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: Varies

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/16/2014
Date Data Arrived at EDR: 10/31/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 17

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 10/05/2015
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/16/2014
Date Data Arrived at EDR: 10/31/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 17

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 10/22/2015
Data Release Frequency: Annually

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/13/2015
Date Data Arrived at EDR: 04/15/2015
Date Made Active in Reports: 04/23/2015
Number of Days to Update: 8

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/15/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/26/2015
Date Data Arrived at EDR: 05/28/2015
Date Made Active in Reports: 06/05/2015
Number of Days to Update: 8

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/28/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/21/2015
Date Data Arrived at EDR: 01/28/2015
Date Made Active in Reports: 02/26/2015
Number of Days to Update: 29

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/21/2015
Date Data Arrived at EDR: 01/28/2015
Date Made Active in Reports: 02/26/2015
Number of Days to Update: 29

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 03/09/2015
Date Data Arrived at EDR: 03/24/2015
Date Made Active in Reports: 03/31/2015
Number of Days to Update: 7

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 06/05/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 11/20/2014
Date Data Arrived at EDR: 11/24/2014
Date Made Active in Reports: 01/07/2015
Number of Days to Update: 44

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 04/14/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 04/17/2015
Date Data Arrived at EDR: 04/21/2015
Date Made Active in Reports: 05/07/2015
Number of Days to Update: 16

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/11/2014
Date Data Arrived at EDR: 06/13/2014
Date Made Active in Reports: 07/07/2014
Number of Days to Update: 24

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 06/12/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 05/26/2015
Date Data Arrived at EDR: 05/29/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 13

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 05/04/2015
Next Scheduled EDR Contact: 08/17/2015
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 05/19/2015
Date Data Arrived at EDR: 05/22/2015
Date Made Active in Reports: 06/05/2015
Number of Days to Update: 14

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 05/18/2015
Next Scheduled EDR Contact: 08/17/2015
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 05/26/2015
Date Data Arrived at EDR: 05/29/2015
Date Made Active in Reports: 06/05/2015
Number of Days to Update: 7

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 05/04/2015
Next Scheduled EDR Contact: 08/17/2015
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 03/31/2015
Date Data Arrived at EDR: 04/15/2015
Date Made Active in Reports: 04/23/2015
Number of Days to Update: 8

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 07/06/2015
Next Scheduled EDR Contact: 10/19/2015
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 03/11/2015
Date Data Arrived at EDR: 03/13/2015
Date Made Active in Reports: 03/24/2015
Number of Days to Update: 11

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/26/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 04/27/2015
Date Data Arrived at EDR: 04/28/2015
Date Made Active in Reports: 05/13/2015
Number of Days to Update: 15

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 05/21/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 07/22/2014
Date Data Arrived at EDR: 11/12/2014
Date Made Active in Reports: 12/19/2014
Number of Days to Update: 37

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 06/12/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/26/2015
Date Data Arrived at EDR: 05/28/2015
Date Made Active in Reports: 06/15/2015
Number of Days to Update: 18

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/21/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 05/05/2015
Date Data Arrived at EDR: 05/07/2015
Date Made Active in Reports: 05/20/2015
Number of Days to Update: 13

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/16/2015
Next Scheduled EDR Contact: 08/03/2015
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 06/17/2015
Next Scheduled EDR Contact: 10/05/2015
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 11/24/2014
Date Data Arrived at EDR: 01/30/2015
Date Made Active in Reports: 03/04/2015
Number of Days to Update: 33

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/13/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/20/2015
Date Data Arrived at EDR: 04/20/2015
Date Made Active in Reports: 05/07/2015
Number of Days to Update: 17

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/20/2015
Next Scheduled EDR Contact: 08/03/2015
Data Release Frequency: Varies

City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/15/2015
Next Scheduled EDR Contact: 08/03/2015
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/15/2015
Date Data Arrived at EDR: 01/29/2015
Date Made Active in Reports: 03/10/2015
Number of Days to Update: 40

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/16/2015
Next Scheduled EDR Contact: 08/03/2015
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 03/30/2015
Date Data Arrived at EDR: 04/02/2015
Date Made Active in Reports: 04/13/2015
Number of Days to Update: 11

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 03/06/2015
Next Scheduled EDR Contact: 08/03/2015
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/03/2015
Date Data Arrived at EDR: 05/26/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 16

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/03/2015
Date Data Arrived at EDR: 06/04/2015
Date Made Active in Reports: 07/06/2015
Number of Days to Update: 32

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/13/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/28/2015
Date Data Arrived at EDR: 05/29/2015
Date Made Active in Reports: 06/15/2015
Number of Days to Update: 17

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/22/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 10/08/2014
Date Data Arrived at EDR: 10/22/2014
Date Made Active in Reports: 12/15/2014
Number of Days to Update: 54

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 07/06/2015
Next Scheduled EDR Contact: 10/19/2015
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 05/22/2015
Date Data Arrived at EDR: 05/26/2015
Date Made Active in Reports: 06/05/2015
Number of Days to Update: 10

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 05/22/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 06/01/2015
Date Data Arrived at EDR: 06/03/2015
Date Made Active in Reports: 07/06/2015
Number of Days to Update: 33

