APPENDIX A

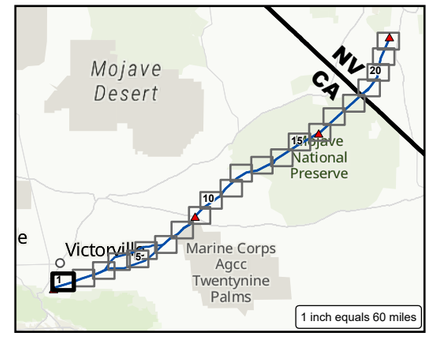
Detailed Maps and Design Drawings

LEGEND

- SCE SUBSTATION
- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

Notes
Base map source: ESRI Aerial Imagery

Project Location



N

0 1,500 3,000 US Feet

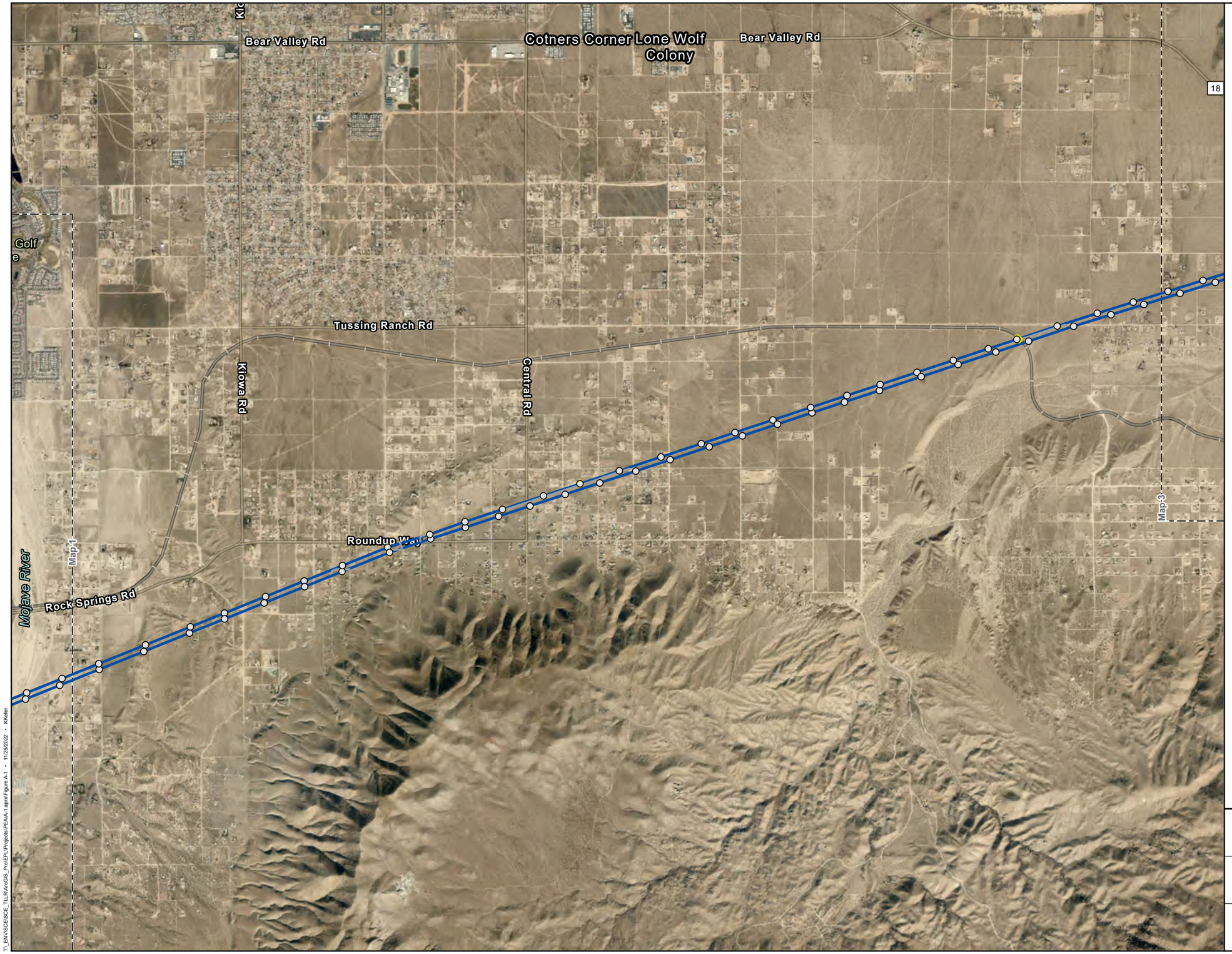
1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE **A-1**



LEGEND

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- ACCESS ROAD
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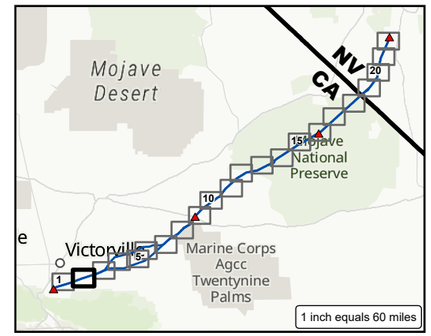
- MAP TILE

Notes
Base map source: ESRI Aerial Imagery

Project Location



N

0 1,500 3,000
US Feet

1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

Notes
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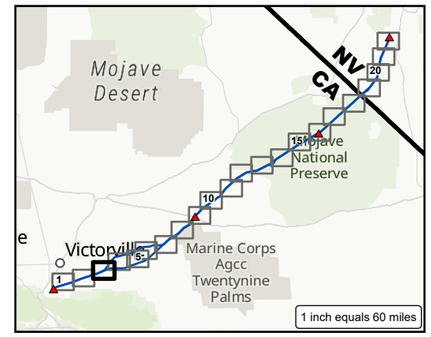
Project Location



N

0 1,500 3,000
US Feet

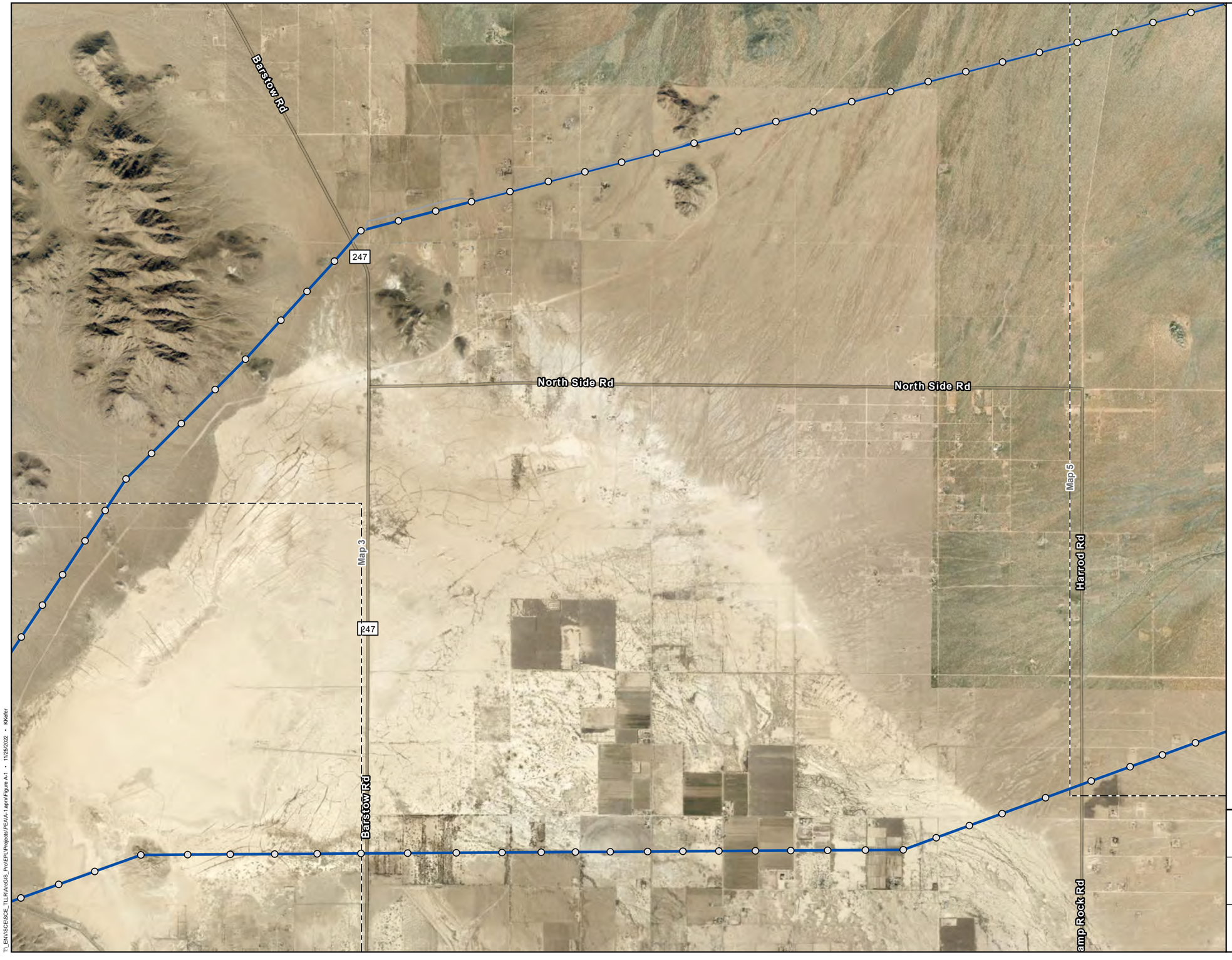
1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1



LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
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- MAP TILE

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Base map source: ESRI Aerial Imagery

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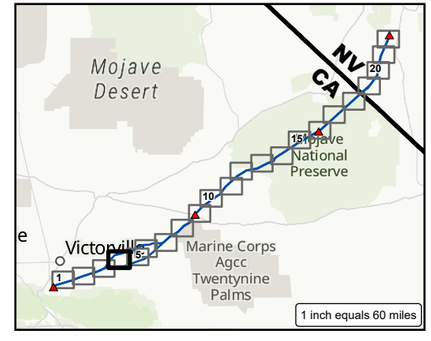

N

0 1,500 3,000 US Feet

1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE
A-1

LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
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- CONSTRUCTION AREA
- MAP TILE

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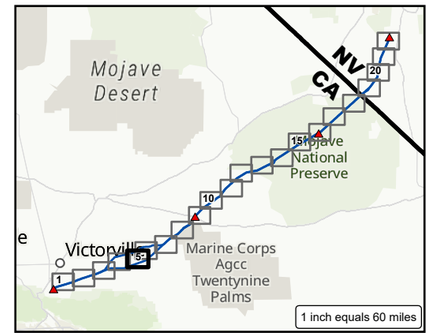

N

0 1,500 3,000 US Feet

1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

LEGEND

- STRUCTURE
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- ACCESS ROAD
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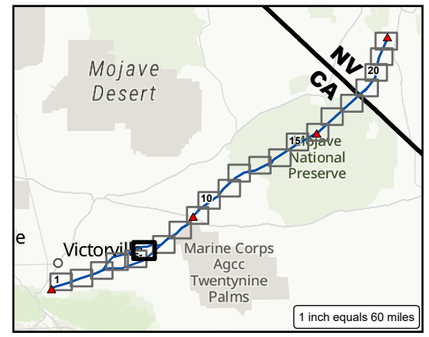

N

0 1,500 3,000
US Feet

1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

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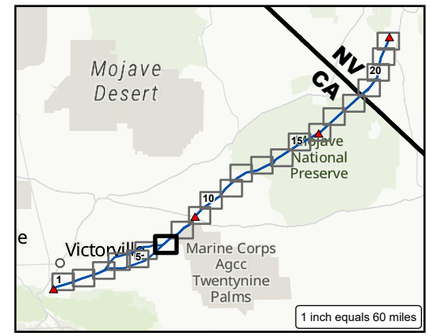


N

0 1,500 3,000 US Feet

1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

Map 9

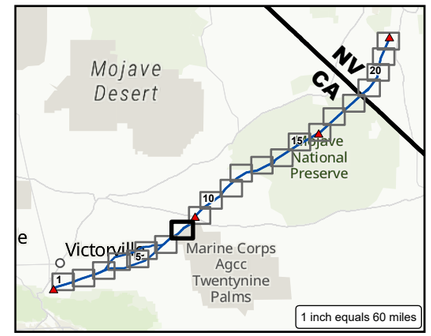
Map 7

LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

Notes
Base map source: ESRI Aerial Imagery

Project Location



N

0 1,500 3,000 US Feet

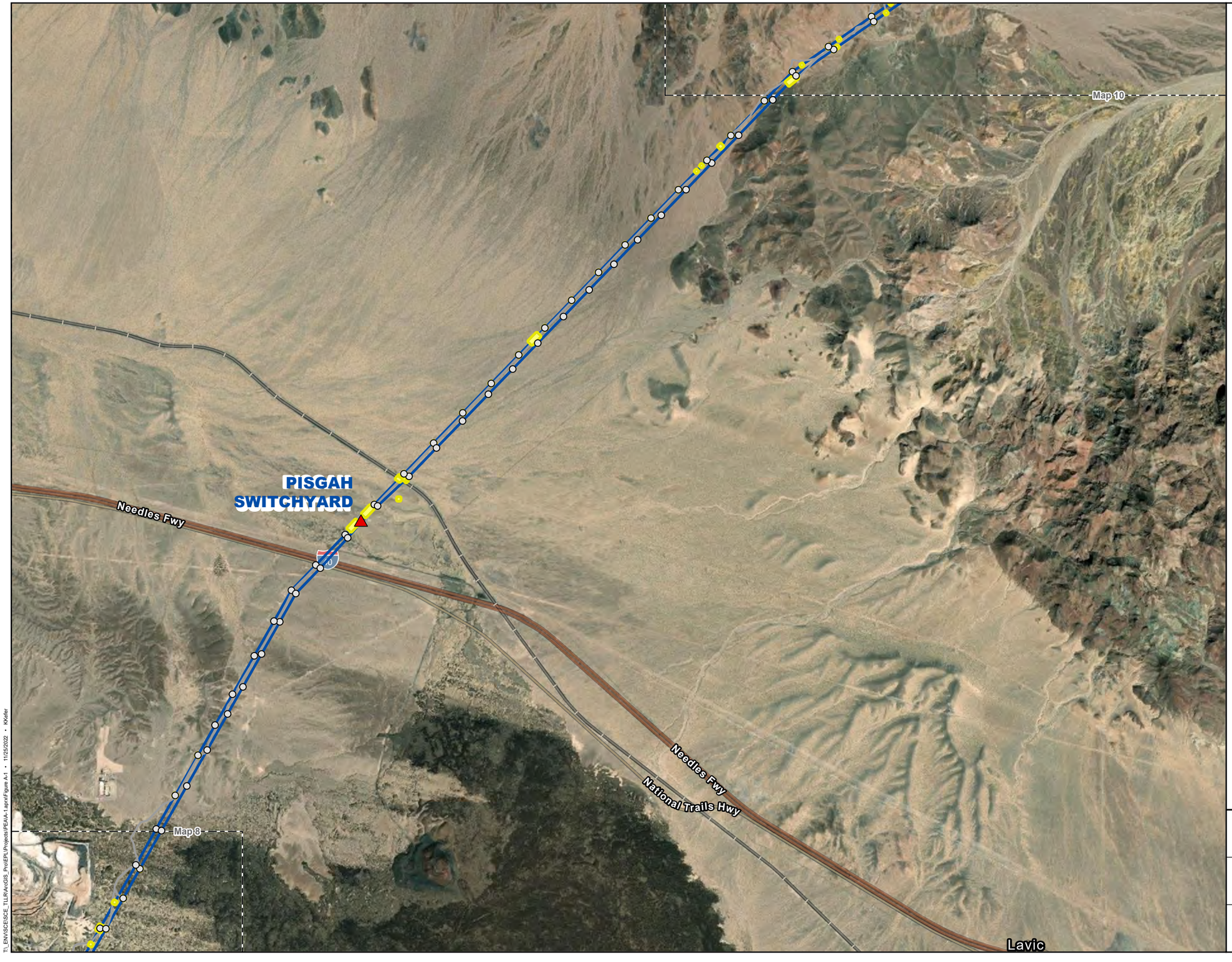
1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE **A-1**



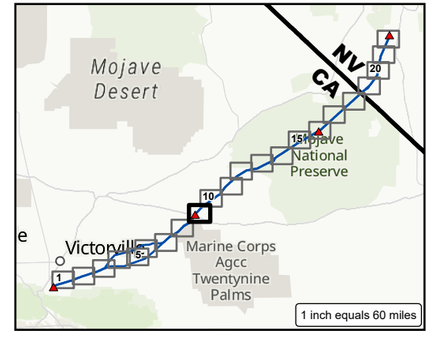
LEGEND

- SCE SUBSTATION
- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

Notes

Base map source: ESRI Aerial Imagery

Project Location



N

0 1,500 3,000 US Feet

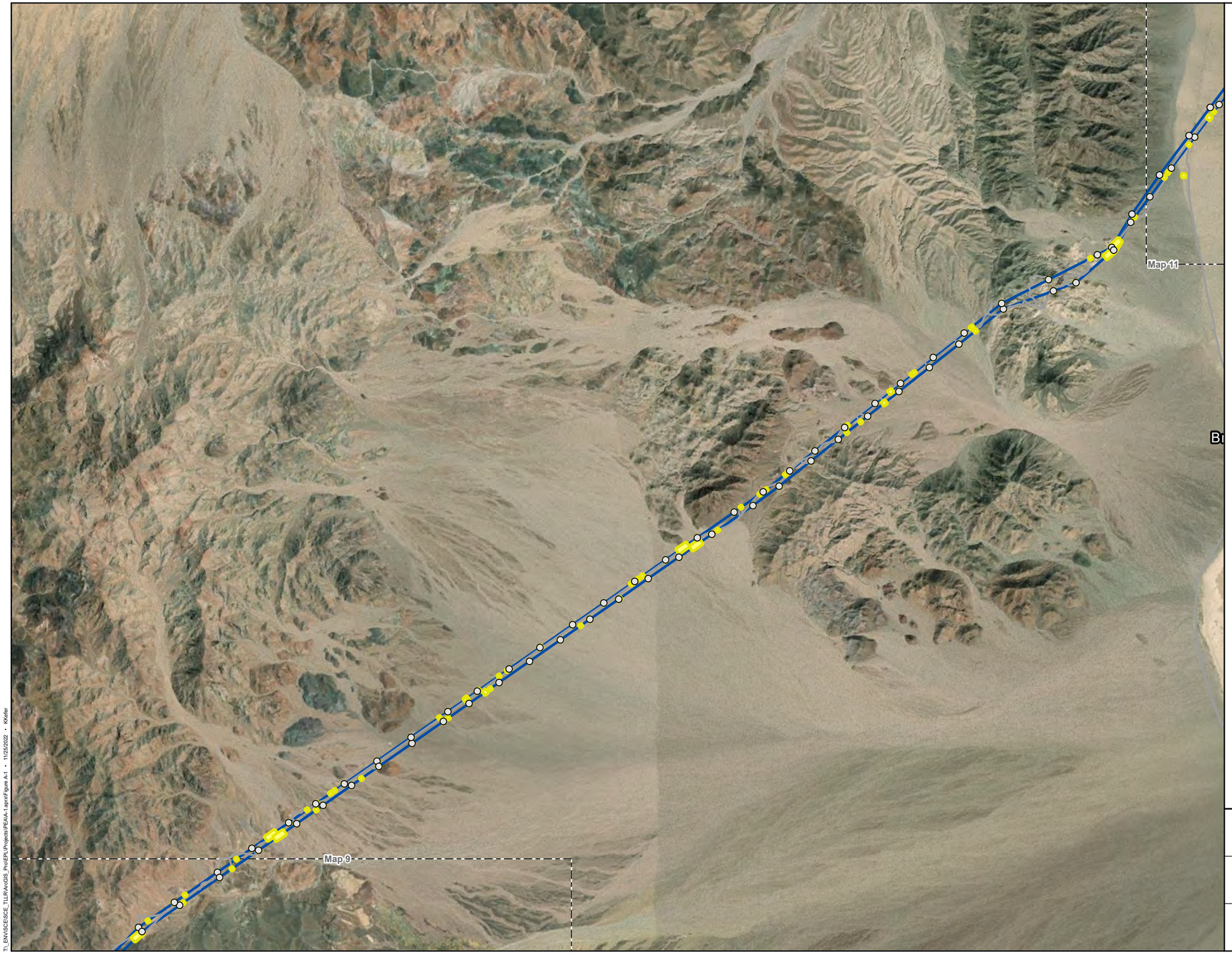
1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL) 220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE A-1

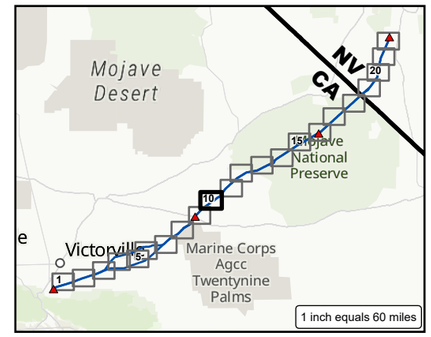


LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

Notes
Base map source: ESRI Aerial Imagery

Project Location



N

0 1,500 3,000 US Feet

1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

Map 12

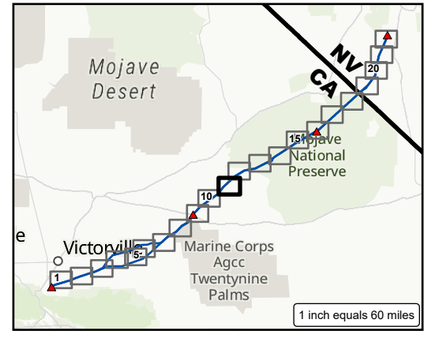
Map 10

LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

Notes
Base map source: ESRI Aerial Imagery

Project Location



N

0 1,500 3,000
US Feet

1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE
A-1

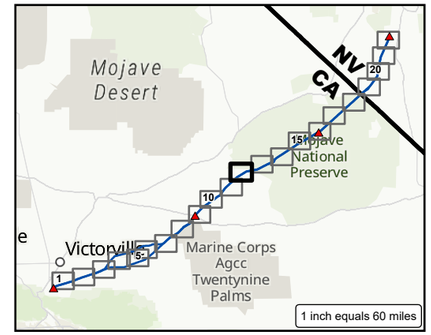
T:_ENV\SCE\SCE_TLR\ArcGIS_Pro\EPL\Projects\PEA\A-1.aprx\Figure A-1 • 11/25/2022 • Kfeifer

LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

Notes
Base map source: ESRI Aerial Imagery

Project Location



N

0 1,500 3,000 US Feet

1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

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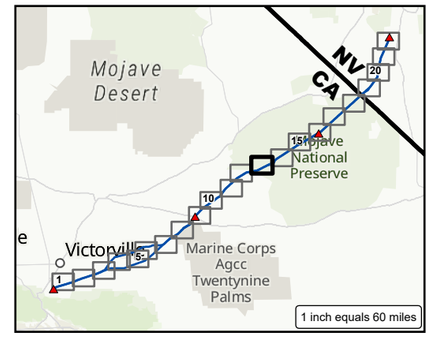
LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

Notes
Base map source: ESRI Aerial Imagery

Project Location



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0 1,500 3,000 US Feet

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Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

T:_ENV\SCE\SCE_TLLR\ArcGIS_Pro\EPL\Projects\PEA\A-1.aprx\Figure A-1 • 11/25/2022 • KKeller

LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

Notes
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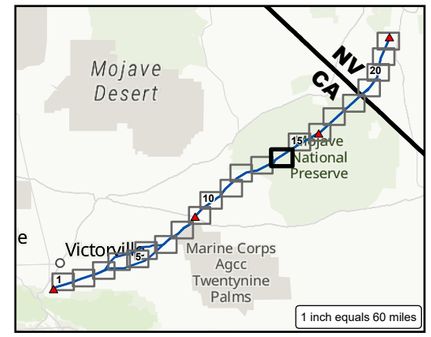
Project Location



N

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Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

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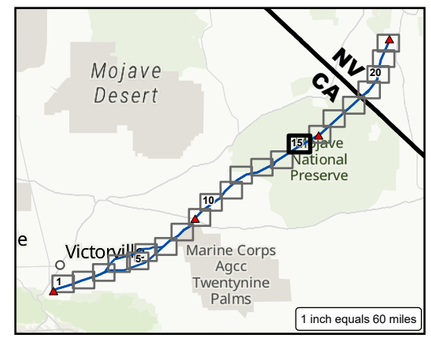

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Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE **A-1**

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LEGEND

- SCE SUBSTATION
- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

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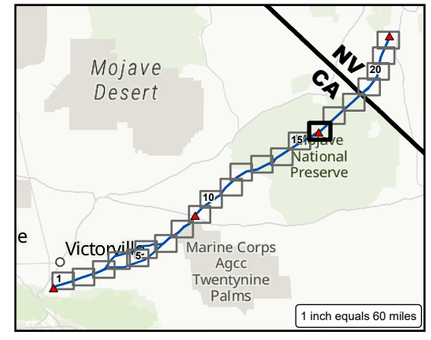

N

0 1,500 3,000
US Feet

1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

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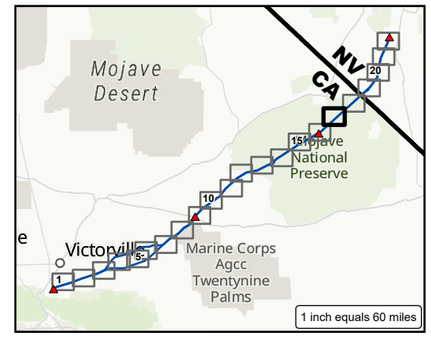

N

0 1,500 3,000 US Feet

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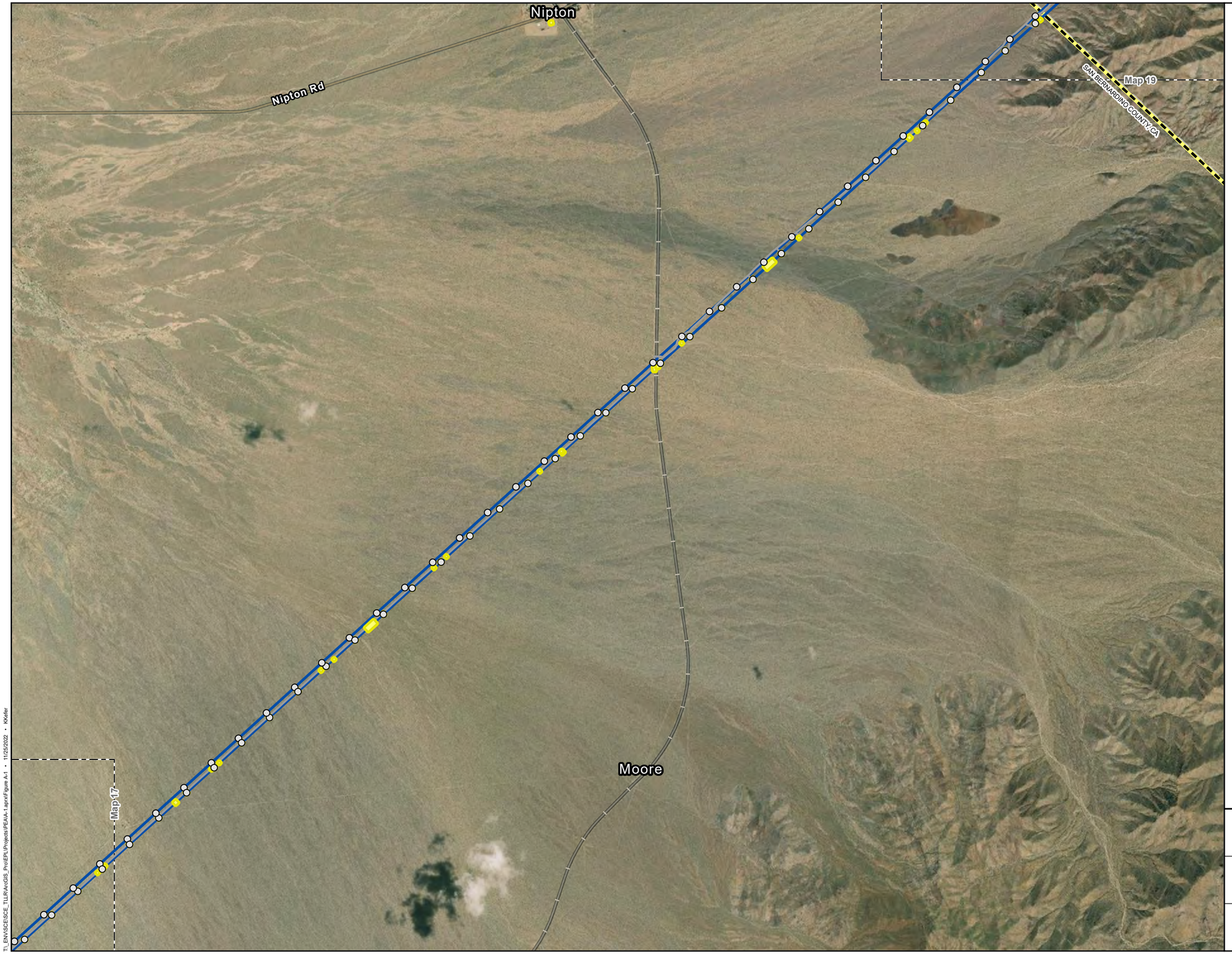
Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

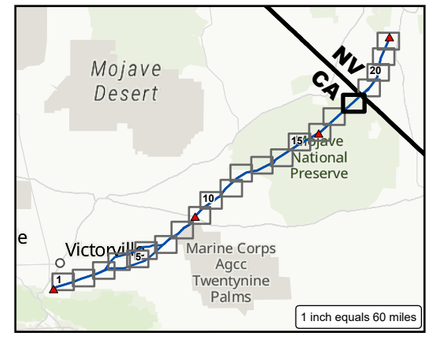


LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- STATE BOUNDARY
- COUNTY BOUNDARY
- MAP TILE

Notes
Base map source: ESRI Aerial Imagery

Project Location



N

0 1,500 3,000
US Feet

1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

Map 20

Wee Thump Joshua Tree Wilderness

164

Joshua Tree Hwy

164

Joshua Tree Hwy

CLARK COUNTY, NV

SAN BERNARDINO COUNTY, CA

Map 18

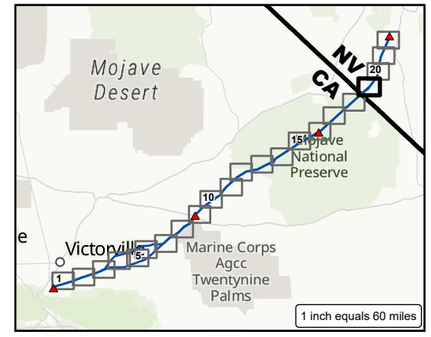
LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- STATE BOUNDARY
- COUNTY BOUNDARY
- MAP TILE

Notes

Base map source: ESRI Aerial Imagery

Project Location



N

0 1,500 3,000 US Feet

1 inch equals 3,500 feet

Eldorado-Pisgah-Lugo (EPL) 220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE A-1

T:_ENV\SCE\SCE_TLLR\ArcGIS_Pro\EPL\Projects\PEA\A-1 approvl\Figure A-1 • 11/25/2020 • KKeller

Map 21

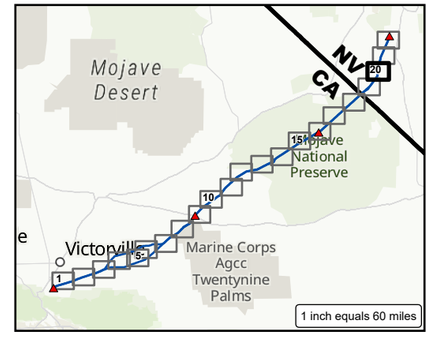
Map 19

LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- MAP TILE

Notes
Base map source: ESRI Aerial Imagery

Project Location



N

0 1,500 3,000
US Feet

1 inch equals 3,500 feet

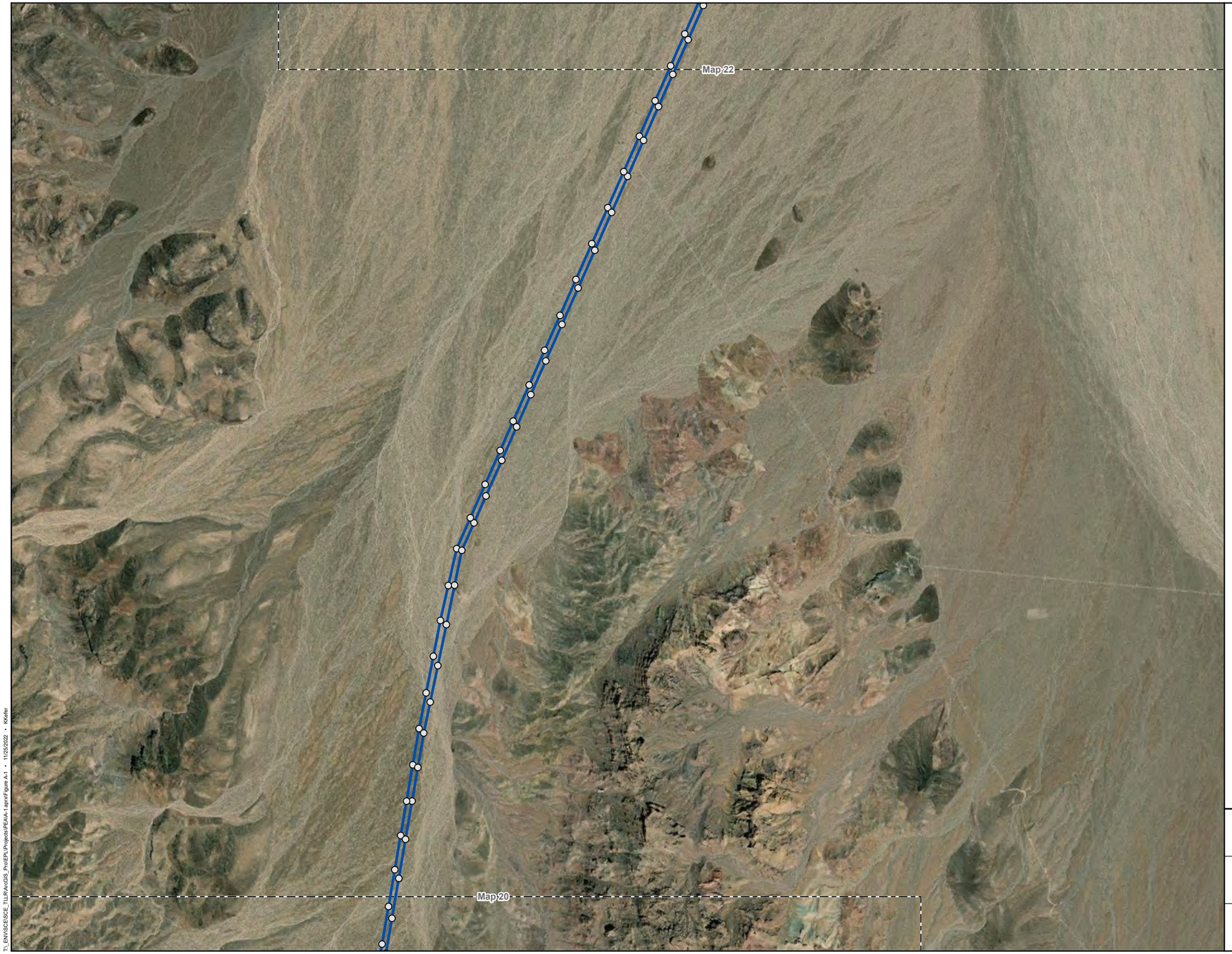
Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

T:_ENV\SCE\SCE_TLLR\ArcGIS_Pro\EPL\Projects\PEA\A-1 approvl\Figure A-1 • 11/25/2022 • KKeller



LEGEND

- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- MAP TILE

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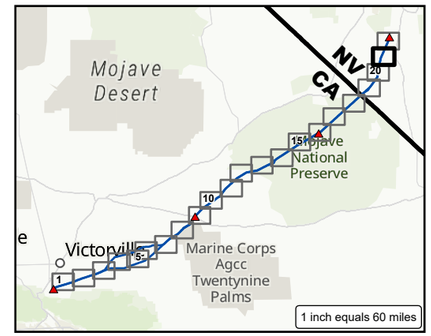
Project Location



N

0 1,500 3,000
US Feet

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Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1

LEGEND

- SCE SUBSTATION
- STRUCTURE
- ELDORADO-PISGAH-LUGO PROJECT
- ACCESS ROAD
- CONSTRUCTION AREA
- MAP TILE

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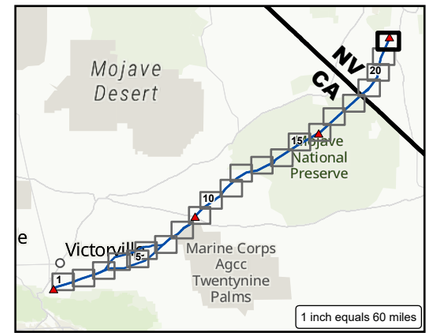
Base map source: ESRI Aerial Imagery

Project Location



N

0 1,500 3,000
US Feet

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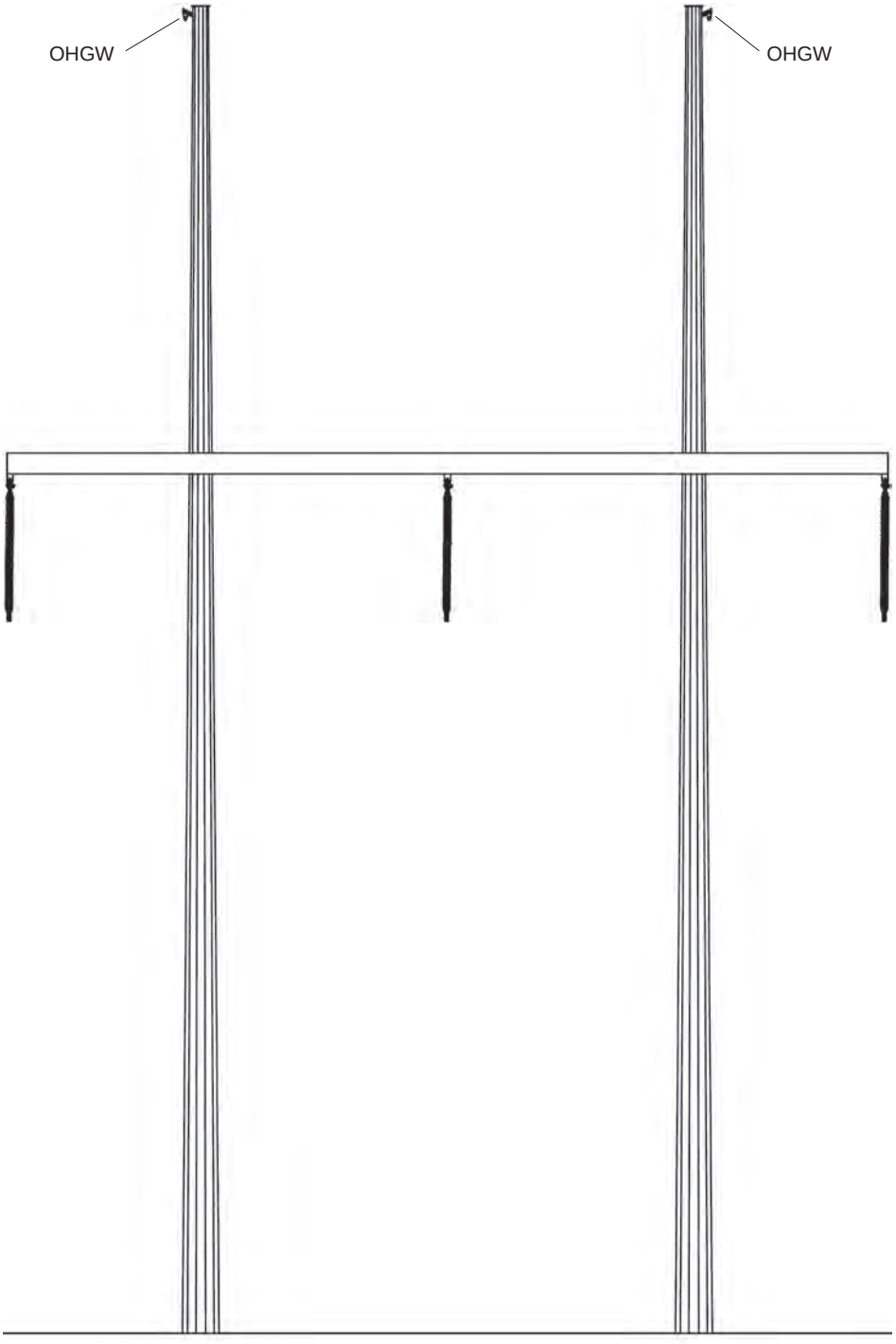
Eldorado-Pisgah-Lugo (EPL)
220 kV Project

PROJECT DATA

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
A-1



Typical Inter-set Structure

Not to Scale

ELDORADO-PISGAH-LUGO 220 kV PROJECT

TYPICAL STRUCTURE DESIGN

ARCADIS SOUTHERN CALIFORNIA EDISON

APPENDIX A.2

APPENDIX B

Emissions Calculations

APPENDIX B
EMISSIONS SUMMARY - GROUND AND HELICOPTER

Annual Emissions (Ground Equipment)							
	ROG	NOx	CO	SO2	PM10 Total	PM2.5	CO2e
Year	tons/yr						MT/yr
2025	0.0284	0.2399	0.2322	8.7000e-004	0.9215	0.1023	77.9204
2026	0.3477	3.2064	2.9694	0.0115	6.2080	0.7456	1,047.7725
2027	0.1175	1.0523	1.0101	3.2600e-003	2.8611	0.3293	293.3778
Annual Emissions (Helicopter Emissions)							
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0	0
2026	1.2432	0.5916	1.5743	0.0121	0.6781	0.1558716	324.25125
2027	0.0000	0.0000	0.0000	0.0000	0.0000	0	0
TOTAL							
2025	0.028	0.24	0.23	0.00087	0.92	0.10	77.9
2026	1.6	3.8	4.5	0.024	6.9	0.90	1372.0
2027	0.12	1.1	1.0	0.0033	2.9	0.33	293.4

Air District	**ROG**	**NOx**	**CO**	**SO2**	**PM10 Total**	**PM2.5 Total**	**CO2e**
MDAQMD	1.4	3.3	3.9	0.0204	6.0	0.78	1189.5
DAQ	0.21	0.51	0.60	0.0031	0.92	0.12	182.5

Thresholds							
MDAQMD	25	25	100	25	15	12	100000
DAQ	100	100	100	100	100	100	

Annual Emissions (Ground Equipment)							
	ROG	NOx	CO	SO2	PM10 Total	PM2.5	CO2e
Year	tons/yr						MT/yr
2025	0.0284	0.2399	0.2322	8.7000e-	2.3133	0.2419	77.9205
2026	0.3477	3.2064	2.9694	0.0115	15.4033	1.6639	1,047.7734
2027	0.1175	1.0523	1.0101	3.2600e-	7.1406	0.7571	293.3780
Annual Emissions (Helicopter Emissions)							
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0	0
2026	1.2432	0.5916	1.5743	0.0121	0.6781	0.1558716	324.25125
2027	0.0000	0.0000	0.0000	0.0000	0.0000	0	0
TOTAL							
2025	0.028	0.24	0.23	0.00087	2.31	0.24	77.92
2026	1.59	3.80	4.54	0.02358	16.08	1.82	1372.02
2027	0.12	1.05	1.01	0.00326	7.14	0.76	293.38

Air District	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total	CO2e
MDAQMD	1.4	3.3	3.9	0.0204	13.9	1.58	1189.5
DAQ	0.21	0.51	0.60	0.0031	2.14	0.24	182.5

Thresholds							
MDAQMD	25	25	100	25	15	12	100000
DAQ	100	100	100	100	100	100	

Daily Emissions (Ground Equipment)						
	ROG	NOx	CO	SO2	PM10 Total	PM2.5
Year	lb/day					
2025	1.4139	12.8901	11.6497	0.0434	36.0024	4.1056
2026	6.7657	62.3762	58.4943	0.2101	70.8212	8.5676
2027	1.3918	12.2093	12.1611	0.0390	41.0644	4.5137
Daily Emissions (Helicopter Emissions)						
2024	0.000	0.000	0.000	0.000	0.000	0.000
2025	43.305	30.428	54.886	0.394	23.654	5.361
2026	0.000	0.000	0.000	0.000	0.000	0.000
Total						
2024	1.4	13	12	0.043	36	4.1
2025	50	93	113	0.605	94	14
2026	1.4	12	12	0.039	41	4.5
Max	**50**	**93**	**113**	**1**	**94**	**14**
Thresholds	137	137	548	137	82	82

Daily Emissions (Ground Equipment)						
	ROG	NOx	CO	SO2	PM10 Total	PM2.5
Year	lb/day					
2025	1.4139	12.8901	11.6497	0.0434	89.9696	9.4932
2026	6.7657	62.3762	58.4943	0.2101	176.2408	18.7024
2027	1.3918	12.2093	12.1611	0.0390	103.1125	10.7077
Daily Emissions (Helicopter Emissions)						
2025	0.000	0.000	0.000	0.000	0.000	0.000
2026	43.305	30.428	54.886	0.394	23.654	5.361
2027	0.000	0.000	0.000	0.000	0.000	0.000
Total						
2025	1.4	13	12	0.043	90	9.5
2026	50	93	113	0.60	200	24
2027	1.4	12	12	0.039	103	11
Max	**50**	**93**	**113**	**1**	**200**	**24**

Thresholds	137	137	548	137	82	82

APPENDIX D

Cultural Resources Studies

Cultural Resources documentation will be provided under separate confidential cover.