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 06/01/2015
Next Scheduled EDR Contact: 09/14/2015
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 03/19/2015
Date Data Arrived at EDR: 03/20/2015
Date Made Active in Reports: 03/31/2015
Number of Days to Update: 11

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 05/26/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 06/01/2015
Next Scheduled EDR Contact: 09/14/2015
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 06/01/2015
Next Scheduled EDR Contact: 09/14/2015
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/12/2015
Date Data Arrived at EDR: 02/13/2015
Date Made Active in Reports: 03/03/2015
Number of Days to Update: 18

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 05/04/2015
Next Scheduled EDR Contact: 08/17/2015
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2015
Date Data Arrived at EDR: 05/12/2015
Date Made Active in Reports: 06/05/2015
Number of Days to Update: 24

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/06/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2015
Date Data Arrived at EDR: 05/12/2015
Date Made Active in Reports: 06/08/2015
Number of Days to Update: 27

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/06/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 05/01/2015
Date Data Arrived at EDR: 05/12/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 30

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/12/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: Quarterly

PLACER COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/10/2015
Date Data Arrived at EDR: 03/12/2015
Date Made Active in Reports: 03/18/2015
Number of Days to Update: 6
Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/28/2015
Date Data Arrived at EDR: 04/30/2015
Date Made Active in Reports: 05/13/2015
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 10/05/2015
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 04/28/2015
Date Data Arrived at EDR: 04/30/2015
Date Made Active in Reports: 05/13/2015
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 10/05/2015
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/02/2015
Date Data Arrived at EDR: 04/08/2015
Date Made Active in Reports: 04/16/2015
Number of Days to Update: 8
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/08/2015
Next Scheduled EDR Contact: 07/20/2015
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/02/2015
Date Data Arrived at EDR: 04/08/2015
Date Made Active in Reports: 04/16/2015
Number of Days to Update: 8
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/08/2015
Next Scheduled EDR Contact: 07/20/2015
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 03/02/2015
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/10/2015
Number of Days to Update: 7

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 05/12/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/23/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 23

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/05/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2014
Date Data Arrived at EDR: 11/21/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 38

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 06/03/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 05/06/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 05/06/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2015
Date Data Arrived at EDR: 06/26/2015
Date Made Active in Reports: 07/06/2015
Number of Days to Update: 10

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/17/2015
Next Scheduled EDR Contact: 10/05/2015
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/22/2015
Date Data Arrived at EDR: 05/26/2015
Date Made Active in Reports: 06/10/2015
Number of Days to Update: 15

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/20/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 04/13/2015
Date Data Arrived at EDR: 04/15/2015
Date Made Active in Reports: 04/23/2015
Number of Days to Update: 8

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/15/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/16/2015
Date Data Arrived at EDR: 03/17/2015
Date Made Active in Reports: 03/24/2015
Number of Days to Update: 7

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/10/2015
Next Scheduled EDR Contact: 06/29/2015
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 05/22/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 02/23/2015
Date Data Arrived at EDR: 02/25/2015
Date Made Active in Reports: 03/03/2015
Number of Days to Update: 6

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 06/05/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 06/01/2015
Next Scheduled EDR Contact: 09/14/2015
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 05/07/2015
Date Data Arrived at EDR: 05/12/2015
Date Made Active in Reports: 06/08/2015
Number of Days to Update: 27

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 05/07/2015
Next Scheduled EDR Contact: 08/24/2015
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 05/22/2015
Date Data Arrived at EDR: 05/26/2015
Date Made Active in Reports: 06/08/2015
Number of Days to Update: 13

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 05/22/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 03/11/2015
Date Data Arrived at EDR: 03/13/2015
Date Made Active in Reports: 03/24/2015
Number of Days to Update: 11

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/26/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 03/13/2015
Date Data Arrived at EDR: 03/19/2015
Date Made Active in Reports: 03/24/2015
Number of Days to Update: 5

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/10/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/13/2015
Date Data Arrived at EDR: 03/20/2015
Date Made Active in Reports: 03/31/2015
Number of Days to Update: 11

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/10/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 03/31/2015
Date Data Arrived at EDR: 04/02/2015
Date Made Active in Reports: 04/10/2015
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/01/2015
Date Data Arrived at EDR: 04/02/2015
Date Made Active in Reports: 04/13/2015
Number of Days to Update: 11

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/22/2015
Next Scheduled EDR Contact: 10/12/2015
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 06/05/2015
Date Data Arrived at EDR: 06/09/2015
Date Made Active in Reports: 07/06/2015
Number of Days to Update: 27

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 06/05/2015
Next Scheduled EDR Contact: 09/21/2015
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 05/05/2015
Date Data Arrived at EDR: 05/07/2015
Date Made Active in Reports: 05/13/2015
Number of Days to Update: 6

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 04/27/2015
Date Data Arrived at EDR: 05/22/2015
Date Made Active in Reports: 06/05/2015
Number of Days to Update: 14

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/18/2015
Next Scheduled EDR Contact: 08/31/2015
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/26/2015
Next Scheduled EDR Contact: 10/19/2015
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/18/2015
Next Scheduled EDR Contact: 08/31/2015
Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 04/27/2015
Date Data Arrived at EDR: 04/29/2015
Date Made Active in Reports: 05/13/2015
Number of Days to Update: 14