APPENDIX E

Detailed Tribal Consultation Report

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

July 15, 2020

Mandi Martinez
SWCA Environmental Consultants

Via Email to: mmartinez@swca.com

Re: TLRR Evaluation Project Along the Eldorado-Pisgah-Lugo 115-kV Transmission Line Project, San Bernardino County

Dear Ms. Martinez:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were positive. Please contact the Chemehuevi Indian Tribe and the San Manuel Band of Mission Indians on the attached list for more information. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

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

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

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

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Bernardino County
7/15/2020

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

Agua Caliente Band of Cahuilla Indians
Jeff Grubbe, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919

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

Kern Valley Indian Community
Robert Robinson, Chairperson
P.O. Box 1010 — Kawaiisu
Lake Isabella, CA, 93283 — Tubatulabal
Phone: (760) 378 - 2915 — Koso
bbutterbredt@gmail.com

Kern Valley Indian Community
Julie Turner, Secretary
P.O. Box 1010 — Kawaiisu
Lake Isabella, CA, 93240 — Tubatulabal
Phone: (661) 340 - 0032 — Koso

Kern Valley Indian Community
Brandy Kendricks,
30741 Foxridge Court — Kawaiisu
Tehachapi, CA, 93561 — Tubatulabal
Phone: (661) 821 - 1733 — Koso
krazykendricks@hotmail.com

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Morongo Band of Mission Indians
Denisa Torres, Cultural Resources Manager
12700 Pumarra Road — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

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

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

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838 — Kitanemuk
Newhall, CA, 91322 — Vanyume
Phone: (503) 539 - 0933 — Tataviam
Fax: (503) 574-3308
ddyocum@comcast.net

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

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed TLRR Evaluation Project Along the Eldorado–Pisgah–Lugo 115-kV Transmission Line Project, San Bernardino County.

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

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

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

Tubatulabals of Kern Valley
Robert L. Gomez, Chairperson
P.O. Box 226
Lake Isabella, CA, 93240
Phone: (760) 379 - 4590
Fax: (760) 379-4592
Tubatulabal

Twenty-Nine Palms Band of Mission Indians
Anthony Madrigal, Tribal Historic Preservation Officer
46-200 Harrison Place
Coachella, CA, 92236
Phone: (760) 775 - 3259
amadrigal@29palmsbomi-nsn.gov
Chemehuevi

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

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

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed TLRR Evaluation Project Along the Eldorado–Pisgah–Lugo 115-kV Transmission Line Project, San Bernardino County.

APPENDIX F

Agency Consultation and Public Outreach

Summary of Meeting Dates

AGENCY	MEETING DATES
Bureau of Land Management	Monthly 2018-2022
National Park Service	May 2022
California Public Utilities Commission	Monthly 2018-2022

Summary of Meetings

Bureau of Land Management

SCE meets with BLM monthly to discuss work, share concerns regarding the protection of resources, have an opportunity to discuss the communications protocol. During these meetings, SCE goes over project status and priorities.

National Park Service

In May 2022, SCE met with Mojave National Preserve/National Park Service staff. The meeting was focused on introducing SCE and NPS staff, presenting to staff the EPL Project and the project scope, identifying questions or concerns from staff, and schedule and communications. The EPL Project is also addressed during an annual SCE/NPS meeting.

Bureau of Land Management/California Public Utilities Commission

The California Public Utilities Commission (CPUC) Energy Division staff; BLM staff; and SCE staff have met monthly throughout 2018, 2019, 2020, 2021, and 2022 to discuss all of the Transmission Line Rating Remediation (TLRR) effort licensing projects, including the EPL Project. Meetings include communication of project status, identifying questions or concerns from agencies, and discussion of project scope.

SCE met with CPUC Energy Division and BLM staff in 2019 to provide updates regarding the evolving Wildfire Mitigation Plan and the relationship to the TLRR Program projects. Additionally, SCE provided updated scope and milestone information for each of the licensing projects.

California Public Utilities Commission

Beginning in 2018, CPUC Energy Division staff and SCE have met on a monthly basis in anticipation of filing the Certificate of Public Convenience and Necessity application and Proponent's Environmental Assessment (PEA). These meetings are intended to address project status and communicate licensing activities throughout the agency review process. Monthly meetings will continue throughout licensing.

San Bernardino County

SCE has met with representatives of San Bernardino County regarding the TLRR effort licensing projects, including the EPL Project, on a regular basis since 2019.

City of Hesperia

SCE Local Public Affairs staff communicated with the City of Hesperia regarding the EPL Project in 2022.

Clark County

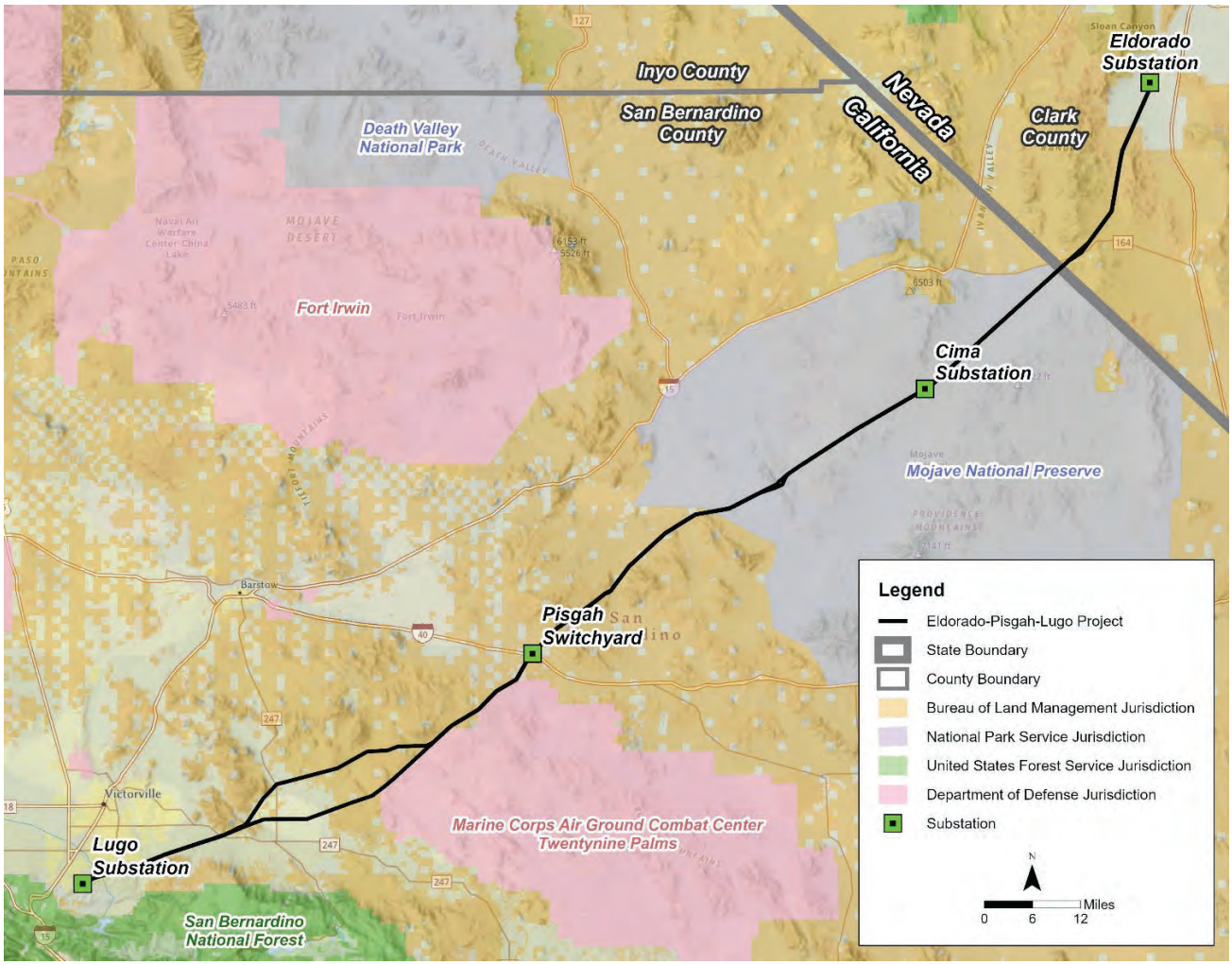
SCE Local Public Affairs staff communicated with Clark County regarding the EPL Project in 2021.

City of Boulder City

SCE Local Public Affairs staff communicated with the City of Boulder City regarding the EPL Project in 2021.

PROPOSED PROJECT
Eldorado-Pisgah-Lugo 220 kV

Anticipated Construction Period 2025-2027



About the Project

The **Eldorado-Pisgah-Lugo (EPL) 220 kV Project** will enhance the safety of Southern California Edison's (SCE) transmission system, controlled by the California Independent System Operator (CAISO). The project is now in the initial planning phase. SCE plans to file project applications with the California Public Utilities Commission (CPUC) and the Bureau of Land Management (BLM) in 2023. If approved by the CPUC and BLM, SCE anticipates construction would begin by the end of 2025, with project completion estimated for 2027.

The primary purpose of the EPL 220 kV Project is to ensure compliance with CPUC General Order 95 (G.O. 95) and National Electrical Safety Code (NESC) standards. In particular, G.O. 95 Rules 37 through 39 specify minimum vertical and horizontal clearances that must be maintained between an electrical conductor and other conductors, or between a conductor and the ground, buildings, and a variety of other objects. Remediating the identified ground clearance discrepancies will also comply with applicable NERC reliability standards: the work will be completed as detailed in the mitigation plan filed in 2007 and as amended by SCE and accepted by the Western Electricity Coordinating Council (WECC).

The EPL Project would remediate ground clearance discrepancies through installation of new conductor and Overhead Ground Wire (OHGW), new inter-set structures, modification of hardware and insulators and modification of equipment at an existing substation and a switchyard.

SOUTHERN CALIFORNIA EDISON®

Energy for What's Ahead®

The Eldorado-Pisgah-Lugo 220 kV Project will enhance safety of SCE's transmission system in portions of San Bernardino and Clark counties.

SCE is working with the CPUC, Bureau of Land Management and National Park Service to apply mitigation measures to avoid and reduce any potential impacts.

The EPL 220 kV project will ensure compliance with CPUC G.O. 95 and National Electrical Safety Code (NESC) standards.

PROPOSED PROJECT

Eldorado-Pisgah-Lugo 220 kV

Project Location

The EPL 220 kV Project would be located in San Bernardino County, California and Clark County, Nevada, over federal lands managed by the Bureau of Land Management (BLM) and National Park Service (NPS), state lands managed by the California Department of Fish and Wildlife (CDFW) and roads managed by California Department of Transportation (Caltrans); railroad crossings managed by BNSF Railway (BNSF) and Union Pacific Railroad (UPRR); county/city lands managed by San Bernardino County, Clark County, and City of Boulder City, private lands; lands owned and managed by SCE and Clark County, Nevada.

Potential Project Activities and Impacts

Prior to construction, crews will be in the area performing survey work and testing. Once construction begins, crews may be performing the following work in your area:

- Replacing conductors (wires) and modifying structures, installing new inter-set structures in identified areas and modifying infrastructure at Cima Substation and Pisgah Switchyard
- Establishing temporary construction staging areas for crews and construction equipment, including crane and helicopter pads

For more information,
visit www.sce.com/EPLProject
or email us at
EPLinfo@sce.com

SOUTHERN CALIFORNIA EDISON®
Energy for What's Ahead®

About the Project

The **Eldorado-Pisgah-Lugo (EPL) Project** will enhance the safety of Southern California Edison's (SCE's) transmission system, controlled by the California Independent System Operator (CAISO). The project is now in the initial planning phase. SCE anticipates filing a project application with the California Public Utilities Commission (CPUC) in coordination with the Bureau of Land Management (BLM) and National Park Service (NPS) in 2023 . If approved by the CPUC, the project is anticipated to begin construction by the end of 2025 .

In California, the EPL project is proposed to follow CPUC (GO 95) safety standards and include remediation activities such as replacing conductor (wire) and installing inter-set structures to increase conductor ground clearances. In Nevada, the design of electric lines is governed by the National Electrical Safety Code (NESC) to replace towers and install insulators. Most of the construction will take place in existing rights-of-way to minimize environmental impacts. The estimated project completion date is late 2027.

Project Location

The proposed project is located in San Bernardino County in California and Clark County in Nevada. The project will span from SCE's El Dorado Substation near Boulder City in Nevada, proceed across the California-Nevada border through the Pisgah Switching Station, to the Lugo Substation adjacent to the City of Hesperia.

Close ✕

Potential Project Activities and Impacts

Prior to construction, crews will be in the area performing survey work and testing. Once construction begins, crews may be performing the following work in your area:

- Replacing conductors (wires) and associated infrastructure
- Installing new inter-set structures
- Establishing temporary construction staging areas for crews and construction equipment, including crane and helicopter pads
- Trimming or removing vegetation, when necessary, in and around construction work areas
- Maintaining access roads in and around construction
- Scheduling temporary street closures, as needed, for safety

Close ✕

Map, Resources & More Information

For more information, email us at **EPLinfo@sce.com**

Close ✕

- Install Service/Local Planning
- Find Rebates
- Contact Us
- Help Center
- Browser Requirements
- Partners & Vendors
- Your Safety
- Energy Procurement
- Regulatory
- Sitemap
- Catalina Island
- Community
- Edison International
- Education
- Energized by Edison
- Newsroom
- YouTube

- Terms & Conditions
- **PRIVACY NOTICE**
- Personal Information Request
- Copyright Act Policy

APPENDIX G

Fire Prevention and
Emergency Response Plan

TLRR: Eldorado-Pisgah-Lugo Project

Fire Prevention and Emergency Response Plan

Prepared for
Southern California Edison

December 2022

Prepared by
Arcadis U.S., Inc.

Applicable agencies:

Bureau of Land Management ☒
National Park Service ☒
California Public Utilities Commission ☒

Draft Environmental Measure Addressed:

CPUC Draft Environmental Measure 5.20, Wildfire: Construction Fire Prevention Plan

Contents

Acronyms and Abbreviations

BLM	Bureau of Land Management
CALFIRE	California Department of Forestry and Fire
CEQA	California Environmental Quality Act
CPS	Critical Protection Sites
CPUC	California Public Utilities Commission
EPL	Eldorado-Pisgah-Lugo
FPI	Fire Potential Index
FTA	Fire Threat Area
O&M	Operation and Maintenance
NPS	National Park Service
PAL	Project Activity Level
PEA	Proponent's Environmental Assessment
POD	Plan of Development
SCE	Southern California Edison
TOD	Task of the Day

1.0 Introduction

The Proponent's Environmental Assessment (PEA) for the Eldorado-Pisgah-Lugo Project (EPL Project) describes the development and implementation of a Fire Prevention and Emergency Response Plan to ensure the health and safety of construction workers, Southern California Edison (SCE) personnel, and the public during construction.

1.1 Purpose of the Plan

The purposes of this Fire Prevention and Emergency Response Plan (Plan) are as follows:

- This Plan has been developed to support the impact analyses presented in the EPL Project PEA and POD documents.
- This Plan has been developed to meet the requirements of the California Public Utilities Commission (CPUC) *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments*; a 'Construction Fire Prevention Plan' is listed as a 'Required' appendix in the *Guidelines*.

The construction contractor, acting on behalf of SCE (or its designee), will adopt this Plan. This Plan does not determine or dictate fire and emergency measures to be implemented during construction of the EPL Project; specific measures and means will be developed by the construction contractor(s). This Plan will be incorporated by reference into any and all separate plans to be developed and implemented by the construction contractor(s). Any and all elements of this Plan may be superseded by elements in separate plans to be developed by the construction contractor(s). Implementation of this Plan, and plan(s) developed by the construction contractor(s), will ensure compliance with state and federal regulations.

This Plan has been developed to work in conjunction with contractor-developed emergency plans and other safety programs. This includes reviewing all planned construction activities to ensure compliance with applicable state, local, and national fire and life safety standards. Fire prevention measures reduce the incidence of fires by eliminating opportunities for ignition of flammable materials.

2.0 Project Overview

The EPL Project is located in unincorporated San Bernardino County and the City of Hesperia in the State of California, and in unincorporated Clark County and the City of Boulder City in the State of Nevada. The Project is located on or spans private and public lands, including lands administered by the Bureau of Land Management (BLM) and lands managed by the National Park Service (NPS).

The EPL is proposed to comply with GO 95 and NESC standards. Compliance will be obtained by installing new inter-set transmission structures, replacing existing conductor with new conductor, and shortening the insulator assemblies on some existing transmission structures.

3.0 Lead and Consulting Agencies

3.1 Lead Agencies

Lead agencies have discretionary approval over the EPL Project and are responsible for reviewing aspects of the measures documented in this Plan. The CPUC is the state lead agency responsible for compliance with the California Environmental Quality Act (CEQA) for the EPL Project. The BLM is the federal lead agency responsible for compliance with the National Environmental Protection Act for the EPL Project. Identified materials or documentation will be provided to the CPUC and BLM as described in the EPL PEA and POD documents.

3.2 Consulting Agencies

Consulting agencies are public agencies, other than the lead agencies, that may provide guidance or information needed to satisfy the requirements addressed in this Plan. Consulting agencies include the NPS, the California Department of Forestry and Fire Protection (CALFIRE), the San Bernardino County Fire Department (SBCFD), the City of Hesperia Fire Department, and the Boulder City Fire Department.

4.0 CPUC Draft Environmental Measure

The CPUC Draft Environmental Measure addressed by this Plan is as follows:

> 5.20 Wildfire: Construction Fire Prevention Plan
>
> A project-specific Construction Fire Prevention Plan for both construction and operation of the project shall be submitted for review prior to initiation of construction. A draft copy of the Plan shall be provided to the CPUC and state and local fire agencies at least 90 days before the start of any construction activities in areas designated as Very High or High Fire Hazard Severity Zones. Plan reviewers shall also include federal, state, or local agencies with jurisdiction over areas where the project is located. The final Plan shall be approved by the CPUC at least 30 days prior to the initiation of construction activities. The Plan shall be fully implemented throughout the construction period and include the following at a minimum:
>
> - The purpose and applicability of the Plan
> - Responsibilities and duties
> - Preparedness training and drills
> - Procedures for fire reporting, response, and prevention that include:
>   - Identification of daily site-specific risk conditions
>   - The tools and equipment needed on vehicles and to be on hand at sites
>   - Reiteration of fire prevention and safety considerations during tailboard meetings
>   - Daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity
> - Coordination procedures with federal and local fire officials
> - Crew training, including fire safety practices and restrictions
> - Method(s) for verifying that all Plan protocols and requirements are being followed
>
> A project Fire Marshal or similar qualified position shall be established to enforce all provisions of the Construction Fire Prevention Plan as well as perform other duties related to fire detection, prevention, and suppression for the project. Construction activities shall be monitored to ensure implementation and effectiveness of the Plan.

5.0 Applicable Activities, Project Areas, and Timing

5.1 Activities and Project Areas

Through the EPL Project, SCE proposes to remediate physical clearance discrepancies on two existing 220 kilovolt transmission circuits. The EPL Project includes the following components to remediate the identified discrepancies.

5.1.1 Transmission

The EPL Project would install new, and replace existing infrastructure along portions of existing 220 kilovolt transmission lines by:

- Installing new inter-set transmission structures and replacing or modifying the existing hardware on adjacent structures.
- Replacing the insulator assemblies on some existing structures that are not adjacent to new inter-set transmission structures.
- Removing existing conductor and installing new 609.5 Irving Aluminum Conductor Composite Core Ultra-Low Sag transmission conductor on existing structures.
- Removing existing OHGW and installing 7#7 Alumoweld overhead groundwire on existing structures

5.1.2 Substations

The EPL Project would include the following substation-related work:

- Disconnect existing conductor from existing positions at the existing Pisgah Switchyard and Cima Substation and connect newly installed conductors to existing substation positions.
- Remove existing overhead groundwire and install new overhead groundwire at the existing Pisgah Switchyard and Cima Substation. Make minor modifications to the existing terminal racks to accommodate the new overhead groundwire.
- Update, as necessary, relay settings at the existing Lugo, Cima, and Eldorado substations and at the existing Pisgah Switchyard.

This Plan is applicable to all components of the Project, including transmission, substation, civil engineering, and pre-construction and post-construction restoration work.

5.2 Timing

The measures and activities described in this Plan are to be followed and implemented during the duration of EPL Project construction and restoration activities.

Post-construction fire prevention and response measures to be performed during operations and maintenance (O&M) activities are not addressed in this Plan. SCE is currently performing O&M activities, including inspections, along the transmission lines included under the EPL Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the EPL Project and will continue to be conducted in accordance with all applicable rules and regulations.

6.0 Fire Prevention Personnel and Responsibilities

All SCE and contractor personnel are empowered and authorized to stop construction activities to prevent fire hazards.

Construction personnel will be designated to fill the following positions and perform the activities described in the following sections. All construction personnel are empowered and authorized to stop construction activities to prevent fire hazards. All project Foremen and designated individuals will act as site-specific fire personnel monitoring, overseeing and providing status of the day-to-day weather and fire watch conditions on-site. Furthermore, the project Superintendent, General Foreman, and project Safety Manager will provide oversight of all construction activities and monitor potential fire danger activities for the project.

6.1 Fire Marshal/Coordinator

- Oversees the entire project for fire and emergencies, and is responsible for fire prevention, fire safety, and identification of fire hazards
- Ensures compliance with the Plan
- Develops Emergency Fire and Evacuation Plans
- Coordinates with local fire departments and fire agencies as needed
- Designates, oversees, and delegates responsibilities to additional fire personnel
- Oversees assigned fire personnel, engines, trucks, patrols, water tenders, etc.
- Be responsible for preventing, detecting, controlling, and extinguishing fires set accidentally as a result of construction activity
- Review the Fire Control and Emergency Response Measures with the Safety Manager, Construction Site Managers and construction employees prior to starting work at each project area, and provide daily update regarding fire danger level in the project area
- Ensure that all construction personnel are trained in situational awareness in fire safety measures relevant to their responsibilities. At a minimum, construction personnel will be able and equipped to extinguish small fires
- Be equipped with communication devices such as radio, satellite, or cell phone communication capability
- Maintain an updated key personnel and emergency services contact (telephone and email) list, kept onsite and made available as needed to construction personnel
- Issue hot work permits and observe welding activities
- Ensure employees evacuate from assigned areas
- Ensure proper patrol of the Project to prevent and detect fires
- Make sure all state, county, and federal fire regulations and Project Fire Plan conditions are met
- Patrol all work areas after the close of work before finishing for the day
- Monitor the fire prevention activities of construction crews in SCE-designated Critical Protection Sites (CPS)

6.2 Safety Manager

- Assists the Fire Marshal/Coordinator with implementation of the Fire Management Plan
- Coordinates with the Fire Marshal/Coordinator to address potential fire hazards and implement fire hazard controls
- Conducts safety orientation and training
- Assures all required personnel complete the Fire Marshal/Coordinator's power point fire safety training for fire safe storage, use, and handling of flammable materials, the use of firefighting equipment, and the requirements of this Fire Management Plan
- Logs all training completed
- Ensures compliance with project safety plans, manages project safety incidents
- Coordinates project safety meetings
- Conducts field/facility investigations and communicates incidents and injuries with Project Management

6.3 Fire Patrol

- Monitors construction work areas along the project alignment, outside of active substations cleared of vegetation
- Maintains and operates a fire patrol vehicle equipped with a full 150-gallon water or foam tank and firefighting equipment
- Conducts risk management along the project alignment
- Detects and suppresses incipient fires
- Provide emergency management services

6.4 Construction Site Managers

- Ensure that equipment is kept at least a minimum of 25 feet from flammable vegetation and/or that appropriate fire protection measures (e.g., watering of area, fire blankets, etc.) will be employed in the event the minimum buffer is infeasible
- Train assigned employees in the safe storage, use, and handling of flammable materials, and the use of firefighting equipment, and the requirements of this fire plan
- Ensure flammable material storage areas are properly maintained
- Ensure that employees follow smoking rules and postings
- Ensure employees evacuate from assigned areas

6.5 Construction Site Foreman

- Complete the Fire Hazard Analysis form in Attachment A and ensure compliance with the form
- Conduct daily tailboard briefings
- Provide a head count to Construction Site Manager in the event of an emergency evacuation
- Communicate evacuation procedures with crew members

6.6 All Construction Personnel

- Use approved spark arrestors on all gasoline and diesel equipment
- Report violations of the Plan to Fire Marshal/Coordinator or Construction Site Manager immediately
- Take reasonable actions to suppress incipient fires, report fires, and comply with this Plan
- Follow requirements of this Plan
- Abide by all rules and signs
- Abide by smoking rules
- Follow evacuation protocols and report to evacuation location

7.0 Fire Prevention Methods

7.1 Potential Fire Hazards

Fire and explosion hazards can exist in almost any work area. Potential hazards include:

- Improper operation or maintenance of gasoline-powered equipment
- Improper storage or use of flammable liquids
- Smoking in prohibited areas
- Accumulation of trash
- Unauthorized hot work (riveting, welding, flame cutting or other fire or spark-producing operation)
- Sparks from electrical or other equipment
- Vehicle fires

7.2 Fire Hazard Analysis and Control

A Fire Hazard Analysis form (Attachment A) will be completed prior to the start of any construction activity that requires the use of open flames, sparking tools, or other direct ignition sources. The assessment form will be used to assess the work site, develop an emergency plan, identify known hazards, and ensure that employees are working in the safest possible environment. It is the responsibility of the individual Construction Site Foreman to complete the form in addition to conducting a Daily Job Briefing.

Fire hazards reporting is the responsibility of all personnel working on the project. Fire hazards will be reported immediately to the Fire Marshal/Coordinator, or Construction Site Manager. It is the responsibility of the Fire Marshal/Coordinator, Safety Manager, or Construction Site Manager to implement corrective action of a fire hazard.

7.3 Coordination with Fire Department and Other Agencies

The Fire Marshal/Coordinator is the single point of contact who will coordinate with the fire agencies and will provide documentation of notifications.

The Fire Marshal/Coordinator will coordinate with BLM, NPS, CALFIRE, the San Bernardino County Fire Department, the City of Hesperia Fire Department, and the Boulder City Fire Department according to the location of project components and will provide documentation of this coordination prior to construction.

This Plan will be submitted to CPUC, the BLM, NPS, CALFIRE, the San Bernardino County Fire Department, the City of Hesperia Fire Department, and the Boulder City Fire Department prior to construction.

The following measures will be implemented by SCE in coordination with the San Bernardino County Fire Department, the City of Hesperia Fire Department, the Boulder City Fire Department, CALFIRE, NPS, and the BLM:

- SCE and its contractors will abide by all restrictions to construction activity that may be enforced by the San Bernardino County Fire Department, the City of Hesperia Fire Department, the Boulder City Fire Department, CALFIRE, NPS, and/or BLM during Red Flag Warning days.

- SCE and its contractors will cease any and all work activities, including helicopter use, as directed by the BLM, NPS, CALFIRE, the San Bernardino County Fire Department, the City of Hesperia Fire Department, and the Boulder City Fire Department representatives in response to fire incidents.

8.0 Potential Fire Hazards

8.1 Smoking and Fire Rules

Smoking will not be permitted during Red Flag Warnings (Attachment B). Permitted smoking areas will be located at one or more Staging Areas, if such a Staging Area is not located in a CPS. These permitted smoking areas will be sited at least 100 feet away from combustible materials, gasoline and oil storage areas, and equipment servicing locations. The Fire Marshal/Coordinator and Safety Manager will post signs at staging yards to designate approved smoking areas. The Fire Marshal/Coordinator and Safety Manager will post signs in conspicuous places in the work area regarding smoking and fire rules. Construction Site Managers and Foreman will require and ensure compliance with these rules. Smoking will be prohibited under the following circumstances:

- No smoking along the transmission lines
- No smoking in areas that have vegetation
- No smoking during operation of light or heavy equipment
- No smoking within 100 feet of any area in which combustible materials (including fuels, gases, and solvents) are stored
- No smoking in any project construction areas during a Red Flag Warning that applies to the EPL Project area
- No smoking will be permitted in areas within a CPS, and no designated approved smoking areas will be established in a CPS

An approved smoking materials disposal container shall be provided in designated smoking areas and shall be at least 25 feet from vegetation. The container shall be resistant to high wind gusts either by design or an adequate form of securing. Smoking must be done within 5 feet of the container. The container will be removed from the construction area and cleaned by the contractor daily. The following minimum fire tools shall be located at the smoking container at all times:

- One (1) water backpack
- One (1) fire extinguisher
- One (1) type O shovel (with a minimum 48-inch handle)

Smoking-related debris (e.g., matches, cigarette butts, etc.) on the ground in or near the designated smoking area will result in the elimination of the smoking privileges. These rules shall be posted near the smoking container with contact information for the person(s) responsible for periodic removal and service of the disposal container.

8.2 Elimination of Ignition Sources

All nonessential ignition sources must be eliminated where flammable liquids are used or stored. The following is a list of some of the more common potential ignition sources and means that will be implemented to reduce the potential for ignition:

- Welding activities will be confined to cleared areas having a minimum radius of 25 feet as measured from the place of welding. All welding activities will be observed by the Fire Marshal/Coordinator or the Fire Marshal/Coordinator's designee, regardless of the location of the

welding activity. In the event native habitat is located beyond the 25-foot clear zone, welding screens will be used to prevent sparks from affecting native habitat.

- A welding site will be selected that is free of native combustible material and/or the site will be cleared of such material to minimize the fire hazard. All welding on supporting structures shall be performed during fabrication of the structures at the fabricator's yard, to the extent practicable. If welding occurs in the project area, the Fire Marshal/Coordinator or the Fire Marshal/Coordinator's designee shall observe the operation, regardless of the location of the welding activity. SCE will confine welding activity to cleared areas having a minimum radius of 25 feet as measured from place of welding and employ a welding screen when welding in the vicinity of combustible material. A fire patrol vehicle with water will monitor active construction work areas along the project alignment, outside of active substations cleared of flammable vegetation.
- All welding rigs shall be equipped with a minimum of one 20-pound or two 10-pound fire extinguishers, and a minimum of five gallons of water in a firefighting apparatus (see Section 9.3).
- Vehicle idling. Vehicles will not be allowed to idle on dirt roads with dead combustible vegetation under the vehicle.
- Diesel and gasoline internal combustion engines will be equipped with spark arresters that are in good working order and meet applicable regulatory standards. This applies to diesel and gasoline internal combustion engines, both stationary and mobile.

8.3 Dispensing and Storage of Gasoline, Diesel, and Combustible Chemicals

Gasoline, diesel, other fuels, and combustible chemicals are required to be in Occupational Safety and Health Administration/American National Standards Institute approved containers, stored out of the sun and away from other heat sources, and stored in accordance with applicable state and/or local fire codes. Flammable materials will be stored off the ground. Gasoline, diesel, other fuels, and combustible chemicals will be dispensed in compliance with the California Fire Code and its Nevada equivalent, depending on location of the dispensing.

8.4 Vegetation Clearance

Vegetation will be cleared or trimmed at and around construction sites as described in the EPL Project PEA and POD documents, thus resulting in fire breaks. Vegetation clearance/fire breaks at each construction site will be limited to the extent necessary to ensure safe construction while minimizing impacts.

8.5 Electric Grounding

Grounding of overhead circuits will be done in accordance with SCE standards, Institute of Electrical and Electronics Engineers standards, and California Division of Occupational Safety and Health requirements. For tubular steel poles and lightweight steel poles, grounding will be done to the structure. Alternately, and as necessary, a ground-driven rod will be used for grounding.

8.6 Hot Work (Welding and Cutting)

Welding activities will be confined to cleared areas having a minimum radius of 25 feet as measured from the place of welding. All welding activities will be observed by the Fire Marshal/Coordinator or that person's designated fire monitor/fire patrol individual, regardless of the location of the welding activity. In the event native habitat is beyond the 25-foot clear zone, welding screens will be used to prevent sparks from affecting native habitat.

Contractor shall select a welding site that is free of native combustible material and/or clear the site of such material to minimize the fire hazard. All welding on supporting structures shall be performed during

fabrication of the structures at the fabricator's yard, to the extent practicable. If welding occurs in the project area, Fire Marshal/Coordinator or that person's designated fire monitor/fire patrol individual shall observe the operation, regardless of the location of the welding activity. Contractor shall confine welding activity to cleared areas having a minimum radius of 25 feet measured from place of welding or employ a welding screen.

All welding rigs shall be equipped with a minimum of one 20-pound or two 10-pound fire extinguishers, and a minimum of five gallons of water in a firefighting apparatus (see Section 9.3).

8.7 Helicopter Use

Helicopters will be used during operation of the EPL Project. At least one day prior to any helicopter use, the helicopter contractor will contact SCE Air Ops and the fire agencies and provide the following information:

- Radio frequencies to be used by the helicopters
- Helicopter identifier data
- Information about the number of helicopters to be used dates of helicopter use, helicopter flight patterns, construction areas where helicopters would be used, and fueling and landing areas

Helicopter use will cease as directed by the fire agency representatives in response to fire incidents.

9.0 Fire Hazard Controls

9.1 Fire Safety Inspections and Housekeeping

The Fire Marshal/Coordinator will conduct regular fire safety inspections at each of the project areas during construction activities to ensure that proper housekeeping is maintained.

SCE and their respective construction contractors will maintain all construction areas in an orderly, safe, and clean manner. All oily rags and used oil filters will be removed from project construction areas. After construction activities are completed in each project area, the area will be cleaned of all trash and surplus materials. All extraneous flammable materials will be cleared from equipment staging areas and parking areas.

9.2 Employee Training

SCE will ensure that all construction personnel are trained in fire safety measures relevant to their responsibilities. This will include a PowerPoint Training prepared by the Fire Marshal/Coordinator. Construction personnel will be trained on situational awareness, basic fire safety training, emergency reporting, evacuation procedures, housekeeping measures, fire extinguishers, fire tools, hot work policies and procedures, Red Flag Warnings, and procedures/protocols required to extinguish incipient fires. A training and safety attendance roster will be completed, and a training and safety log will be completed for all training.

9.3 Fire Tools

Fire suppression equipment will be selected according to SCE standards. Equipment will include:

- Type O shovel with a minimum 48-inch handle
- Ax (or Pulaski) - shall have 2- 1/2 pound or larger head and be not less than 28" in overall length
- Fully charged fire extinguisher - U.L. rated at 2-A:10- B:C
- 5-gallon backpack pump-type fire extinguisher filled with water
- First aid kit

A set of fire tools will include one of each of the above tools. A set of fire tools will be required during Red Flag Warning events for each crew working outside of active fenced substations. The Fire Marshal/Coordinator vehicle and fire patrol vehicle(s) will also travel with a set of fire tools.

9.4 Fire Extinguishers

Fire extinguishers used on the project shall be in compliance with the International Fire Code Section 906. The type and size of extinguishers will vary by the construction activity being performed. Fire extinguishers will be utilized as stated below for each of the following construction activities:

- One pressurized chemical fire extinguisher for each gasoline-powered tool being operated, including but not restricted to compressors, hydraulic accumulators, gardening tools (such as chain saws and weed trimmers), soil augers, rock drills, etc., unless otherwise permitted by the Fire Marshal/Coordinator
- Fire extinguishers unless otherwise noted shall be a 2A:10B:C (5 pounds or larger)
- Portable fire extinguishers shall be installed in special hazard areas and be placed within 30 feet of gasoline operated equipment
- A fire extinguisher is required on all equipment used for project construction on the project alignment, outside of the active substations cleared of flammable vegetation. Additional requirements may be identified which increase the number of fire tools required on the equipment, as the Fire Marshal/Coordinator determines necessary based on field conditions

Once an extinguisher is selected, purchased, and installed, it is the responsibility of the Fire Marshal/Coordinator to oversee the inspection, maintenance, and testing of fire extinguishers to ensure that they are in proper working condition and have not been tampered with or physically damaged.

9.5 Fire Box

Contractor and or SCE shall equip centrally designated mobilization areas or concentrated short term project work areas with one sealed box of firefighting tools as per the direction of the Fire Marshal/Coordinator. The box shall be sealed but capable of being opened in the event of an emergency. The box shall be unlocked during subtransmission line project construction activities. Box shall be secured and locked at night. The Fire Box will contain the following equipment.

- Three (3) backpack pump-type fire extinguishers filled with water
- Five (5) type O shovels with a minimum 48-inch handle
- Five (5) axes (Pulaski) with a 2 ½ pound head or larger and not be less than 28 inches in overall length
- Five (5) McLeod fire tools
- One (1) serviceable chain saw of 3 ½ or more horsepower with a cutting bar 20 inches in length or longer
- Shall have communication capability to summon assistance in the case of fire or emergencies

9.6 Fire Patrol Vehicles and Equipment

The SCE fire prevention contractor will have a fully outfitted fire patrol vehicle(s) operated by fire personnel with the sole responsibility of fire prevention monitoring and suppression between active construction work areas along the project alignment, outside of active substations cleared of flammable vegetation. Crews that are working in areas that are remote from the other project components will have a designated fire person that will be responsible for monitoring for fires and will coordinate with the Fire Marshal/Coordinator. The fire patrol vehicle will be equipped with a full 150-gallon water or foam tank and a set of fire tools. The fire patrol vehicle will maintain fire suppression equipment and Advance First

Aid/automated external defibrillator/cardiopulmonary resuscitation and/or Emergency Medical Technicians and defibrillators on each unit.

SCE will be required to use water reservoirs for construction (dust control) that can also be used to assist in the prevention and suppression of incipient fires in work areas located outside of active fenced substations. The water tenders will be trained for basic fire preventative measures. All fire resources will be overseen by the Fire Marshal/Coordinator to assure proper placement for the project work site.

10.0 Communication and Coordination with Agencies

The following measures will be implemented by SCE in coordination with the fire agencies:

- SCE and its contractors will abide by all restrictions to construction activity that may be enforced by the Fire Marshal/Coordinator and fire agencies during Red Flag Warning days
- SCE will provide project-wide notification of Red Flag Warning events on the task of the day (TOD) calls, TOD emails, and via text message to foremen when the National Weather Forecast issues a Red Flag Warning mid-day. In addition, all personnel will be notified at daily tailboard briefings. Personnel will follow protocols as addressed in Attachment B
- SCE and its contractors will cease any and all work activities, including helicopter use, as directed by the Fire Marshal/Coordinator or fire agency representatives in response to fire incidents

10.1 Communication Protocols

All construction crews, Fire Marshal/Coordinator(s), Foreman, Construction Site Manager, and Safety Manager shall be provided with radio and cellular telephone access that is operational along the entire length of the approved route to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. All fires shall be reported to the fire agencies with jurisdiction in the Project area immediately upon ignition.

Each crew member shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards shall be updated and redistributed to all construction crew-members, as needed, prior to the initiation of construction activities and on the day the information change goes into effect. Outdated cards shall be destroyed.

10.2 Critical Protection Sites

CPS are areas associated with dry habitats, chaparral vegetation, inhabited property, and a considerable history of wildfires. CPS are defined as those areas that are located in a CPUC-designated “Tier 2—Elevated” or “Tier 3—Extreme” fire threat area (FTA). There are no CPS identified in Nevada.

A Tier 2 FTA is where there is an elevated risk for utility-associated wildfires. A Tier 3 FTA is where there is an extreme risk for utility associated wildfires. The Fire-Threat Map in Attachment C illustrates the location of CPS along the EPL Project alignment.

The Fire Marshal/Coordinator will assure that all crews working in these areas are fully aware of the potential for fire hazards for the construction activities being performed. The crews will be equipped with a set of fire tools appropriate for their construction activities. The presence of the Fire Marshal/Coordinator or designee with staged fire tools and suppression equipment is required while working in the CPS. These requirements will be noted at each tailboard briefing and logged. Additionally, no smoking will be allowed within these areas.

10.3 Red Flag Warning Special Provisions

The following special provisions will be carried out for days when notified of a Red Flag Warning by the National Weather Service:

- Suspend all non-essential work within CPS area. All non-essential work shall be determined by SCE and approved by the Fire Marshal/Coordinator on a case-by-case basis.
- If work must be done within fire hazard areas, crews should be especially careful during the progress of work and adequate firefighting equipment must be kept readily available.
- Type VI engines, Back pumps, shovels, fire extinguishers, etc. will be available.
- Crews will be alert for fires or possible fires while working in or passing through fire hazard areas.
- Equipment service areas, parking areas, and fuel and oil storage areas will be cleared of all flammable material for a radius of at least 20 feet. Small mobile or stationary engine sites will be cleared of flammable material for a radius of at least 15 feet from the engine.
- The contractor shall furnish one type O shovel (with a minimum 48-inch handle) and one 2A:10-B:C (at minimum) pressurized chemical fire extinguisher for each gasoline-powered tool, including but not restricted to compressors, hydraulic accumulators, gardening tools (chain saws and weed trimmers), soil augers, rock drills, etc. Fire extinguishers will be of the type and size necessary to provide assurance of controlling fire caused by use of portable power tools under various climatic and fuel conditions. The type O shovel (with a minimum 48-inch handle) must be kept within 100 feet from each chain saw when used off cleared landing areas.
- The Fire Marshal/Coordinator will coordinate with the BLM, NPS, CALFIRE, the San Bernardino County Fire Department, the City of Hesperia Fire Department, and the Boulder City Fire Department and communicate to the Safety Manager and the Construction Site Managers any road closures implemented during Red Flag Warning days. Project work site discussions will address preferred evacuation routes per specific site, to be included on the Daily Job Briefing. Means of evacuation may include vehicle, walking, or helicopter removal.
- The Fire Marshal/Coordinator and Safety Manager will coordinate with project personnel for any special measures to be taken during a Red Flag Warning day, including those described herein and described in Attachment B.
- As part of required employee training, training will be provided on procedures to implement during Red Flag Warning Days, such as those described herein and described in Attachment B.
- Portable fire extinguishers must be available at all work sites, on construction equipment, and vehicles within the Project area, regardless of other firefighting measures. The successful performance of a fire extinguisher in a fire situation largely depends on its proper selection, inspection, maintenance, and distribution.

11.0 Fire Emergency Response

11.1 Communication Protocols

In the event of a fire/incident, the following protocol will be followed by the Fire Marshal/Coordinator and Safety Manager for their respective personnel.

- During a fire/incident, the Fire Marshal/Coordinator and Safety Manager will communicate with the Foreman for each crew that an emergency evacuation has been declared
- The Foreman at each work site will communicate the head count to the Fire Marshal/Coordinator

- The Fire Marshal/Coordinator, in coordination with the Safety Manager, will communicate personnel locations and head count to the appropriate fire department to assist with rescue operations
- The Fire Marshal/Coordinator will communicate directions to the Foreman to proceed with their crew to an Evacuation Assembly Area that will be designated for each portion of the project prior to construction. The Evacuation Assembly Area will be selected based on available evacuation routes from the work area, current weather conditions (e.g., wind direction that could affect the direction of fire spread), and other pertinent conditions as identified by the Fire Marshal/Coordinator. The Evacuation Assembly Area will be discussed daily during the morning tailboard meetings. For individuals who are not directly associated with a crew or work location (e.g., monitors surveying, nesting bird biologists, lands surveying, inspecting or installing Environmentally Sensitive Area staking, installation of storm water Best Management Practices, weed abatement teams, cultural resource assessment, and/or mitigation teams), the Fire Marshal/Coordinator will communicate directly with those individuals, via cell phone, satellite phone, or radio
- The Foreman at each work site will communicate the direction they will be travelling to escape the fire using a global positioning system unit, compass, or map

All evacuated personnel will be required to check in with their Foreman and/or the Fire Marshal/Coordinator upon arrival and check out before leaving. A project Communication Plan will be prepared to address SCE organizational notification procedures.

11.2 Evacuation Routes and Plans

Evacuation routes and plans will vary for each construction work area and will be dependent upon daily activities at and in the vicinity of each construction work area. Evacuation routes will therefore change on daily basis and will be communicated to workers in daily tailboard meetings by the Foreman or Fire Marshal/Coordinator.