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/27/2015
Next Scheduled EDR Contact: 08/10/2015
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 05/27/2015
Date Data Arrived at EDR: 06/17/2015
Date Made Active in Reports: 07/06/2015
Number of Days to Update: 19

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/17/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 03/26/2015
Date Data Arrived at EDR: 04/01/2015
Date Made Active in Reports: 04/13/2015
Number of Days to Update: 12

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 07/06/2015
Next Scheduled EDR Contact: 10/05/2015
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 05/18/2015
Date Data Arrived at EDR: 05/19/2015
Date Made Active in Reports: 06/05/2015
Number of Days to Update: 17

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 05/18/2015
Next Scheduled EDR Contact: 08/17/2015
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/18/2015
Next Scheduled EDR Contact: 08/31/2015
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 04/29/2015
Date Made Active in Reports: 05/29/2015
Number of Days to Update: 30

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/14/2015
Next Scheduled EDR Contact: 07/27/2015
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 05/01/2015
Date Data Arrived at EDR: 05/06/2015
Date Made Active in Reports: 05/20/2015
Number of Days to Update: 14

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/06/2015
Next Scheduled EDR Contact: 08/17/2015
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/21/2014
Date Made Active in Reports: 08/25/2014
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/16/2015
Next Scheduled EDR Contact: 08/03/2015
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/15/2014
Date Made Active in Reports: 08/13/2014
Number of Days to Update: 29

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/26/2015
Next Scheduled EDR Contact: 09/07/2015
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 03/19/2015
Date Made Active in Reports: 04/07/2015
Number of Days to Update: 19

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/11/2015
Next Scheduled EDR Contact: 09/28/2015
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Telephone: 281-546-1505
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: 800-823-6277
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

NORTH PERRIS GROUNDWATER DEVELOPMENT - FUTURE WELL
EAST NANCE STREET
PERRIS, CA 92571

TARGET PROPERTY COORDINATES

Latitude (North):	33.8546 - 33° 51' 16.56''
Longitude (West):	117.2231 - 117° 13' 23.16''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	479361.7
UTM Y (Meters):	3745863.0
Elevation:	1460 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	33117-G2 PERRIS, CA
Most Recent Revision:	1979

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

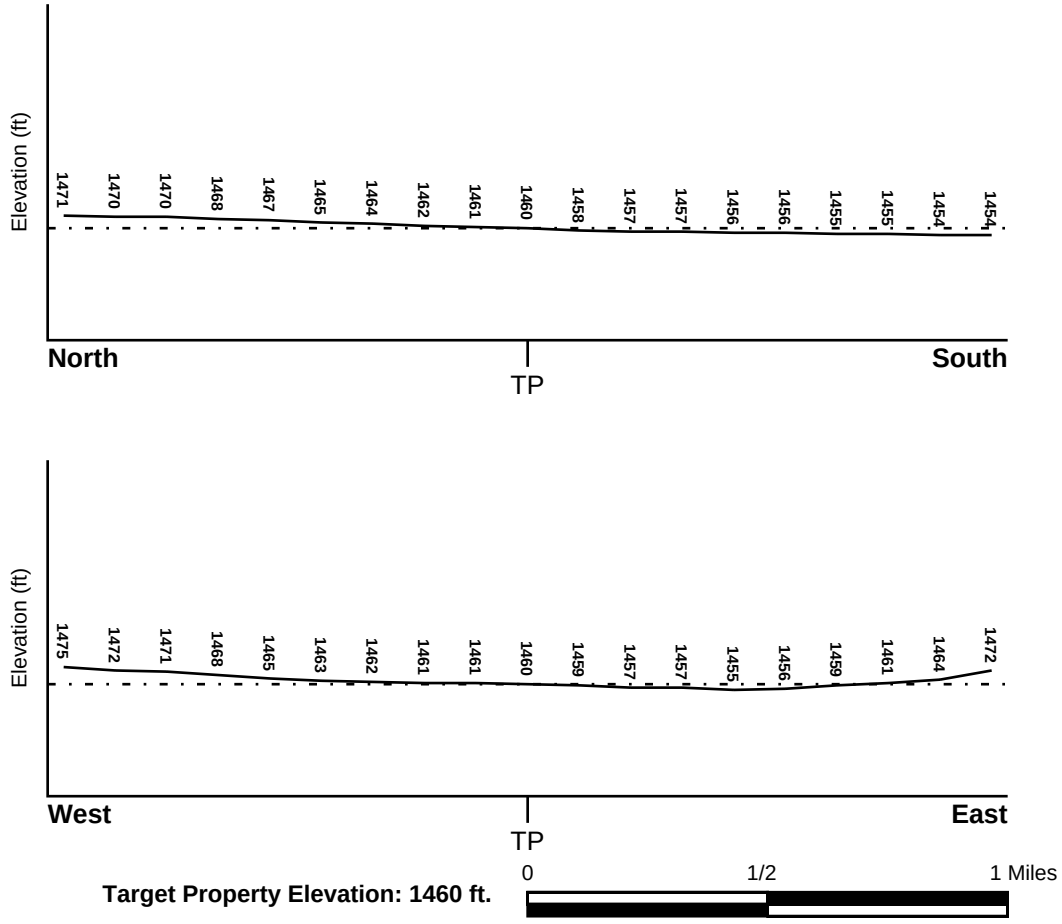
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 1460 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
RIVERSIDE, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06065C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

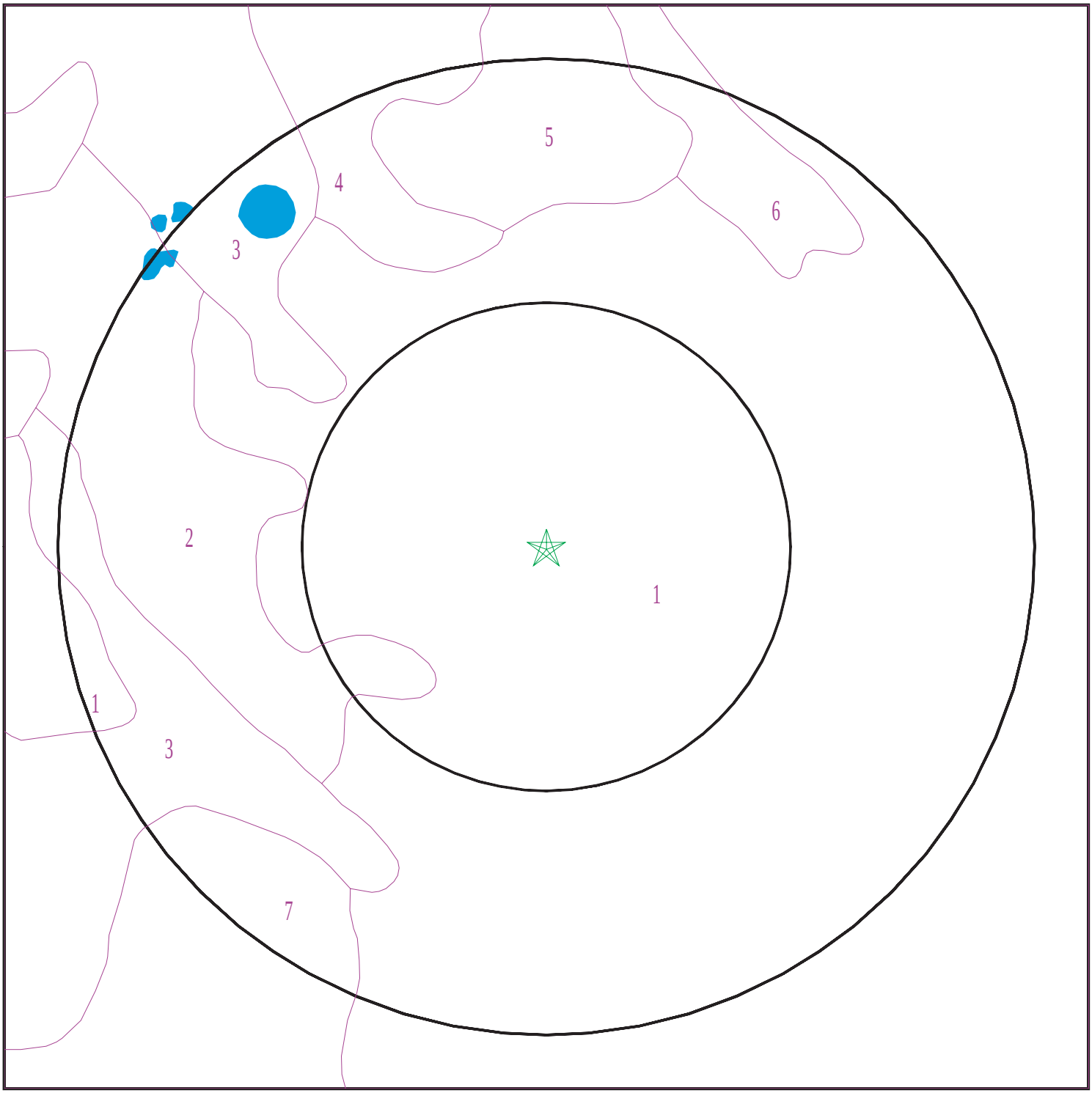
Era:	Mesozoic
System:	Cretaceous
Series:	Cretaceous granitic rocks
Code:	Kg *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4347356.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	NORTH PERRIS GROUNDWATER DEVELOPMENT - FUTURE WELL	CLIENT:	Engen Corporation
ADDRESS:	East Nance Street PERRIS CA 92571	CONTACT:	Cat Hardell
LAT/LONG:	33.8546 / 117.2231	INQUIRY #:	4347356.2s
		DATE:	July 07, 2015 6:01 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: DOMINO

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 9 Min: 7.9
2	14 inches	27 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 9 Min: 7.9
3	27 inches	35 inches	cemented	Not reported	Not reported	Max: 0.01 Min: 0	Max: Min:
4	35 inches	62 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 4 Min: 1.4	Max: 9 Min: 7.9

Soil Map ID: 2

Soil Component Name: HANFORD

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 5.6
2	7 inches	40 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 5.6
3	40 inches	59 inches	stratified loamy sand to coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 5.6