11.3 Emergency Response Coordinators/Supervisors

The Fire Marshal/Coordinator and Safety Manager will be responsible for verifying that personnel have evacuated from their assigned areas. A map indicating the location of hospitals in the project area will be provided in the emergency medical plan located in the contractor's Emergency Response Safety Plan.

11.4 Support Services

BLM would lead the response to fire emergencies along those portions of all Segments that are within a Federal Responsibility Area and that are not on lands managed by the NPS.

NPS would lead the response to fire emergencies along those portions of Segments 3 and 4 that are within a Federal Responsibility Area and that are on lands not administered by the BLM.

CALFIRE would respond to fire emergencies along those portions of all Segments within a State Responsibility Area.

The San Bernardino County Fire Department or the City of Hesperia Fire Department would respond to fire emergencies along those portions of Segments 1 and 2 within a Local Responsibility Area.

The Boulder City Fire Department would respond to fire emergencies within its jurisdiction.

A complete list of emergency contact information will be provided on laminated cards to each crew member.

Helicopter support services may be provided by construction helicopters in the event of an emergency. They can be equipped with "water bags" to provide incipient fire extinguishing services.

11.5 Fire and Emergency Reporting Procedures

If a fire/incident is discovered

- Alert the appropriate fire agency by calling 9-1-1
- Notify the Fire Marshal/Coordinator
- Report all incidents to the Construction Site Foreman who will inform the Fire Marshal/Coordinator
- Remain calm and speak clearly
- Provide accurate location, size, and type of Incident / fire
- Notify supervisors and other personnel
- Establish communications to any necessary support services
- Assess and communicate what action is currently taking place
- Job site or private / public incident
- Take a site-specific employee head count immediately.
- ALL incidents are to be reported

The fire will be fought by SCE and its contractors ONLY if

- The fire department has been notified of the fire, AND
- The fire is incipient and confined to its area of origin, AND
- There is an escape route and employees can fight the fire with their backs to the escape route, AND
- The proper PPE and extinguisher/tools are available, AND are in good working order, AND their proper use is known, AND
- The personal are fully trained and certified firefighters. If employees are unsure of their ability or the fire extinguisher's capacity to contain the fire, they will leave the area.

12.0 Plan Approval

As mandated in the CPUC *Guidelines*, this Plan "will be provided to federal, state, and local fire agencies for review and comment as applicable to where components of the proposed project would be located. CPUC will approve the final Construction Fire Prevention Plan. Record of the request for review and comment and any comments received from these agencies will be provided to CPUC CEQA Unit Staff."

Per the *Guidelines*, this Plan will be provided to the following: BLM, NPS, CALFIRE, the San Bernardino County Fire Department, the City of Hesperia Fire Department, and the Boulder City Fire Department.

Attachment A
Fire Hazard Analysis

Fire Hazard Analysis

Fire Hazard Analysis/Hot Work Permit

Fire Hazard Analysis	Job#:
Project Activity Fire Level	Project Name:
	Location:
Date:	Foreman:
	Fire Watch:
Level (if applicable):	Emergency Contact Information Emergency #:
Task Description:	Hospital : Medical

Jobsite Checklist (Check all that

☐ Fire Coordinator/Fire Marshal Contacted	☐ Open flame operation required (welding)	☐ Firefighting/suppression equipment inspected
☐ Assess area for fire hazard potential	☐ Welding area prepared for use	☐ Flammable gases identified
☐ Firefighting/suppression equipment inspected	☐ Spark sources identified prior to use	☐ Chemical sources identified
☐ Discuss emergency escape plan	☐ Area prepared for use of sparking equipment	☐ Wildlife (bugs, insects, bees, etc.)
☐ Communication devices working/ in service	☐ Firefighting/suppression equipment in place	☐ Wildlife (dogs, raccoons, rodents, etc.)
☐ Identify need for additional water support	☐ Pulaski	☐ Native vegetation identified and cleared
☐ Eliminate housekeeping hazards	☐ Shovel(s)	☐ Identify physical hazards
☐ Smoking prohibited and/or smoking area	☐ Fire extinguisher (min. 2A10BC)	☐ Uneven surfaces
☐ identified	☐ Water Backpack (Min. 5 gallons)	☐ Ice, mud, snow, rain
	☐ Water Truck/Buffalo (Min. 300 gallons)	

Fire Hazard Job Analysis:

What is the fire hazard associated with this job?

What are the necessary procedures to reduce the likelihood of a spark or fire?

What special precautions shall be taken to ensure a fire doesn't occur?

What fire defenses are in place to prevent the spread of fire and protect the lives of employees on this work site?

Change (Any of the changes indicated below necessitates completing a new job briefing)

☐ Change of condition ☐ ☐ Change of person in charge

Attendees (Visitors to the job site are required to review this form when they sign the onsite tailboard)

Print Name:	Sign Name:	Date:

Attachment B
Red Flag Warning

RED FLAG WARNING

Fire Weather Watches and **Red Flag Warnings (RFW)** are issued by the National Weather Service to advise fire and land management agencies of the possible development, or actual occurrence of Red Flag conditions. A Red Flag event occurs when critical weather patterns develop that could lead to large, dangerous Wildland fires. Conditions that warrant a Fire Weather Watch or RFW, either alone or in combination are the expected or actual occurrence of the following:

Fire Weather Watch – ***(No Action Required – Advisory only)*** – Issued in one or more counties whenever the potential for Red Flag conditions exists. A Fire Weather Watch will normally be issued 12 to 96 hours in advance of the expected onset of Red Flag conditions. If dry lightning is the only condition expected in the 0 to 12 hour time frame, a Fir Weather Watch may be issued or continued in place of an RFW.

Red Flag Warning (RFW) is a term used by fire weather forecasters and fire agencies to call attention to limited conditions of particular importance that may result in extreme burning conditions. The Warning is issued when there is an ongoing event of the fire weather forecaster has a high degree of confidence that Red Flag criteria will occur within 24 hours of issuance. For the project area, these criteria require dry fuels with the following:

- Southern California (Excluding the Antelope Valley): RH ≤ 10 percent with sustained wind ≥ 15 mph or with gusts ≥ 25 mph for 6 hours or more. RH ≤ 15 percent with sustained wind ≥ 25 mph or with gusts ≥ 35 mph for 6 hours or more.
- Antelope Valley and SE Kern County Deserts: Relative Humidity ≤ 15 percent and sustained (20-foot) winds ≥ 25 mph for duration of 8 hours or more.
- Desert Areas: Relative Humidity ≤ 15 percent and wind gusts ≥ 35 mph for 6 hours or more.
- Central California Interior: Relative Humidity ≤ 15 percent with sustained winds ≥ 25 mph and/or frequent gusts ≥ 35 mph for duration of 6 hours or more. OR Relative Humidity ≤ 10 percent for a duration of 10 hours or more regardless of wind.
- Dry thunderstorm activity (i.e., considerable lightning with little or no measurable precipitation).

    a. **Local Fire Rules** – All work will abide by requirements imposed by local fire agencies, monitored by the EPL Project Fire Marshal.

    b. **Hot Work** – No hot work will be performed during red flag warnings.

    c. Smoking is prohibited on all worksites and in construction yards during red flag warnings.

d. **High Fire Threat Zone** – During active red flag warnings, when working in a High Fire Area during an RFW, (both emergency and non-emergency work) should only be performed if approved by the Fired Marshal along with

   1. The crew is under direct supervision of a crew foreman or site lead, AND
   2. The crew maintains adequate communications (900 megahertz, cellular, satellite phone, etc.), AND
   3. The crew has required fire suppression equipment deployed in the immediate area of the work being performed (shovels, water backpack and ABC fire extinguisher), AND
   4. Weather conditions, terrain and surrounding vegetation would permit the crew to extinguish a fire resulting from the work being performed.

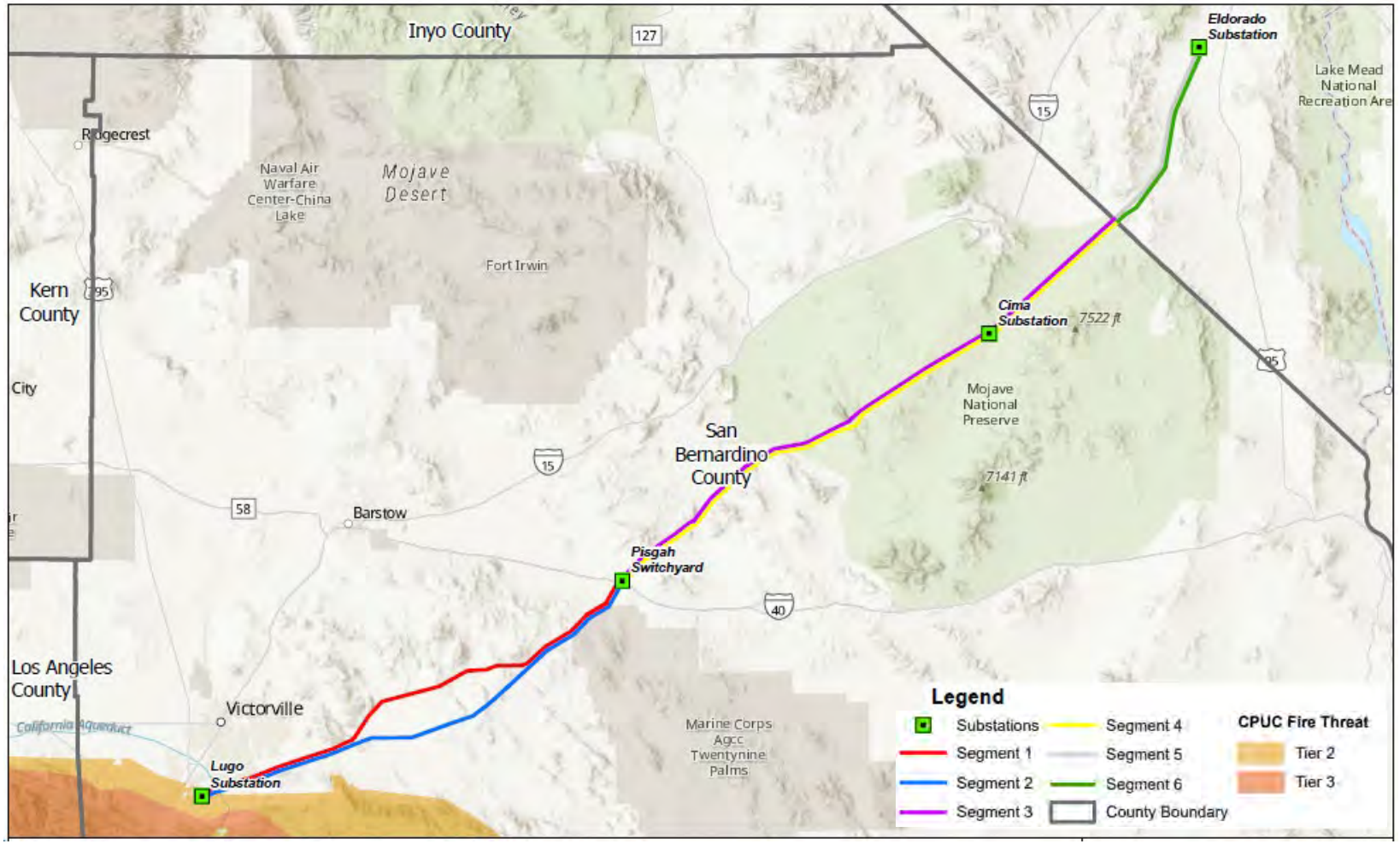
Exception – When work is performed within a High Fire Area but confined to an area devoid of flammable or combustible materials (e.g., parking lot, commercial area, agricultural lands, bare ground, work indoors, etc.). Work confined to the location types above that do not emit sparks or emit a flame and cannot ignite a fire may be performed within High Fire Area.

e. **Firefighting** – Only appropriately certified, trained and approved equipped vehicles with proper fire PPE will participate in firefighting suppression operations. Work crews shall take direction from the Fire Marshal/Project Managers until operational control is turned over to the appropriate fire agencies (i.e., CALFIRE). Unequipped vehicles and/or untrained personnel shall remain well clear of the area affected by fire suppression operations.

f. **Shut Down Procedures** – During a RED FLAG event the project will be determined to be shut down based upon the recommendation of the Fire Marshal. The Fire Marshal or designee will be onsite monitoring the work operations and the daily weather conditions. The Fire Marshal will discuss his recommendation with the onsite Foreman and work operations will halt for the day. The Foreman will inform all crews to get their work site safe and secure (if work is in progress) and to demobilize back to the yard. If during discussion between the Fire Marshal and the Foreman it is determined that there is low risk work that can be performed, the crew will adjust work tasks for that day.

g. **Red Flag Posting** – RFW will be posted in the Job Trailer for the duration of the project.

Attachment C
CPS Map


Inyo County
127
Eldorado Substation
Lake Mead National Recreation Are
15
Ridgecrest
Naval Air Warfare Center-China Lake
Mojave Desert
Fort Irwin
Kern County
395
Cima Substation
7522 ft
City
Mojave National Preserve
San Bernardino County
15
7141 ft
58
Barstow
Pisgah Switchyard
40
Los Angeles County
Victorville
California Aqueduct
Lugo Substation
Marine Corps Agcc Twentynine Palms
Legend
Substations
Segment 1
Segment 2
Segment 3
Segment 4
Segment 5
Segment 6
County Boundary
CPUC Fire Threat
Tier 2
Tier 3

APPENDIX H

Ambient Noise Survey

Southern California Edison

Ambient Noise Evaluation

Eldorado-Pisgah-Lugo Project

San Bernardino County, California

May 2022

Ambient Noise Evaluation

EPL Project

May 2022

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Contents

Acronyms and Abbreviations

C	Celsius
Caltrans	California Department of Transportation
CFR	Code of Federal Regulations
CNEL	Community Noise Equivalent Level
CSP	Control-Silver Peak
dBA	decibel A-weighted
FHWA	Federal Highway Administration
kV	kilovolt
Ldn	Day/Night Noise Level
Leq	Equivalent Continuous Noise Level
mph	miles per hour
RH	relative humidity
SLM	sound level monitor

1 Introduction

This report describes the noise environment in the vicinity of the Eldorado-Pisgah-Lugo (EPL) Project Study Area; the Study Area is defined as the planned work locations plus the closest sensitive receptors with potential to be affected by project-related noise. Noise sources may include helicopters, aerial cranes, rubber-tired cranes, augers, excavators, dozers, graders, mixers, and other various diesel- and gasoline-powered construction equipment. Potential receptors include suburban and rural communities and recreationists.

The EPL Project alignment in San Bernadino County spans the west and east sides of the county. Population, and thus potentially sensitive receptors, are located at the western end of the EPL Project alignment where the City of Hesperia and the rural communities of Apple Valley and Lucerne Valley are found. The EPL alignment continues eastward across the Mojave National Preserve, terminating at Eldorado Substation in Nevada (Figure 1). Figure 2 shows the location of the ambient noise monitoring locations addressed in this report in relation to the EPL Project alignment.

2 Background Information on Noise

The following typical environmental noise values provide a generalized framework to describe low, moderate, and high environmental noise levels. Within this general framework, low noise levels can be associated with rural and residential suburban areas away from highway noise, moderate noise levels may be associated with suburban residential and commercial areas, and areas in proximity to transportation systems. High noise level environments are more typical in urban, industrial and commercial environments.[1]

Table 1. Typical Environmental Noise Values

Leq Level	Community Noise Level Description
< 40 dBA	Remote
40 – 52 dBA	Low
53 – 64 dBA	Moderate
>65 dBA	High

Note: Terms found in Table 1 are explained in the following sections.

2.1 Noise Term Definitions

The following terms are used in this report:

- **Equivalent Continuous Noise Level, (Leq):** The level of a steady sound that, in a stated time period, and at a stated location, has the same A-weighted sound energy as the time-varying sound. This is not exactly the same as a statistical average of the sound pressure which is presented in this report as L50. The Leq is the

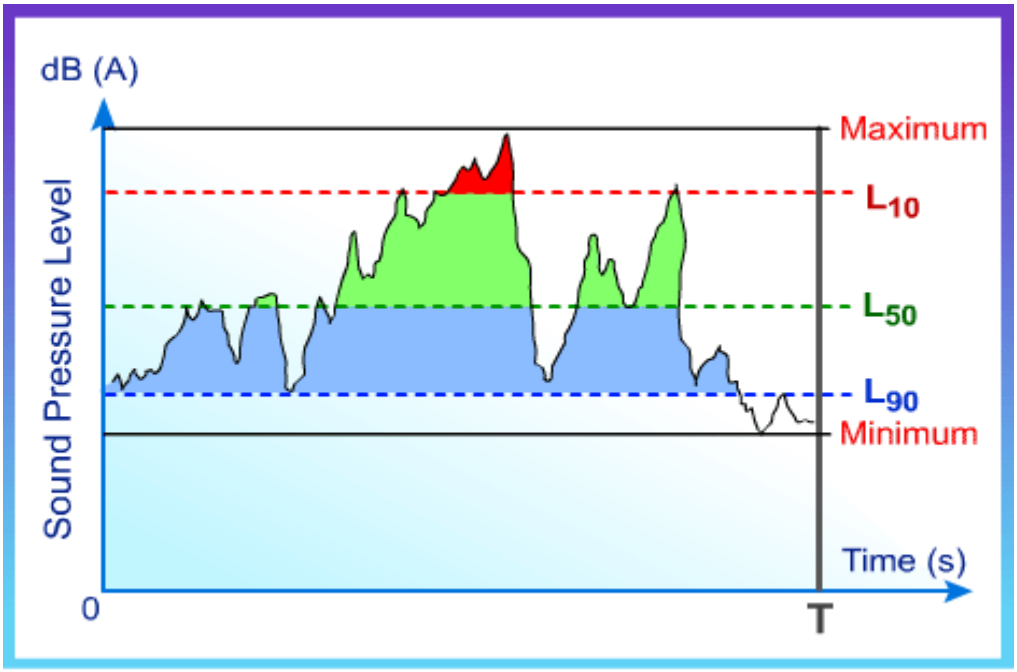
[1] Gavin King, Roland-Mieszkowski M., Jason T, and Rainham D., Noise Levels Associated with Urban Land Use, Journal of Urban Health, 2012 Dec; 89(6): 1017–1030

most general quantitative parameter for defining environmental noise level. It is commonly found in regulatory standards and before and after comparisons.

The Leq is an equivalency value to account for sound energy and is typically close to the statistical average (L50), but not the same as the statistical average. The continuous sound pressure equivalency (Leq) is typically a few dB higher than the statistical average. As such the Leq is the primary descriptor of noise conditions within this report.

- **Community Noise Equivalent Level, (CNEL):** The 24-hour A-weighted average sound level, obtained after the addition of 5 decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m. The CNEL value is only presented for monitoring sessions that were 24-hours. The CNEL provided by the Session Reports (Attachment A) is the same as the Leq if the monitoring period was completed during daytime hours.
- **Day/Night Noise Level, (Ldn):** The 24-hour A-weighted average sound level obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m. The Ldn value is only presented for monitoring sessions that were 24-hours. The Ldn value provided by the Session Reports (Attachment A) is the same as the Leq if the monitoring period was completed during daytime hours.
- **Range, (Lmin/ Lmax):** The minimum and maximum A-weighted sound levels (range) measured on a sound level meter, during a designated time interval.
- **Statistical Analysis, (Ln, e.g., L10, L50 / Lavg, and L90):** Ln are noise levels exceed some (n) percentage of the time. Commonly used values of n for the n-percent exceeded level,
  - L10 – often used when assessing traffic noise and in planning applications and takes account of peaks in noise. Sometimes referred to as the annoyance level regarding individual noise environments.
  - L50 (sometimes referred to as Lavg) – statistically the sound level mid-point.
  - L90 – generally considered to represent background or ambient noise level. Sometimes referred to as the din or background level.
  - Statistical analysis of each Ln value (0-100) for each noise monitoring period are found in Attachment A, Session Reports. Table 1 provides the Ln values above as a summary.

The following graph presents an example of a sound pressure reading with associated L10, L50, and L90 levels. Note that for the same sound event, L10 > L50 > L90.



Source: Ln values what are they and how are they used, July 13, 2018 (https://pulsarinstruments.com/en/post/what-are-ln-values-and-how-are-they-used)

The relation of the Leq and Lavg to the statistical ranges (Lmin-Lmax, and L90 – L10) provides insight into describing the nature of the noise.

2.2 Noise Characterization

There are several methods of characterizing sound. The most common is the A-weighted sound level or dBA. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Environmental sound levels are described in terms of an average level that has the same acoustical energy as the sum of all the time-varying events. This energy equivalent sound/noise descriptor is called Leq. A common averaging period when measuring Leq values is hourly, but Leq can describe any series of noise events of arbitrary duration. The Leq is similar, but distinguished from, the statistical average of sound pressure measurements. The statistical average, referred to as both Lavg and L50 is also used in terms of a specific parameter that provides a basis for measurements and comparisons.

Values presented for CNEL and Ldn are both modifications of the Leq value. The CNEL and Ldn provide additional weighting on noise that occurs in the evening and night hours as described in the terminology subsection of this report.

The Leq and Lavg values are evaluated for each location including the relation of the Leq and Lavg to two key ranges in noise analysis, the Lmin-Lmax range and the L10-L90 range. Statistical averages and continuous sound level equivalencies that are close to the L90 indicate most of the noise included in the measurement was part of the background. Equivalencies and averages closer to the L10 indicate much of the noise associated with

a specific measurement was from sporadic events, that tend to be associated with the annoying component of community noise.[2]

For instance, if someone were standing near a metal salvage yard there may be a constant din of noise from different ongoing operations. This might represent the L90 value. Then there may be occasional or sporadic loud noises on top of that din when the crusher is used. The L10 value may be representative of this noise level.

CNEL and Ldn are only included for 24-hour noise measurements. For all other measurements, CNEL and Ldn are the same as the Leq, as seen in the Session Reports found in Attachment A.

Lc-a provides a reference value for the low frequency noise which is commonly described as more detrimental to enjoyment of home environments. It is often assumed that an Lc-a exceeding +15 dB is a level of concern indicator of Lower Frequency Noise.[3]

3 State and Local Noise Regulations and Guidelines

3.1 State

3.1.1 California Noise Control Act

The California Noise Control Act states that excessive noise is a serious hazard to public health and welfare, and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also recognizes that continuous and increasing bombardment of noise exists in urban, suburban, and rural areas. This act declares that the State of California has the responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. The Office of Noise Control in the Department of Health Services provides assistance to local communities developing local noise control programs, and works with the Governor's Office of Planning and Research to provide guidance for the preparation of the required noise elements in city and county general plans, pursuant to Section 65302(f) of the California Government Code.