Soil Map ID: 3

Soil Component Name: EXETER

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 7.3 Min: 6.6
2	16 inches	37 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 7.8 Min: 6.6
3	37 inches	50 inches	indurated	Not reported	Not reported	Max: 0.01 Min: 0	Max: Min:
4	50 inches	59 inches	stratified sandy loam to silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

Soil Map ID: 4

Soil Component Name: TRAVER

Soil Surface Texture: loamy fine sand

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	12 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 9 Min: 7.4
2	12 inches	38 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 9.6 Min: 8.4
3	38 inches	59 inches	stratified fine sandy loam to silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 9.6 Min: 8.4

Soil Map ID: 5

Soil Component Name: TRAVER

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	20 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 9 Min: 7.4
2	20 inches	59 inches	stratified fine sandy loam to silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 9.6 Min: 8.4

Soil Map ID: 6

Soil Component Name: GRANGEVILLE

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 9 Min: 7.4

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	16 inches	59 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 9 Min: 7.4

Soil Map ID: 7

Soil Component Name: DOMINO

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	14 inches	27 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.9

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	27 inches	35 inches	cemented	Not reported	Not reported	Max: 0.01 Min: 0	Max: Min:
4	35 inches	62 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS40000138608	0 - 1/8 Mile SE
A2	USGS40000138607	0 - 1/8 Mile SE
3	USGS40000138621	1/4 - 1/2 Mile NW
7	USGS40000138615	1/2 - 1 Mile West
B8	USGS40000138576	1/2 - 1 Mile SW
C11	USGS40000138560	1/2 - 1 Mile SW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

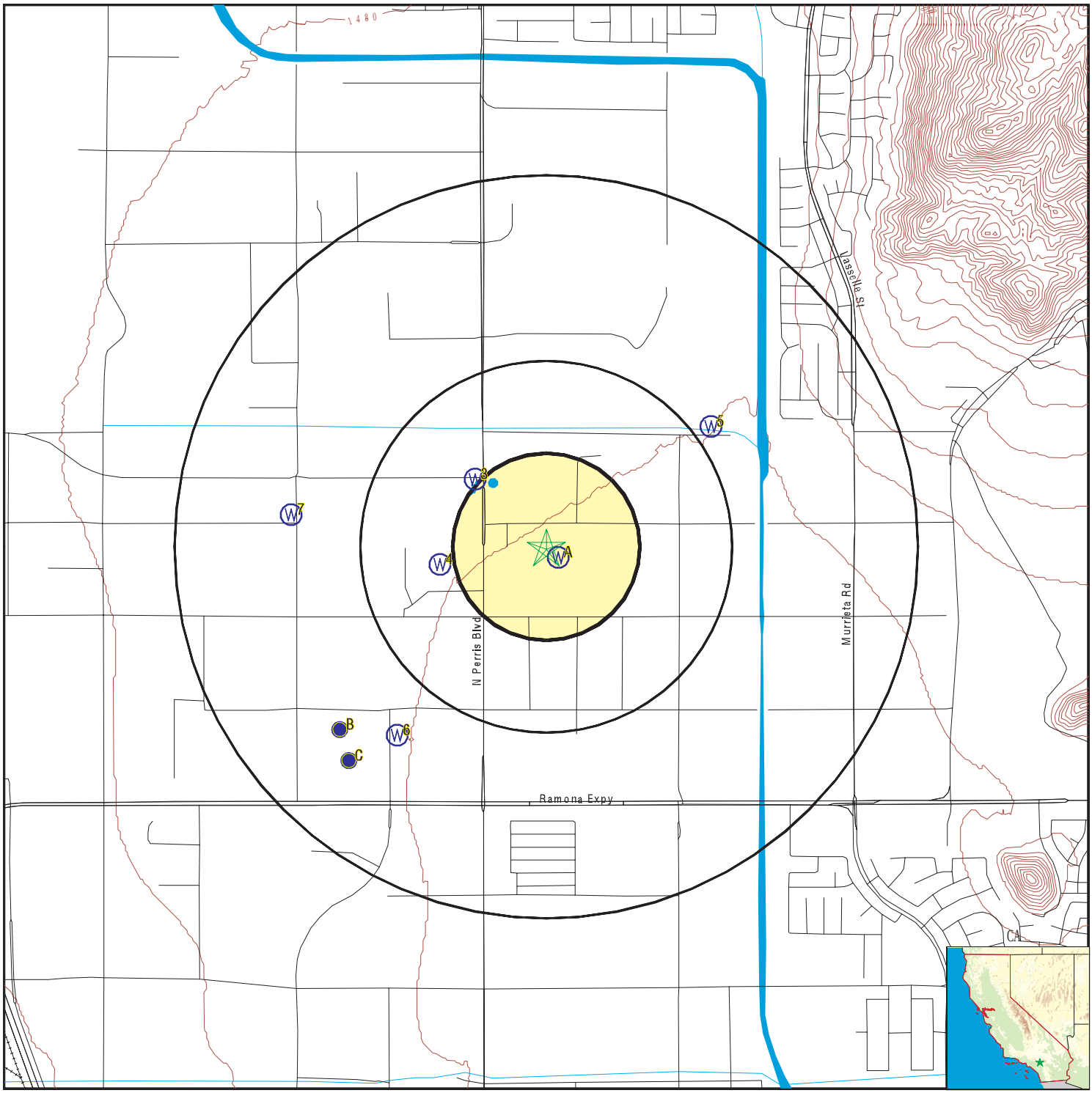
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
4	4814	1/4 - 1/2 Mile West
5	CADW50000003601	1/2 - 1 Mile NE
6	4816	1/2 - 1 Mile SW
C9	CADW50000003522	1/2 - 1 Mile SW
B10	4815	1/2 - 1 Mile SW