3.1.2 Caltrans

Title 23, Part 772 of the Code of Federal Regulations (23CFR772), "Procedures for Abatement of Highway Traffic Noise and Construction Noise," outlines procedures for noise studies that are required for approval of Federal-aid highway projects. FHWA published a final rule revising 23CFR772 on July 13, 2010 (Appendix A). The Federal Highway Administration (FHWA) requires that State highway agencies prepare updated state-specific policies and procedures for applying the revised regulation in their state.

In response to this federal requirement the California Department of Transportation (Caltrans) has published the Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects (Protocol). This document presents Caltrans policies and procedures for applying 3CFR772 in California.

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[2] Noise Assessment - Noise Descriptors for Environmental Noise (epd.gov.hk)
https://www.epd.gov.hk/epd/noise_education/web/ENG_EPD_HTML/m2/types_3.html

[3] Jakobsen, J., Danish Guidelines on Environmental Low Frequency Noise, Infrasound and Vibration, in: Moller, H. and Lydolf, M., eds, *Proceedings of the 9th International Meeting on Low Frequency Noise & Vibration. Aalborg 2000 May 17th-19th May Aalborg Denmark*, Department of Acoustics, Aalborg University, Aalborg, 2000, 57-64.
Malgorzata Pawlaczyk-Luszczynska1, Dudarewicz1 A. , Waszkowska2 M, and Sliwinska-Kowalska M., "Annoyance Related to Low Frequency Noise in Subjective Assessment of Workers," Journal of Low Frequency Noise, Vol. 28 No. 1 2009, (p. 1-17).

23CFR772 applies to all Federal or Federal-aid Highway Projects authorized under title 23, United States Code. Therefore, this regulation applies to any highway project or multimodal project that: (1) requires FHWA approval regardless of funding sources, or (2) is funded with Federal-aid highway funds.

Because the EPL Project is not part of the Federal-aid highway projects, the Traffic Noise Analysis Protocol and the accompanying document titled Technical Noise Supplement, A Guide for the Measurement, Modeling, and Abatement of Highway Traffic and Construction Noise (TeNS) (California Department of Transportation 2020) are not directly appliable to this project. The Caltrans noise analysis procedures, practices, and other useful technical background information related to the analysis of highway noise impacts and abatement, while not required, was used as a guideline for conducting the background noise investigation and preparing this report.

3.2 Local

3.2.1 San Bernadino County Countywide Plan

The County's Countywide Plan contains the following noise-related policies:

Policy HZ-2.6 Coordination with transportation authorities

We collaborate with airport owners, FAA, Caltrans, SBCTA, SCAG, neighboring jurisdictions, and other transportation providers in the preparation and maintenance of, and updates to transportation-related plans and projects to minimize noise impacts and provide appropriate mitigation measures.

Policy HZ-2.7 Truck delivery areas

We encourage truck delivery areas to be located away from residential properties and require associated noise impacts to be mitigated.

Policy HZ-2.8 Proximity to noise generating uses

We limit or restrict new noise sensitive land uses in proximity to existing conforming noise generating uses and planned industrial areas.

Policy HZ-2.9 Control sound at the source

We prioritize noise mitigation measures that control sound at the source before buffers, soundwalls, and other perimeter measures.

3.2.2 San Bernadino County Noise Ordinance

The San Bernadino County Noise Ordinance includes the following:

> The County's Development Code (Division 3, Countywide Development Standards; Chapter 83.01, General Performance Standards, Section 83.01.080, Noise) sets interior and exterior noise standards for specific land uses by type of noise source. Noise standards for stationary noise sources are summarized in Table 3.11-6, Noise Standards for Stationary Noise Sources. As shown, the noise standard for residential properties is 55 dBA Leq from 7 a.m. to 10 p.m. and 45 dBA Leq from 10 p.m. to 7 a.m. For industrial properties, the noise standard from stationary noise sources is 70 dBA at any time of the day or night. Areas exposed to noise levels exceeding these standards are considered noise-impacted areas. The County's Development Code exempts noise from construction noise, provided construction is limited

to the hours between 7 a.m. and 7 p.m., except on Sundays or federal holidays, when construction is not allowed.

Table 3.11-6:
Noise Standards for Stationary Noise Sources

Affected Land Uses (Receiving Noise)	Leq (7 a.m. – 10 p.m.)	Leq (10 p.m. – 7 a.m.)
Residential	55 dBA	45 dBA
Professional Services	55 dBA	55 dBA
Other Commercial	60 dBA	60 dBA
Industrial	70 dBA	70 dBA

Source: San Bernardino County 2014, Development Code, Section 83.01.080, Table 83-2
Notes:
Leq = (Equivalent Energy Level). The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a
given sample period, typically 1, 8, or 24 hours.
dBA = (A-weighted Sound Pressure Level). The sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The
A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the
sensitivity range of the human ear.

3.2.3 City of Hesperia Noise Ordinance

The City of Hesperia Noise Ordinance is as follows:

16.20.125 - Noise.

A. Noise Measurement. Noise will be measured with a sound level meter, which meets the standards of the American National Standards Institute (ANSI Section S1.4-1979, Type 1 or Type 2). Noise levels shall be measured using the "A" weighted sound pressure level scale in decibels (ref. pressure = 20 micro-newtons per meter squared). The unit of measure shall be designated as dB(A). The building official shall be the noise control officer.

B. Noise Standards.

1.The following table describes the noise standard for emanations from any source, as it affects adjacent properties:

NOISE STANDARDS

Affected Land Use (Receiving Noise)	Maximum Noise Level	Time Period
A-1, A-2, R-1, R-3 and RR Zone Districts	55 dB(A)	10:00 p.m. - 7:00 a.m.
A-1, A-2, R-1, R-3 and RR Zone Districts	60 dB(A)*	7:00 a.m. - 10:00 p.m.
C-1, C-2, C-3, C-4, C-R, AP, and P-I Zone Districts	65 dB(A)*	Anytime
I-1 and I-2 Zone Districts	70 dB(A)*	Anytime

* Due to wind noise, the maximum permissible noise level may be adjusted so that it is no greater than five dB(A) above the ambient noise level.

2.No person shall operate or cause to be operated any source of sound at any location or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level, when measured on any other property, either incorporated or unincorporated, to exceed:

a. The noise standard for that receiving land use (as specified in subsection (B)(1) of this section) for a cumulative period of more than thirty (30) minutes in any hour; or

b. The noise standard plus five dB(A) for a cumulative period of more than fifteen (15) minutes in any hour; or

c. The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour; or

d. The noise standard plus fifteen (15) dB(A) for a cumulative period of more than one minute in any hour; or

e. The noise standard plus twenty (20) dB(A) for any period of time.

C. If the measured ambient level exceeds any of the first four noise limit categories above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

D.If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in subsection (B)(1) of this section shall be reduced by five dB(A).

E. Exempt Noises. The following sources of noise are exempt:

1. Motor vehicles not under the control of the industrial use;

2. Emergency equipment, vehicles and devices;

3. Temporary construction, repair, or demolition activities between seven a.m. and seven p.m. except Sundays and federal holidays.

4 Ambient Noise Monitoring Methods

Arcadis Senior Scientist, Mr. Kevin Held, MS, CHMM, CIS, obtained sound measurements along the EPL Project alignment using two TSI brand SoundPro DL, Type 1 Environmental Sound Level Meters (SLMs). The SLMs and

related equipment were leased from Pine Environmental, Inc. who maintains documents on instrument inspections, maintenance and certifications. Instrument setup followed manufacturer's directions for community noise exposure monitoring while obtaining Lc-a measurements as an indication of the amount of low frequency (subsonic) sound pressure based upon the difference between C-weighted and A-weighted measurements.

The SLMs and calibrator were factory serviced within the past year and field calibrated with a TSI QC-10 calibrator. Documentation on the noise meter settings, run dates and times, and data is found in individual session reports generated by the SLMs using TSI data management software. A session report for each monitoring location in this report is presented in Attachment A.

Monitors and power sources were positioned inside specialized enclosures mounted on survey tripods with extended outdoor microphones on the top of the enclosures. Field calibrations were completed while the SLMs were inside the enclosure and connected to the extended microphone. Photographs from each noise monitoring location, showing the monitoring station (enclosure, microphone, and tripod) are found in Attachment B. Equipment was deployed from Monday April 4, 2022, until Friday April 9, 2022, as listed in Table 2, Sound Level Monitoring Sessions.

Meteorological data was monitored during each monitoring session to ensure conditions were compliant with manufacturer recommendations and regulatory stipulations described in Section 5.2 of this report. Any time there was potential for wind with speed at or above 11 miles per hour (mph) to contact the microphone provisions were made to ensure there was adequate wind block to ensure wind speed hitting the microphone would remain less than 11 mph throughout the monitoring session. A Davis Vantage Pro meteorological sensor with tripod was used to monitor concurrent meteorological conditions in the general area and at the microphone.

SLM data compiled and presented in Table 3 is entirely A-scale weighted. Data summarized in Table 3 includes the parameters which are defined in the report sub-section on term definitions.

5 Measuring Locations, Times, and Durations

Five monitoring locations were selected to provide data representative of locations where receptors may be affected by noise generated during construction of the EPL Project (Figure 2). The monitoring locations are adjacent to residences and other potential receptors along the EPL Project alignment.

The monitoring time at locations varied (Table 2). Most locations were monitored for 1 hour or 2 hours. One location in the City of Hesperia was monitored for a 24-hour period to ensure the study acquired some broadly representative overnight data sufficient to provide CNEL and Ldn measurements for a location generally representative of community receptors on the EPL Project alignment.

No monitoring was performed in the State of Nevada; however, results from the monitoring performed at locations 5 and 6 are taken to be representative of ambient noise along the EPL Project alignment in Nevada.

5.1 Meteorological Constraints on Noise Measurements

The California Department of Transportation Measurements and Instrumentation Manual Technical Noise Supplement Section 3.6.1 "Meteorological Criteria" states noise measurements should not be made when either one or more of the following meteorological conditions exist.

- Wind speeds are more than 11 mph.

- Manufacturers' recommendations for acceptable temperature and humidity ranges for instrument operation are exceeded. For the TSI/Quest® SoundPro these ranges are from -10ºC to +50ºC (<± 0.5 dB effect); Storage -25ºC to +70ºC, and 10%-90% (non-condensing) Relative Humidity (RH).
- Although the range of acceptable RH is contingent on the manufacturer's specifications, an attempt should be made to pair measurements for similar conditions of humidity. For example, comparisons of measurements made under extremely dry conditions (e.g., less than 25%) with those made during humid conditions (e.g., more than 75%) should be avoided.
- Wet pavements. All reported background sound measurements with a highway noise component are assumed valid for dry pavements only.

Meteorological conditions can affect noise measurements in several ways. At an ambient noise level of 40 to 45 dBA, wind speeds of more than 11 mph may begin to contaminate noise measurements with a rumbling noise because of frictional forces on a microphone covered with a wind screen.

The wind speed at each monitoring location was recorded to be less than 11 mph. If there were wind speeds greater than 11 mph at a particular time and location, than the microphone was repositioned into a monitoring location with sufficient wind blockage to ensure the wind speed at the microphone was never at or above 11 mph during the monitoring session. Repositioning of the microphone to avoid excessive wind impact on the microphone was necessary for five measurements, three from Lucerne Valley and two from measurements near Kelbaker Road in the Mojave National Preserve. Specific strategies for protecting the microphone from the wind is described with the individual monitoring session details provided in Table 3.

Extremes in temperature and relative humidity affect critical components of sound level meters. For example, during conditions of high humidity, water condensation can form on the vibrating microphone membrane, causing a "popping" sound that can contaminate noise measurements. The temperature and RH at the time of measurement was within the acceptable ranges.

Rain or snow on highway pavement can alter the levels and the frequencies of tire and pavement noise, causing it to vary in unpredictable ways from levels on dry pavements, on which vehicle noise source characteristics are based. Pavement in the vicinity of all monitoring locations was dry during the monitoring session.

6 Findings

Results for each monitoring location are described below. These evaluations discuss Leq and Lavg as fundamental environmental noise levels. Other statistical data points such as range, L10, L90, and CNEL are considered to enhance the understanding of background noise conditions at each location.

6.1 Location 1: Hesperia

Monitoring was conducted from two locations as seen in Figure 4. The Leq (24-hr) was collected at Location 1A. The measurement was taken at the boundary between the transmission line corridor and the backyard of a residence, seen in Figure 5. The Leq was 55.4 dBA, which is considered moderate based on a wide range of communities. This level exceeds the City of Hesperia nighttime noise standard (55 dBA) for an area zoned for residential use. Additional measurements on nearby streets including monitoring at Location 1B were consistent with the noise level recorded at Location 1A. The LDN and CNEL were greater than the Leq. indicating noise levels are consistent between day and night. The primary source of noise was vehicle traffic, particularly from

Rancho Road. There was also noise from residences in this neighborhood where homes are relatively close together. Vehicles with teenagers and young adults were observed at nearby locations along the utility corridor before sundown and during nighttime, adding to noise levels at night. L90 levels indicated the noise din is steady in this community. While the L90 (background noise level) decreased at night the L10 (sporadic noise) remained significant. This may have resulted from periodic truck traffic on Rancho Road.

6.2 Location 2: Apple Valley

Monitoring was conducted at three locations, one during night hours (Central Road) and two during daytime. Leq levels ranged from 43 to 47 dBA, which is indicative of low community noise levels and consistency across the monitoring locations. The community noise level did not decrease significantly until after 10 pm. Vehicle traffic and community sounds including residences and commercial facilities were the primary noise sources. Wind was a contributing factor. The statistical analysis indicates low L90 levels. This, with the time graphs for these locations, shows periods of very low noise level where wind is the primary source, punctuated by sporadic community sounds such as barking dogs, moderate or sporadic traffic, airplanes, residences, and commercial traffic at small businesses.

The utility corridor in which the EPL Project alignment is located runs through the most commercial section of the Apple Valley community. Noise travels across the valley readily. Comparison of the LDN, CNEL, and Leq at Location 2B (Central Road) indicates the sound pressure level remains relatively constant between day and evening hours. Data indicates a slight elevation during early evening, possibly coinciding with people returning from work, and continuing a pattern of sporadic noise until decreasing after 10 pm.

6.3 Location 3: Lucerne Valley

Measurements were collected at three locations. Two locations, 3A and 3B, were collected near occupied houses. The Leq values at these locations were consistent, ranging between 43 and 46 dBA. The third location (3C) was sites at the transmission line corridor at Powerline Road. There were no occupied residences in this area; the Leq was 38.5 dBA, which is indicative of a very low community noise level.

The nearby residences were the primary noise source at Locations 3A and 3B. This included air conditioning and other appliances, grading of crushed stone, and people. The noise at Location 3C and along the transmission line corridor was predominantly from the wind.

6.4 Location 4: Johnson Valley

Geographically, Johnson Valley is the eastern portion of Lucerne Valley. Johnson Valley is a remote rural area frequented by off-road vehicle users. Monitoring occurred at two locations. Location 4A was on Squaw Bush Road near the transmission line corridor. The second location was on Toydon Street, which was selected to be representative of noise levels in the center of the community. The respective Leq values, 34.6 and 43.8 dBA, combined with the statistical noise analysis, are indicative of a very quiet community where wind is the primary source of noise.

6.5 Location 5: Mojave National Preserve – Kelbaker Road

Monitoring was conducted at two locations near Kelbaker Road. Location 5A was sited within 100 feet of the road, while Location 5B was sited several hundred feet from Kelbaker Road. Road traffic and wind were the predominant sources at Location 5A where the Leq was 48 dBA. Wind alone was the predominant noise source at Location 5B where the Leq was 38 dBA. The 10 dBA difference is contributed to the increased noise level with proximity to Kelbaker Rd, as the road is the only other recognized noise source other than wind.

Initial wind speed measurements in open areas were 10 to 17 mph. The microphone was carefully positioned in low lying areas near berms or other geographic features that blocked the wind sufficient to ensure the wind speed remained less than 11 mph at the microphone location.

6.6 Location 6: Mojave National Preserve – Ivanpah Road

This is a remote location within the Preserve. There was no audible vehicle traffic or community noise during the monitoring sessions. The predominant noise source was the wind. Measurements were collected at three locations, under the transmission lines (6A), 50 meters from the transmission lines, and 100 meters from the transmission lines. The Leq measured at these three points was 44, 43 and 38 dBA, respectively. Wind speed was 5 to 10 mph. While data showed higher levels at locations closer to the transmission lines, the investigator did not notice an audible difference in sound levels from the transmission lines at the time of the investigation. Based upon observations at multiple sites and the data from the comparison at this location, there is some noise emitted from the transmission lines under some circumstances (e.g., during high winds). The noise, when detected, was found to be barely audible and it appears to dissipate to non-detectable levels at a distance of 30 meters from the transmission lines.

7 Results and Conclusions

Leq values at the noise level monitoring locations ranged from 35 dBA (in a very remote location) to 60 dBA (in a suburban-commercial location). Existing noise levels recorded at Location 1A in the City of Hesperia were above the nighttime noise standard (55 dBA) for an area zoned for residential use; no other exceedances of established thresholds were recorded. Apple Valley and Lucerne Valley are rural communities with moderate noise levels where the predominant noise sources were vehicle traffic, residences, and wind. Monitoring in the Mojave National Preserve indicates road traffic and wind are the dominant noise sources. Noise from existing transmission lines was barely audible to the investigator; the noise was measurable, as there was a decrease in noise level with increased distance from the transmission lines. This noise level appeared to dissipate to an extent where it was no longer measurable between 50 and 100 meters from the transmission lines.

Tables

Table 2. Sound Level Meter Measurements at Selected Locations

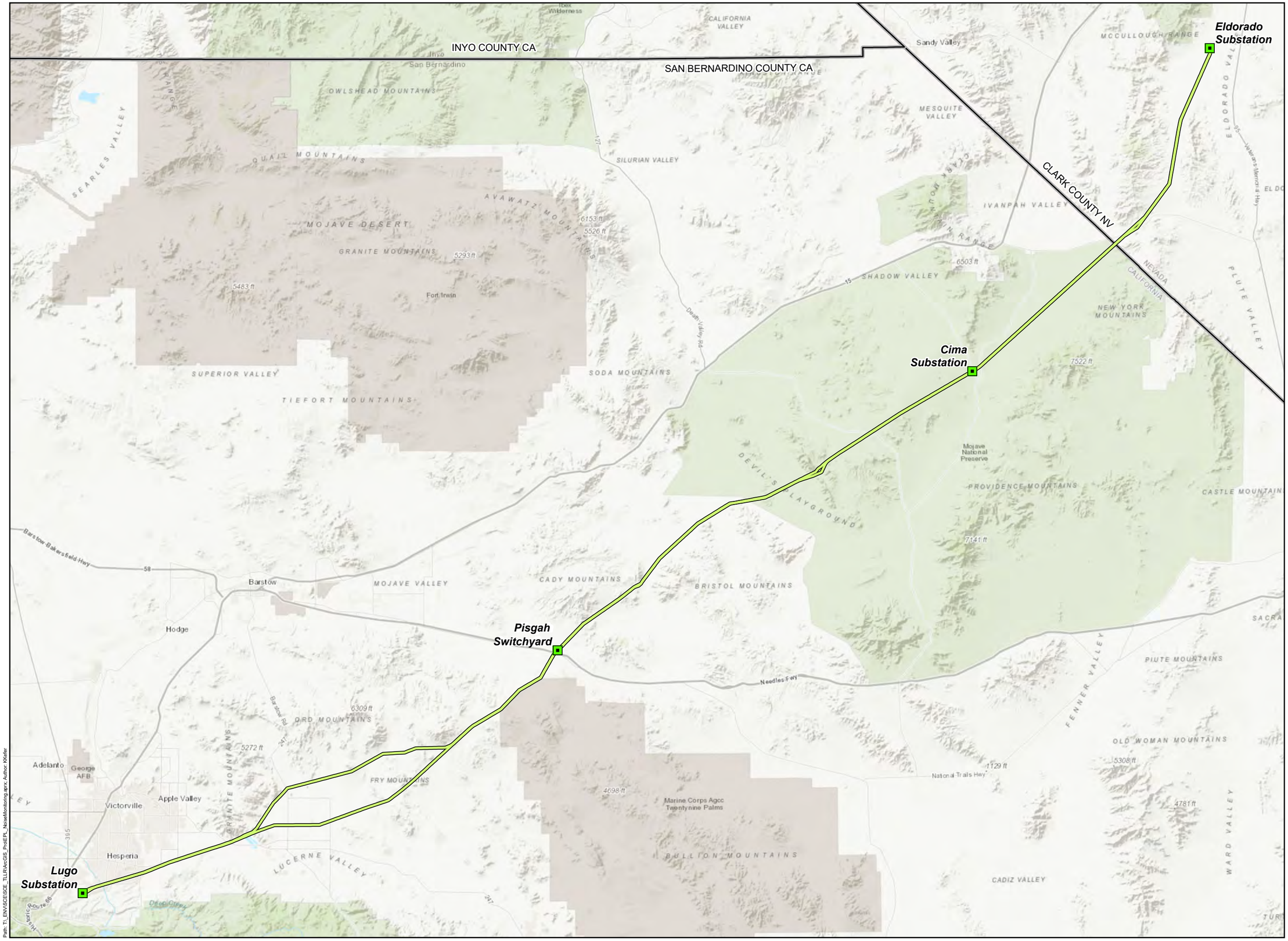
Session Number: Location:	Lmin, dBA	Lmax, dBA	Leq, dBA	Community Noise Exposure Level (CNEL), dBA	LDN	L10, dBA	L50, dBA	L90, dBA	Lc-a, dB
City of Hesperia									
1A Via Cartagena Street	42.9	82.3	**55.4**	**60.4**	60.2	57.8	53.6	47.6	11.8
1B Via Montego Street	42.9	67.5	56.5	**56.5**	57.5	61.2	47.7	46.7	17.1
Apple Valley									
2A Cerra Vista Street	33.8	55.4	43.5	**43.5**	43.5	46.1	42.4	37.5	14.5
2B Central Road	32.3	66.6	47.1	**51.5**	49.5	50.5	44.4	34.9	14.7
2C Powerline Road	35.6	54.5	44.3	**44.3**	44.3	48.0	41.4	37.9	22.8
Lucerne Valley									
3A Wachoota Road	32.5	69.8	43.3	**43.3**	43.3	42.1	36.0	34.3	16.0
3B Waverly Street	43.6	52.6	45.9	**45.9**	45.9	47.4	45.9	44.4	7.3
3C Powerline Road	32.5	57.1	38.5	**38.5**	38.5	37.5	34.3	33.7	23.9
Johnson Valley									
4A Johnson Valley, Squaw Bush Road	32.3	46.8	34.6	**34.6**	34.6	36.5	33.1	32.4	23.2
4B Johnson Valley, Toydon Street	42.2	49.1	43.8	**43.8**	43.8	44.2	43.7	43.1	5.3
Mojave National Preserve, Kelbaker Road									
5A Mojave National Preserve, Kelbaker Road	42.2	63.8	47.5	**47.5**	47.5	47.8	44.4	43.7	10.8
5B Mojave National Preserve, off-road	32.3	45.0	37.7	**37.7**	37.7	41.6	34.9	32.4	28.6
Mojave National Preserve, Ivanpah Road									
6A Powerline Road (under transmission lines)	42.2	50.8	44.2	**44.2**	44.2	45.1	43.9	43.3	12.8
6B Ivanpah Road (50 meters from transmission lines)	33.2	57.9	43.3	**43.3**	43.3	47.0	40.1	35.5	23.1
6C Saddle Brook Road (100 meters from transmission lines)	32.1	66.7	38.0	**38.0**	38.0	43.3	33.7	32.4	15.5