PHYSICAL SETTING SOURCE MAP - 4347356.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	NORTH PERRIS GROUNDWATER DEVELOPMENT - FUTURE WELL	CLIENT:	Engen Corporation
ADDRESS:	East Nance Street PERRIS CA 92571	CONTACT:	Cat Hardell
LAT/LONG:	33.8546 / 117.2231	INQUIRY #:	4347356.2s
		DATE:	July 07, 2015 6:01 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
SE
0 - 1/8 Mile
Lower

FED USGS **USGS40000138608**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335115117131802		
Monloc name:	004S003W06H002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070202	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.854185
Longitude:	-117.2225373	Sourcemap scale:	Not Reported
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

A2
SE
0 - 1/8 Mile
Lower

FED USGS **USGS40000138607**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335115117131801		
Monloc name:	004S003W06H001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070202	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.854185
Longitude:	-117.2225373	Sourcemap scale:	Not Reported
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

3
NW **FED USGS** **USGS40000138621**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335126117133201		
Monloc name:	004S003W06A003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070202	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8572405
Longitude:	-117.2264265	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

4
West **CA WELLS** **4814**
1/4 - 1/2 Mile
Higher

Water System Information:

Prime Station Code:	04S/03W-06H02 S	User ID:	WAT
FRDS Number:	3310700002	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT
Water Type:	Well/Groundwater	Well Status:	Abandoned
Source Lat/Long:	335114.0 1171338.0	Precision:	100 Feet (one Second)
Source Name:	WELL 06 - ABANDONED		
System Number:	3310700		
System Name:	MARCH AFB		
Organization That Operates System:			
	722 CES/CC 840 MACDILL,BLD2506		
	MARCH AFB, CA 92518		
Pop Served:	8186	Connections:	2348
Area Served:	MARCH AFB		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

5
NE
1/2 - 1 Mile
Higher

CA WELLS **CADW50000003601**

Latitude :	33.859301		
Longitude :	117.215385		
Site code:	338593N1172154W001	Casgem sta:	Not Reported
Local well:	EMWD25517	Casgem s 1:	Observation
County id:	33		
Basin cd:	8-5	Basin desc:	San Jacinto
Org unit n:	Southern Region Office	Site id:	CADW50000003601

6
SW
1/2 - 1 Mile
Higher

CA WELLS **4816**

Water System Information:

Prime Station Code:	04S/03W-06Q04 S	User ID:	WAT
FRDS Number:	3310009045	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	335050.0 1171345.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	PERRY STREET #2 WELL		
System Number:	3310009		
System Name:	Eastern Municipal WD		
Organization That Operates System:			
	P.O. Box 8300 San Jacinto, CA 92381-1300		
Pop Served:	253705	Connections:	84839
Area Served:	HEMET-SAN JACINTO-SUN CITY		
Sample Collected:	25-APR-11	Findings:	0.72 UG/L
Chemical:	TRICHLOROETHYLENE		
Sample Collected:	25-APR-11	Findings:	21. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-AUG-11	Findings:	0.417 PCI/L
Chemical:	RADIUM 228 COUNTING ERROR		
Sample Collected:	04-AUG-11	Findings:	0.284 PCI/L
Chemical:	RADIUM 228 MDA95		
Sample Collected:	04-AUG-11	Findings:	0.105 PCI/L
Chemical:	RA-226 FOR CWS OR TOTAL RA FOR NTNC BY 903.0		
Sample Collected:	04-AUG-11	Findings:	0.206 PCI/L
Chemical:	RA-226 OR TOTAL RA BY 903.0 C.E.		
Sample Collected:	04-AUG-11	Findings:	0.446 PCI/L
Chemical:	RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0		
Sample Collected:	04-AUG-11	Findings:	5.05 PCI/L
Chemical:	GROSS ALPHA		

Sample Collected:	04-AUG-11	Findings:	4.2 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	04-AUG-11	Findings:	0.61 UG/L
Chemical:	TRICHLOROETHYLENE		
Sample Collected:	04-AUG-11	Findings:	7.5 UNITS
Chemical:	COLOR		
Sample Collected:	04-AUG-11	Findings:	1260. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	04-AUG-11	Findings:	7.4
Chemical:	PH, LABORATORY		
Sample Collected:	04-AUG-11	Findings:	130. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	04-AUG-11	Findings:	160. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	04-AUG-11	Findings:	0.4 MG/L
Chemical:	TOTAL ORGANIC CARBON (TOC)		
Sample Collected:	04-AUG-11	Findings:	400. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	04-AUG-11	Findings:	110. MG/L
Chemical:	CALCIUM		
Sample Collected:	04-AUG-11	Findings:	29. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	04-AUG-11	Findings:	110. MG/L
Chemical:	SODIUM		
Sample Collected:	04-AUG-11	Findings:	320. MG/L
Chemical:	CHLORIDE		
Sample Collected:	04-AUG-11	Findings:	0.41 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	04-AUG-11	Findings:	43. MG/L
Chemical:	SILICA		
Sample Collected:	04-AUG-11	Findings:	270. UG/L
Chemical:	BARIUM		
Sample Collected:	04-AUG-11	Findings:	540. UG/L
Chemical:	BORON		
Sample Collected:	04-AUG-11	Findings:	5.1 UG/L
Chemical:	SELENIUM		
Sample Collected:	04-AUG-11	Findings:	760. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	04-AUG-11	Findings:	8.3e-002
Chemical:	LANGELIER INDEX AT SOURCE TEMP.		
Sample Collected:	04-AUG-11	Findings:	24. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-AUG-11	Findings:	2.2 NTU
Chemical:	TURBIDITY, LABORATORY		

Sample Collected:	04-AUG-11	Findings:	12.
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	04-AUG-11	Findings:	5400. UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	17-OCT-11	Findings:	0.67 UG/L
Chemical:	TRICHLOROETHYLENE		
Sample Collected:	17-OCT-11	Findings:	23. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-JAN-12	Findings:	0.6 UG/L
Chemical:	TRICHLOROETHYLENE		
Sample Collected:	11-JAN-12	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-APR-12	Findings:	0.71 UG/L
Chemical:	TRICHLOROETHYLENE		
Sample Collected:	09-APR-12	Findings:	22. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-AUG-12	Findings:	22. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-AUG-12	Findings:	5000. UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	01-AUG-12	Findings:	0.63 UG/L
Chemical:	TRICHLOROETHYLENE		
Sample Collected:	08-OCT-12	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08-OCT-12	Findings:	0.62 UG/L
Chemical:	TRICHLOROETHYLENE		
Sample Collected:	28-JAN-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	28-JAN-13	Findings:	0.65 UG/L
Chemical:	TRICHLOROETHYLENE		
Sample Collected:	09-APR-13	Findings:	23. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-AUG-13	Findings:	1410. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	14-AUG-13	Findings:	7.2
Chemical:	PH, LABORATORY		
Sample Collected:	14-AUG-13	Findings:	160. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	14-AUG-13	Findings:	190. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	14-AUG-13	Findings:	390. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	14-AUG-13	Findings:	110. MG/L
Chemical:	CALCIUM		

Sample Collected:	14-AUG-13	Findings:	27. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	14-AUG-13	Findings:	110. MG/L
Chemical:	SODIUM		
Sample Collected:	14-AUG-13	Findings:	3.4 MG/L
Chemical:	POTASSIUM		
Sample Collected:	14-AUG-13	Findings:	270. MG/L
Chemical:	CHLORIDE		
Sample Collected:	14-AUG-13	Findings:	0.35 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	14-AUG-13	Findings:	41. MG/L
Chemical:	SILICA		
Sample Collected:	14-AUG-13	Findings:	250. UG/L
Chemical:	BARIUM		
Sample Collected:	14-AUG-13	Findings:	560. UG/L
Chemical:	BORON		
Sample Collected:	14-AUG-13	Findings:	850. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	14-AUG-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-AUG-13	Findings:	0.2 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	14-AUG-13	Findings:	4600. UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	14-AUG-13	Findings:	0.55 UG/L
Chemical:	TRICHLOROETHYLENE		
Sample Collected:	04-NOV-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-NOV-13	Findings:	0.53 UG/L
Chemical:	TRICHLOROETHYLENE		
Sample Collected:	27-JAN-14	Findings:	21. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	24-APR-14	Findings:	. 20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-AUG-14	Findings:	. 1370. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	14-AUG-14	Findings:	. 7.4
Chemical:	PH, LABORATORY		
Sample Collected:	14-AUG-14	Findings:	. 140. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	14-AUG-14	Findings:	. 170. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	14-AUG-14	Findings:	. 430. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		

Sample Collected:	14-AUG-14	Findings:	. 120. MG/L
Chemical:	CALCIUM		
Sample Collected:	14-AUG-14	Findings:	. 30. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	14-AUG-14	Findings:	. 120. MG/L
Chemical:	SODIUM		
Sample Collected:	14-AUG-14	Findings:	. 3.6 MG/L
Chemical:	POTASSIUM		
Sample Collected:	14-AUG-14	Findings:	. 330. MG/L
Chemical:	CHLORIDE		
Sample Collected:	14-AUG-14	Findings:	. 0.39 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	14-AUG-14	Findings:	. 45. MG/L
Chemical:	SILICA		
Sample Collected:	14-AUG-14	Findings:	. 270. UG/L
Chemical:	BARIUM		
Sample Collected:	14-AUG-14	Findings:	. 620. UG/L
Chemical:	BORON		
Sample Collected:	14-AUG-14	Findings:	. 940. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	14-AUG-14	Findings:	. 0.101
Chemical:	LANGELIER INDEX AT SOURCE TEMP.		
Sample Collected:	14-AUG-14	Findings:	22. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-AUG-14	Findings:	. 1.8 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	14-AUG-14	Findings:	. 12.
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		