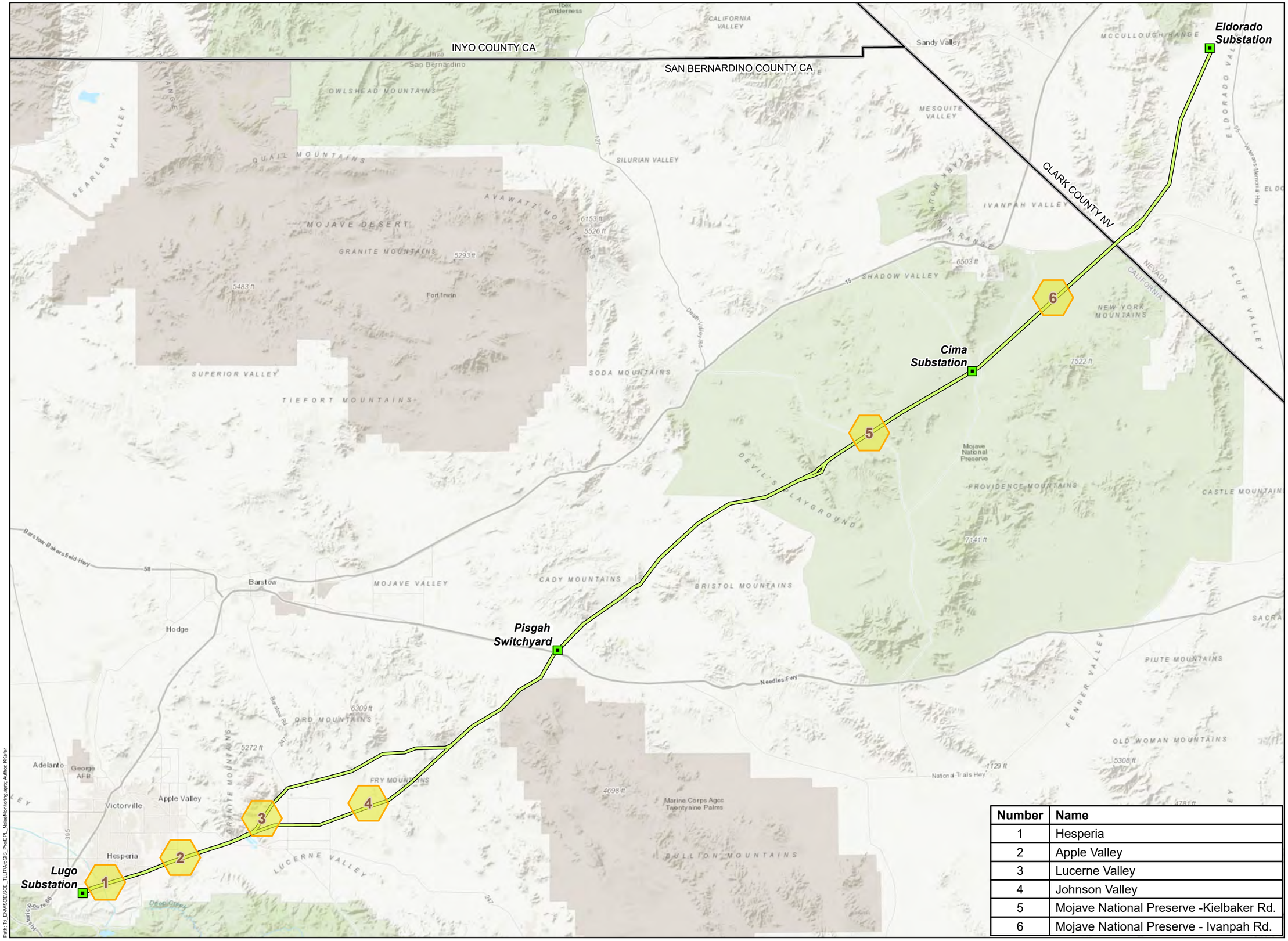
All data was collected while the wind speed at the microphone remained under 11 mph during monitoring.

Table 3. Session time periods and location descriptions

Session Number: Location:	Date	Start Time (24:00)	End Time (24:00)	Run Time (hrs:min)	Description of Location and Local Noise Sources
City of Hesperia					
1A Via Cartagena Street	4/4/22 to 4/5/22	14:33	16:29	25:55	Suburban developments, proximity to Ranchero Road is primary noise source
1B Via Montego Street	4/5/22	16:56	16:57	0:0.5	Suburban developments, residential community noise and traffic din
Apple Valley					
2A Cerra Vista St..	4/5/22	10:59	11:22	0:23	Rural/suburban residential community,
2B: Central Road	4/4/22	17:28	23:08	5:40	Night hours in rural/suburban residential community
2C Powerline Rd.	4/5/22	10:30	10:39	0:10	Rural/suburban residential community
Lucerne Valley					
3A Wachoota Rd	4/5/22	12:39	14:45	2:06	Rural residential community
3B Waverly St.	4/6/22	12:33	14:03	1:30	Rural residential community
3C Powerline Rd.	4/5/22	14:58	15:08	0:10	Rural residential community
Johnson Valley					
4A Squaw Bush Rd.	4/7/22	16:57	17:57	1:00	Remote rural community Primary source of noise was wind.
4B Toydon St.	4/7/22	17:11	17:56	0:15	Remote rural community, Primary source of noise was wind.
Mojave National Preserve, Kelbaker Road					
5A Keilbaker Rd	4/6/22	16:44	17:44	1:00	Remote location. Primary sources of noise were wind with occasional road traffic
5B Kelbaker Rd and Powerline Road	4/6/22	17:48	17:54	0:05	Remote location. Primary source of noise was wind
Mojave National Preserve, Ivanpah Road					
6A Powerline Road	4/7/22	10:19	11:30	1:11	0 meters from powerlines. Primary source of noise was wind
6B Ivanpah Road	4/7/22	11:44	11:52	0:08	50 meters from powerlines. Primary source of noise was wind.
6C Saddle Brook Road	4/7/22	10:34	11:15	0:40	100 meters from powerlines. Primary source of noise was wind

Figures


INYO COUNTY CA
SAN BERNARDINO COUNTY CA
CLARK COUNTY NV
Eldorado Substation
Cima Substation
Pisgah Switchyard
Lugo Substation
Project Location
OREGON
IDAHO
NEVADA
UTAH
CALIFORNIA
ARIZONA
LEGEND
ALIGNMENT
SUBSTATION
COUNTY BOUNDARY
0 5 10
Miles
1" = 10 mi
when printed at 11"x17"
Inyo County
California
Date: 6/15/2022
EPL Project
Noise Monitoring
Overview
Figure 1
SOUTHERN CALIFORNIA EDISON
ARCADIS
Path: T:_ENV\SCE\SCE_TLLR\ArcGIS_Pro\EPL_NoiseMonitoring.aprx Author: KKeller



LEGEND

- ALIGNMENT
- SUBSTATION
- COMMUNITY NOISE ASSESSMENT LOCATION
- COUNTY BOUNDARY

0 5 10

Miles

1" = 10 mi
when printed at 11"x17"

Inyo County
California

Date: 6/15/2022

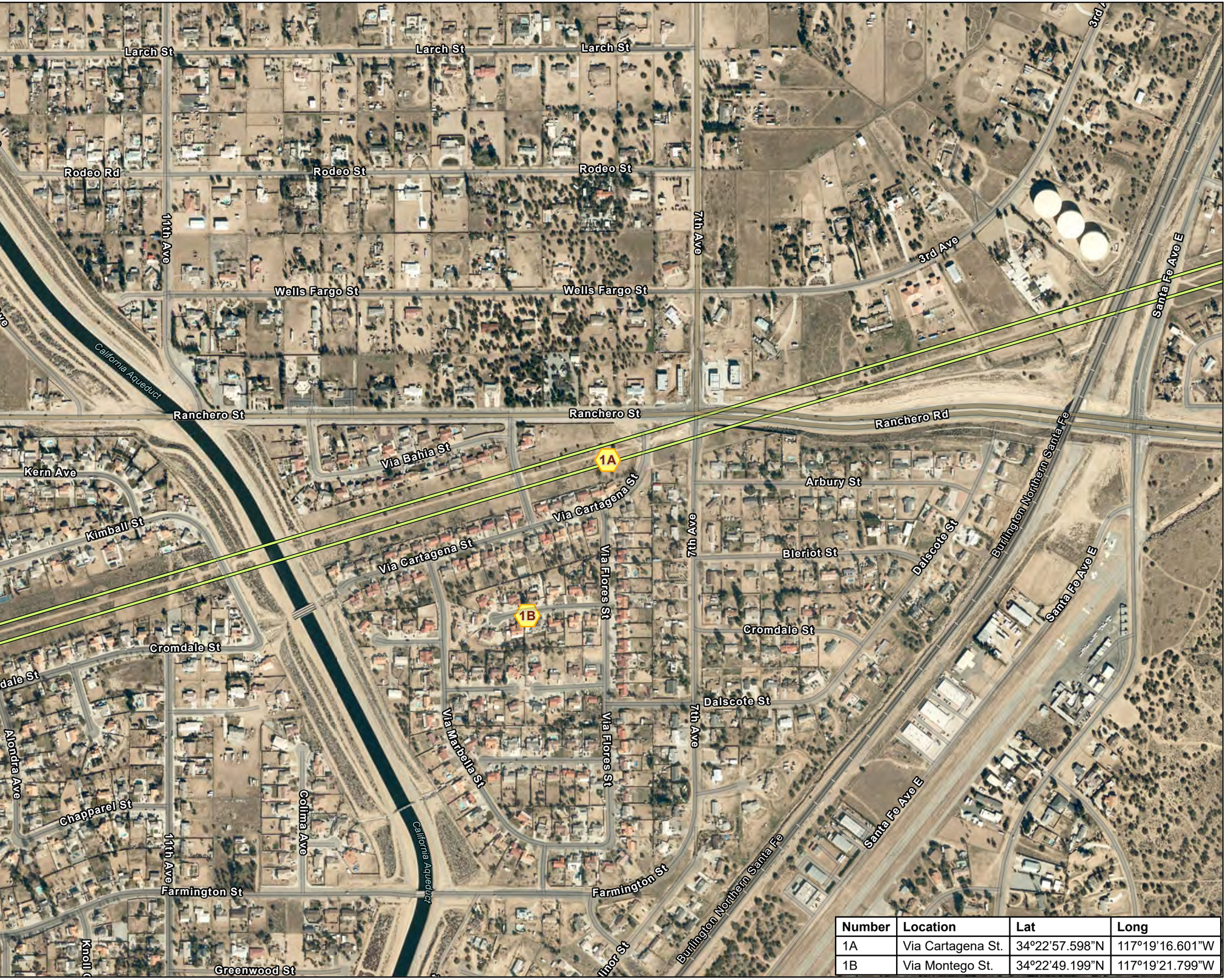
Number	Name
1	Hesperia
2	Apple Valley
3	Lucerne Valley
4	Johnson Valley
5	Mojave National Preserve -Kielbaker Rd.
6	Mojave National Preserve - Ivanpah Rd.

EPL Project
Noise Monitoring
Community Noise
Assessment Locations

Figure 2

SOUTHERN CALIFORNIA EDISON
ARCADIS

Path: T:_ENV\SCE\SCE_TLLR\ArcGIS_Pro\EPL_NoiseMonitoring.aprx; Author: KKafer



LEGEND

- ALIGNMENT
- NOISE MONITORING LOCATION

0 250 500

Feet

1" = 500 ft
when printed at 11"x17"

Inyo County
California

Date: 6/15/2022

Number	Location	Lat	Long
1A	Via Cartagena St.	34°22’57.598”N	117°19’16.601”W
1B	Via Montego St.	34°22’49.199”N	117°19’21.799”W

EPL Project
Noise Monitoring
Community Noise
Assessment Locations

Figure 2-1

SOUTHERN CALIFORNIA EDISON

ARCADIS

Path: Tl:_ENV\SCE\SCE_TILLR\ArcGIS_Proj\EPL_NoiseMonitoring.aprx; Author: KKeller

Number	Location	Lat	Long
2A	Cerra Vista St.	34°25'12.101"N	117°10'18.476"W
2B	Central Rd.	34°25'41.965"N	117°09'41.465"W
2C	Powerline Rd.	34°25'33.992"N	117°10'11.841"W

LEGEND

- ALIGNMENT
- NOISE MONITORING LOCATION

0 250 500

Feet

1" = 500 ft
when printed at 11"x17"

Inyo County
California

Date: 6/15/2022

EPL Project
Noise Monitoring
Community Noise
Assessment Locations

Figure 2-2

SOUTHERN CALIFORNIA EDISON

ARCADIS

Path: T:_ENV\SCE\SCE_TILLR\ArcGIS_Proj\EPL_NoiseMonitoring.aprx; Author: KKeller

LEGEND

ALIGNMENT

NOISE MONITORING LOCATION

Number	Location	Lat	Long
3A	Wachoota Rd.	34°29'48.998"N	117°00'01.001"W
3B	Waverly St.	34°29'12.566"N	116°59'53.776"W
3C	Powerline Rd.	34°29'39.278"N	117°00'00.540"W

0 250 500

Feet

1" = 500 ft
when printed at 11"x17"

Inyo County
California

Date: 6/15/2022

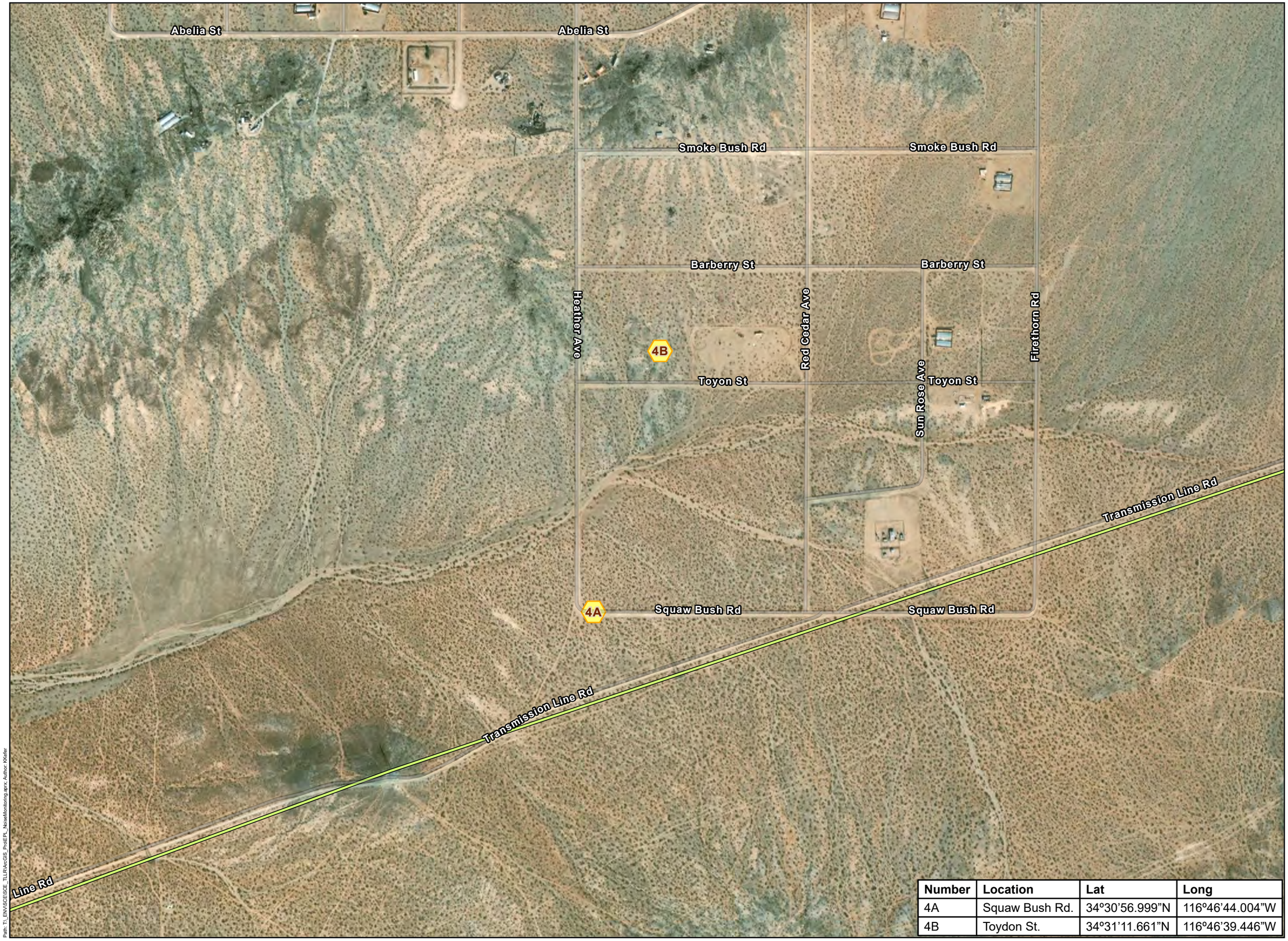
EPL Project
Noise Monitoring
Community Noise
Assessment Locations

Figure 2-3

SOUTHERN CALIFORNIA EDISON

ARCADIS

Path: T:_ENV\SCE\SCE_TILLR\ArcGIS_Pro\EPL_NoiseMonitoring.aprx; Author: KKeller



LEGEND

ALIGNMENT

NOISE MONITORING LOCATION

Number	Location	Lat	Long
4A	Squaw Bush Rd.	34°30'56.999"N	116°46'44.004"W
4B	Toydon St.	34°31'11.661"N	116°46'39.446"W

0 250 500

Feet

1" = 500 ft
when printed at 11"x17"

Inyo County
California

Date: 6/15/2022

EPL Project
Noise Monitoring
Community Noise
Assessment Locations

Figure 2-4

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

ARCADIS

Path: TL_ENV\GIS\ESCE_TLLR\ArcGIS_Pro\EPL_NoiseMonitoring.aprx Author: KKeller

LEGEND

- ALIGNMENT
- NOISE MONITORING LOCATION

0 250 500

Feet

1" = 500 ft
when printed at 11"x17"

Inyo County
California

Date: 6/15/2022

Number	Location	Lat	Long
5A	Keilbaker Rd.	35º08’46.936”N	115º43’51.265”W
5B	Keilbaker Rd. and Powerline Rd.	35º08’47.594”N	115º44’05.471”W

EPL Project
Noise Monitoring
Community Noise
Assessment Locations

Figure 2-5

SOUTHERN CALIFORNIA EDISON
ARCADIS

Path: Ti:_ENVISCE\SCE_ TLR\ArcGIS_Pro\EPL_NoiseMonitoring.aprx; Author: KKiefer

LEGEND

ALIGNMENT

NOISE MONITORING LOCATION

Number	Location	Lat	Long
6A	Powerline Rd.	35º22’18.001”N	115º20’41.000W
6B	Ivanpah Rd.	35º22’24.265”N	115º20’37.050”W
6C	Saddle Brook Rd.	35º22’26.324”N	115º20’38.661”W

0 250 500

Feet

1" = 500 ft
when printed at 11"x17"

Inyo County
California

Date: 6/15/2022

EPL Project
Noise Monitoring
Community Noise
Assessment Locations

Figure 2-6

SOUTHERN CALIFORNIA EDISON

ARCADIS

Path: Th:_ENV\SCE\SCE_TLL\RArcGIS_Proj\EPL_NoiseMonitoring.aprx; Author: KKeller

Attachment A

Session Report

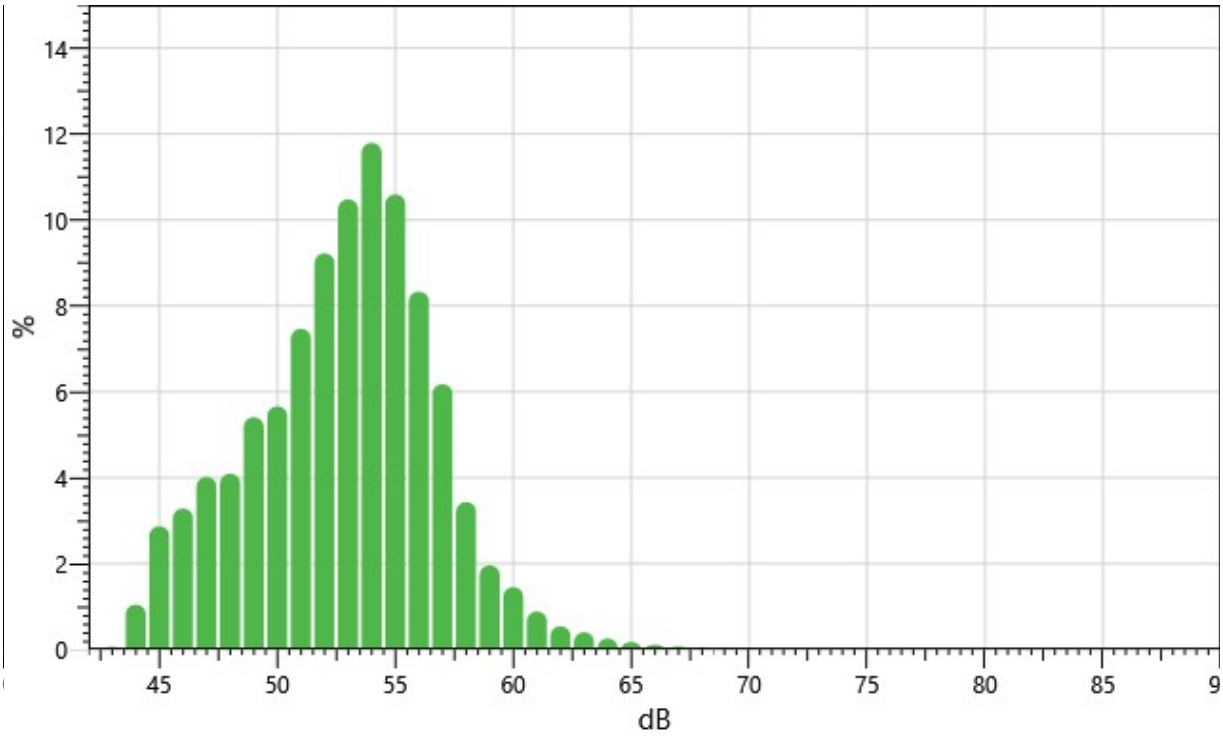
4/6/2022

Information Panel

Name	S125_BLI050007_05042022_233822
Start Time	4/4/2022 2:33:25 PM
Stop Time	4/5/2022 4:28:41 PM
Device Name	BLI050007
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	1.01:55:16
Serial Number	BLI050007
User Name	