7
West
1/2 - 1 Mile
Higher

FED USGS **USGS40000138615**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335121117140301		
Monloc name:	004S003W06C001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070202	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8558516
Longitude:	-117.235038	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1465
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

B8
SW
1/2 - 1 Mile
Higher

FED USGS **USGS40000138576**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335053117135801		
Monloc name:	004S003W06Q004S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8479722
Longitude:	-117.23275	Sourcemap scale:	24000
Horiz Acc measure:	.5	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1460
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Cenozoic Erathem		
Aquifer type:	Unconfined single aquifer		
Construction date:	19940115	Welldepth:	760
Welldepth units:	ft	Wellholedepth:	905
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
2001-03-12	109.8	

C9
SW
1/2 - 1 Mile
Higher

CA WELLS **CADW50000003522**

Latitude :	33.846375		
Longitude :	117.231861		
Site code:	338464N1172319W001	Casgem sta:	Not Reported
Local well:	EMWD11044	Casgem s 1:	Irrigation
County id:	33		
Basin cd:	8-5	Basin desc:	San Jacinto
Org unit n:	Southern Region Office	Site id:	CADW50000003522

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B10
SW
1/2 - 1 Mile
Higher | **CA WELLS** | **4815**

Water System Information:

Prime Station Code:	04S/03W-06Q03 S	User ID:	WAT
FRDS Number:	3310009010	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT
Water Type:	Well/Groundwater	Well Status:	Abandoned
Source Lat/Long:	335049.0 1171355.0	Precision:	100 Feet (one Second)
Source Name:	WELL 1341 PERRY - ABANDONED		
System Number:	3310009		
System Name:	Eastern Municipal WD		
Organization That Operates System:			
	P.O. Box 8300		
	San Jacinto, CA 92381-1300		
Pop Served:	253705	Connections:	84839
Area Served:	HEMET-SAN JACINTO-SUN CITY		

C11
SW
1/2 - 1 Mile
Higher | **FED USGS** | **USGS40000138560**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335046117135501		
Monloc name:	004S003W06Q001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070202	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8461295
Longitude:	-117.2328155	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1460
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92571	1	0

Federal EPA Radon Zone for RIVERSIDE County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for RIVERSIDE COUNTY, CA

Number of sites tested: 12

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.117 pCi/L	100%	0%	0%
Living Area - 2nd Floor	0.450 pCi/L	100%	0%	0%
Basement	1.700 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX E

Environmental Professional Qualifications

EnGEN Corporation

ENVIRONMENTAL PROFESSIONAL QUALIFICATIONS (2015)

H. Wayne Baimbridge – REPA 46279, Principal

- **Education:** California State University, San Diego, California
  Bachelor of Science Degree, Geology, 1977
- **Professional Registration:** Registered Environmental Property Assessor 46279
- **Professional Associations:** Consulting Engineers and Land Surveyors
  California Geotechnical Engineers Association
  Association of Environmental Professionals

EXPERIENCE: Mr. Baimbridge is the founder and CEO of **EnGEN Corporation**. With over 37 years experience in environmental studies, engineering geology, geotechnical and geo-environmental professional disciplines he is a solid asset to any engineering team. Mr. Baimbridge work practice includes full technical and project management responsibilities. Projects vary in size from high density Community Redevelopment, commercial industrial, multi-density residential, commercial/industrial existing and new developments. Mr. Baimbridge has over 24 years experience working with public agencies and municipalities.

ENVIRONMENTAL SPECIALTY: Mr. Baimbridge has been conducting Phase-I, II and III Environmental Site Assessments, since 1992, where he has contributed to establish a standard of practice that has enhanced and simplified the professional's ability to service the ever-changing landscape of the oversight review process.

Most recently completed related reference projects for Phase I Environmental Site Assessments are:

- **Phase I Environmental Site Assessment** – 39.22 Acres Northwest of Espanade Avenue and Mountain Avenue, APN: 438-030-006, 007, 008, 009 & 012, City of Hemet, County of Riverside, California; Dated: December 20, 2013. The Phase I Site Assessment for this project was incorporated into an overall environmental and water resource study to provide the District with background information on potential real estate purchase of the subject project for development as a potential potable water well site.
- **Phase I Environmental Site Assessment –** 2301 North Tustin Avenue, Santa Ana, California 92705, May 6, 2013. Standard Phase I ESA to determine potential impact from two prior UST's on site.

* **Phase II Environmental Site Assessment** - 2540-B Orange Avenue, Santa Ana, California. Report prepared for Saddleback Associates, Inc., May 3, 2013. The Phase II Site Assessment was performed in order to determine the presence of hydrocarbon-contaminated soil and water at the target property from prior UST(s) located on site and removed in 1989. Scope of work involved oversight of the drilling, sampling, groundwater well monitoring construction, sampling, and testing and report preparation.

* **Phase I Environmental Site Assessment** - 33140 Rancho California Road, Temecula area, Riverside County, California. Report prepared for: Calvary Chapel Bible Fellowship, Dated: April 28, 2013. The Phase I Site Assessment for this project was incorporated into an overall environmental and geotechnical impact study to provide the PR Investors with sufficient background information on the potential real estate purchase of approximate 20 acres for expansion of the existing church facility.