Statistics Chart

S125_BLI050007_05042022_233822: Statistics Chart



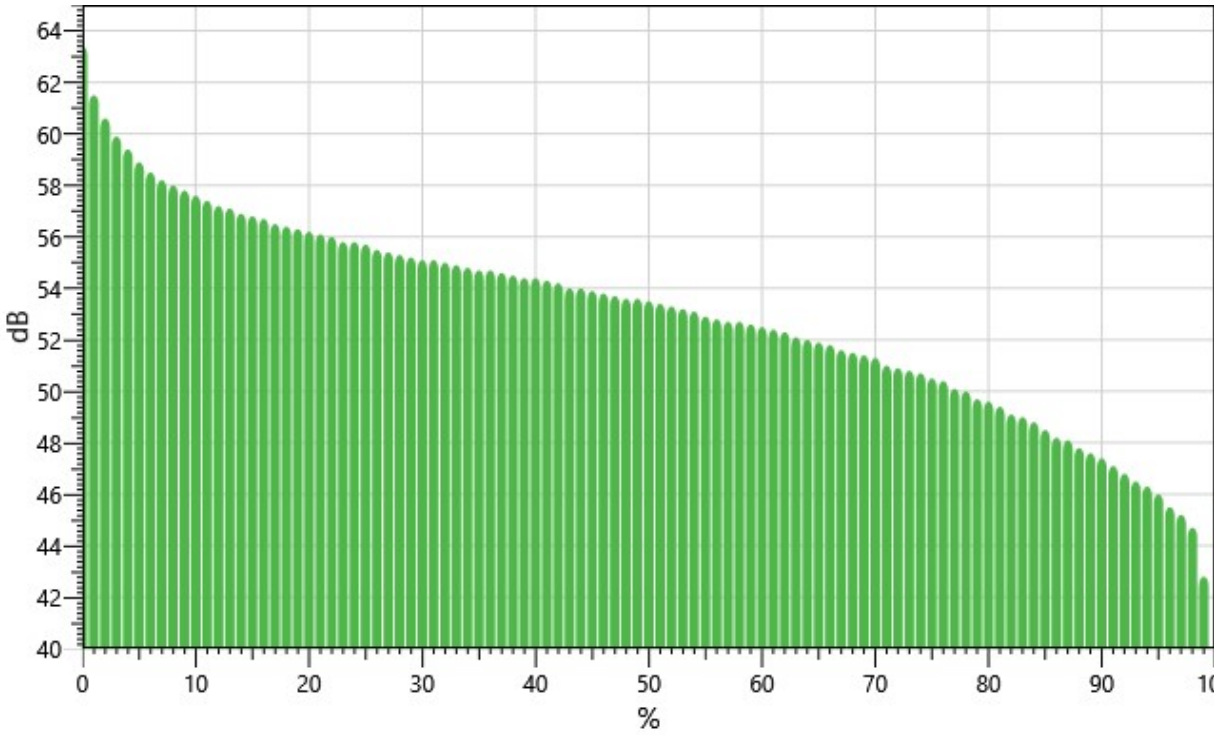
Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
42:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43:	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.00	0.04	0.00	0.06
44:	0.07	0.00	0.11	0.15	0.00	0.19	0.00	0.24	0.28	0.00	1.05
45:	0.32	0.00	0.36	0.39	0.00	0.42	0.45	0.00	0.46	0.46	2.87
46:	0.00	0.46	0.45	0.00	0.44	0.45	0.48	0.00	0.49	0.51	3.28
47:	0.00	0.52	0.55	0.00	0.58	0.61	0.00	0.64	0.70	0.42	4.02
48:	0.00	0.61	0.60	0.59	0.00	0.58	0.58	0.57	0.00	0.57	4.09
49:	0.59	0.58	0.58	0.00	0.58	0.58	0.59	0.62	0.65	0.64	5.41
50:	0.00	0.65	0.68	0.69	0.00	0.69	0.70	0.73	0.74	0.77	5.66
51:	0.79	0.82	0.00	0.85	0.91	0.94	0.40	0.90	0.92	0.93	7.47
52:	0.96	0.98	0.99	0.00	1.00	1.03	1.02	1.06	1.09	1.09	9.22
53:	1.07	0.00	1.12	1.14	1.15	1.18	1.16	1.18	1.22	1.27	10.48
54:	1.27	1.27	0.00	1.30	1.34	1.34	1.39	1.42	1.49	1.00	11.79
55:	1.31	1.28	1.25	1.21	1.17	1.14	1.11	0.00	1.09	1.04	10.59
56:	0.97	0.93	0.89	0.86	0.83	0.82	0.78	0.77	0.77	0.72	8.33
57:	0.72	0.69	0.66	0.64	0.61	0.60	0.59	0.58	0.56	0.53	6.18
58:	0.36	0.43	0.40	0.38	0.36	0.34	0.32	0.29	0.29	0.27	3.43
59:	0.25	0.24	0.22	0.22	0.00	0.22	0.21	0.21	0.20	0.19	1.96
60:	0.18	0.16	0.15	0.15	0.15	0.14	0.15	0.14	0.12	0.12	1.45
61:	0.13	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.07	0.07	0.89
62:	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.04	0.54
63:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.40
64:	0.04	0.03	0.02	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.26
65:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.18
66:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.11
67:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.07
68:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.06
69:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
70:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
71:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
72:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
73:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
74:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
75:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01

79:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Chart

S125_BLI050007_05042022_233822: Exceedance Chart

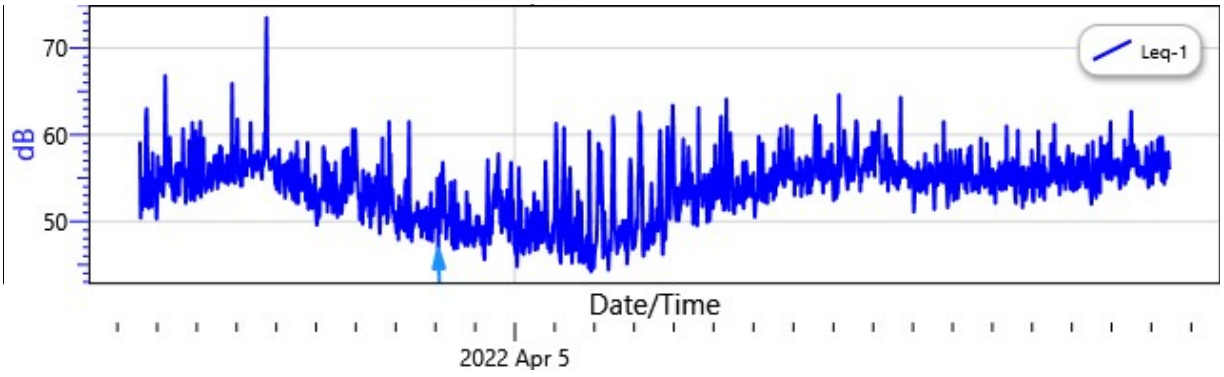


Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		63.4	61.5	60.6	59.9	59.4	58.9	58.5	58.2	58.0
10%:	57.8	57.6	57.4	57.2	57.1	56.9	56.8	56.7	56.5	56.4
20%:	56.3	56.2	56.1	56.0	55.8	55.8	55.7	55.5	55.4	55.3
30%:	55.2	55.1	55.1	55.0	54.9	54.8	54.7	54.7	54.6	54.5
40%:	54.4	54.4	54.3	54.2	54.0	54.0	53.9	53.8	53.7	53.6
50%:	53.6	53.5	53.4	53.3	53.2	53.1	52.9	52.8	52.7	52.7
60%:	52.6	52.5	52.4	52.3	52.1	52.0	51.9	51.8	51.6	51.5
70%:	51.4	51.3	51.0	50.9	50.8	50.7	50.5	50.4	50.1	50.0
80%:	49.7	49.6	49.4	49.1	49.0	48.8	48.5	48.2	48.1	47.8
90%:	47.6	47.4	47.1	46.8	46.5	46.3	46.0	45.5	45.2	44.7
100%:	42.8									

Logged Data Chart

S125_BLI050007_05042022_233822: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	11.8 dB			
Leq	1	55.4 dB	CNEL	1	60.4 dB
Dose	1	0.1 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	13.1 Pa²-Sec
L1	1	63.4 dB	L10	1	57.8 dB
L50	1	53.6 dB	L90	1	47.6 dB
LDN	1	60.2 dB	Lmax	1	82.3 dB
Lmin	1	42.9 dB	Lpk	1	109.2 dB
Mntime	1	4/5/2022 12:13:16 AM	Mxtime	1	4/4/2022 4:53:12 PM
OL%	1	0 %	Pdose (1.00:00)	1	0.1 %
PKtime	1	4/4/2022 2:44:01 PM	ProjectedTWA (1.00:00)	1	60.2 dB
Rtime	1	1.01:55:16	SEL	1	105.1 dB
Takt	1	56.6 dB	TWA	1	60.5 dB
UL Time	1	00:00:00	UR%	1	20.8 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Dose	2	1.7 %	Dose8	2	0.5 %
Exp Hrs	2	0.1 Pa²-Hours	Exp Sec	2	196.4 Pa²-Sec
Leq	2	67.2 dB	Lmax	2	87.8 dB
Lmin	2	50.7 dB	Lpk	2	107.6 dB
Mntime	2	4/5/2022 1:43:13 AM	Mxtime	2	4/4/2022 5:45:09 PM
OL%	2	0 %	Pdose (1.00:00)	2	1.6 %

PKtime	2	4/4/2022 2:44:01 PM	ProjectedTWA (1.00:00)	2	72 dB
Rtime	2	1.01:55:16	SEL	2	116.9 dB
TWA	2	72.3 dB	UL Time	2	00:00:00
UR%	2	0 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW			

Session Report

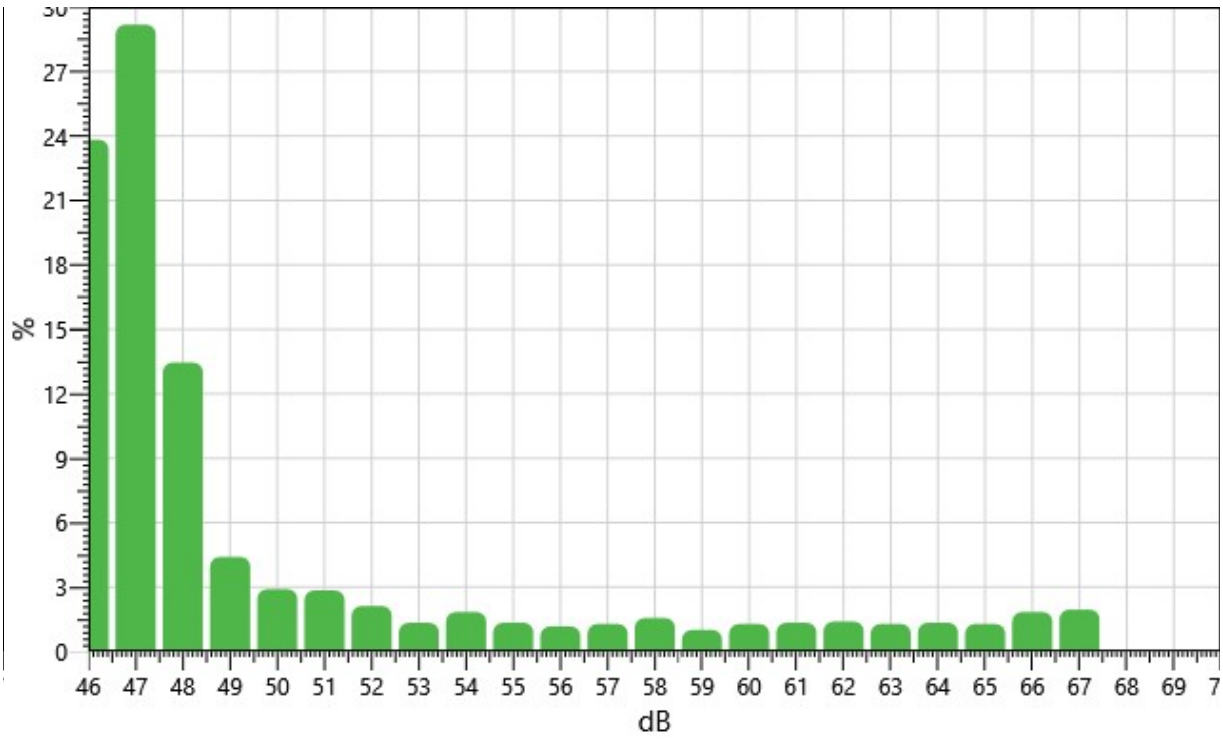
4/6/2022

Information Panel

Name	S019_BJM120003_05042022_234900
Start Time	4/5/2022 4:56:28 PM
Stop Time	4/5/2022 4:56:56 PM
Device Name	BJM120003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	00:00:28
Serial Number	BJM120003
User Name	

Statistics Chart

S019_BJM120003_05042022_234900: Statistics Chart

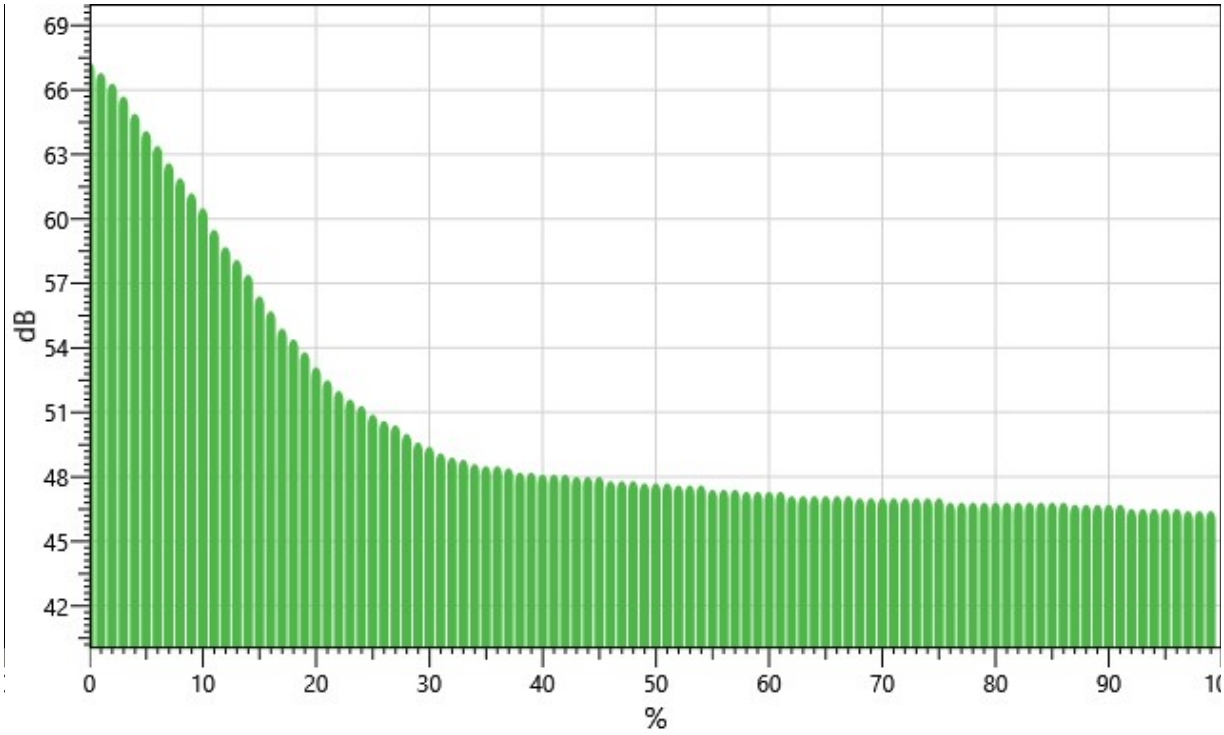


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
46:	0.00	0.00	0.00	0.00	0.00	2.57	4.69	0.00	5.64	10.94	23.83
47:	0.00	7.76	5.52	0.00	4.46	2.85	0.00	2.68	3.29	2.62	29.19
48:	0.00	3.79	3.07	1.28	0.00	1.67	1.34	1.34	0.00	0.95	13.45
49:	0.89	0.39	0.28	0.00	0.33	0.73	0.56	0.45	0.39	0.39	4.41
50:	0.00	0.39	0.28	0.28	0.00	0.28	0.50	0.50	0.33	0.33	2.90
51:	0.56	0.33	0.00	0.28	0.45	0.45	0.11	0.17	0.28	0.22	2.85
52:	0.17	0.33	0.17	0.00	0.33	0.22	0.22	0.17	0.22	0.28	2.12
53:	0.22	0.00	0.17	0.11	0.17	0.11	0.11	0.17	0.11	0.17	1.34
54:	0.17	0.17	0.00	0.28	0.17	0.28	0.17	0.22	0.22	0.17	1.84
55:	0.17	0.11	0.17	0.17	0.11	0.17	0.11	0.00	0.22	0.11	1.34
56:	0.11	0.17	0.17	0.17	0.06	0.11	0.11	0.11	0.06	0.11	1.17
57:	0.11	0.11	0.06	0.17	0.11	0.11	0.11	0.17	0.17	0.17	1.28
58:	0.06	0.17	0.22	0.06	0.22	0.22	0.17	0.11	0.17	0.17	1.56
59:	0.06	0.17	0.17	0.11	0.00	0.17	0.11	0.06	0.11	0.06	1.00
60:	0.11	0.11	0.06	0.11	0.17	0.11	0.11	0.17	0.17	0.17	1.28
61:	0.11	0.11	0.11	0.22	0.06	0.17	0.17	0.17	0.11	0.11	1.34
62:	0.17	0.17	0.11	0.17	0.11	0.17	0.11	0.17	0.11	0.11	1.40
63:	0.17	0.11	0.17	0.11	0.11	0.11	0.11	0.17	0.11	0.11	1.28
64:	0.17	0.17	0.11	0.06	0.17	0.17	0.11	0.17	0.11	0.11	1.34
65:	0.17	0.17	0.06	0.17	0.11	0.17	0.06	0.11	0.17	0.11	1.28
66:	0.28	0.17	0.11	0.17	0.22	0.17	0.17	0.11	0.22	0.22	1.84
67:	0.22	0.22	0.22	0.22	0.73	0.33	0.00	0.00	0.00	0.00	1.95

Exceedance Chart

S019_BJM120003_05042022_234900: Exceedance Chart



Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		67.3	66.8	66.3	65.7	64.9	64.1	63.4	62.6	61.9
10%:	61.2	60.5	59.5	58.7	58.1	57.4	56.4	55.7	54.9	54.4
20%:	53.8	53.1	52.5	52.0	51.6	51.3	50.9	50.6	50.4	50.0
30%:	49.6	49.4	49.1	48.9	48.8	48.6	48.5	48.5	48.4	48.2
40%:	48.2	48.1	48.1	48.1	48.0	48.0	48.0	47.8	47.8	47.8
50%:	47.7	47.7	47.7	47.6	47.6	47.6	47.4	47.4	47.4	47.3
60%:	47.3	47.3	47.3	47.1	47.1	47.1	47.1	47.1	47.1	47.0
70%:	47.0	47.0	47.0	47.0	47.0	47.0	47.0	46.8	46.8	46.8
80%:	46.8	46.8	46.8	46.8	46.8	46.8	46.8	46.8	46.7	46.7
90%:	46.7	46.7	46.7	46.5	46.5	46.5	46.5	46.5	46.4	46.4
100%:	46.4									

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	17.1 dB			
CMinusAEnabled	--	True			

Leq	1	56.5 dB	CNEL	1	56.5 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0 Pa²-Sec
L1	1	67.3 dB	L10	1	61.2 dB
L50	1	47.7 dB	L90	1	46.7 dB
LDN	1	56.5 dB	Lmax	1	67.5 dB
Lmin	1	46.5 dB	Lpk	1	82.7 dB
Mntime	1	4/5/2022 4:56:34 PM	Mxtime	1	4/5/2022 4:56:37 PM
OL%	1	0 %	Pdose (1.00:00)	1	0.1 %
PKtime	1	4/5/2022 4:56:37 PM	ProjectedTWA (1.00:00)	1	61.3 dB
Rtime	1	00:00:28	SEL	1	71 dB
Takt	1	60.1 dB	TWA	1	26.4 dB
UL Time	1	00:00:00	UR%	1	71.1 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	80 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s
Meter Floor	1	0 dB	Peak Weighting	1	A
Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0 %	Dose8	2	2.3 %
Exp Hrs	2	0 Pa²-Hours	Exp Sec	2	0.3 Pa²-Sec
Leq	2	73.6 dB	Lmax	2	76.4 dB
Lmin	2	72.5 dB	Lpk	2	88 dB
Mntime	2	4/5/2022 4:56:48 PM	Mxtime	2	4/5/2022 4:56:37 PM
OL%	2	0 %	Pdose (1.00:00)	2	6.9 %
PKtime	2	4/5/2022 4:56:37 PM	ProjectedTWA (1.00:00)	2	78.4 dB
Rtime	2	00:00:28	SEL	2	88.1 dB
TWA	2	43.5 dB	UL Time	2	00:00:00
UR%	2	0 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW	Count Rate	2	64 #
Criterion Level	2	90 dB	Criterion Time	2	8 hrs.

Int Threshold Enable	2	False	Integrating Threshold	2	80 dB
Peak Weighting	2	C	Projection Time	2	1440 mins.
ULL	2	115 dB			

Session Report

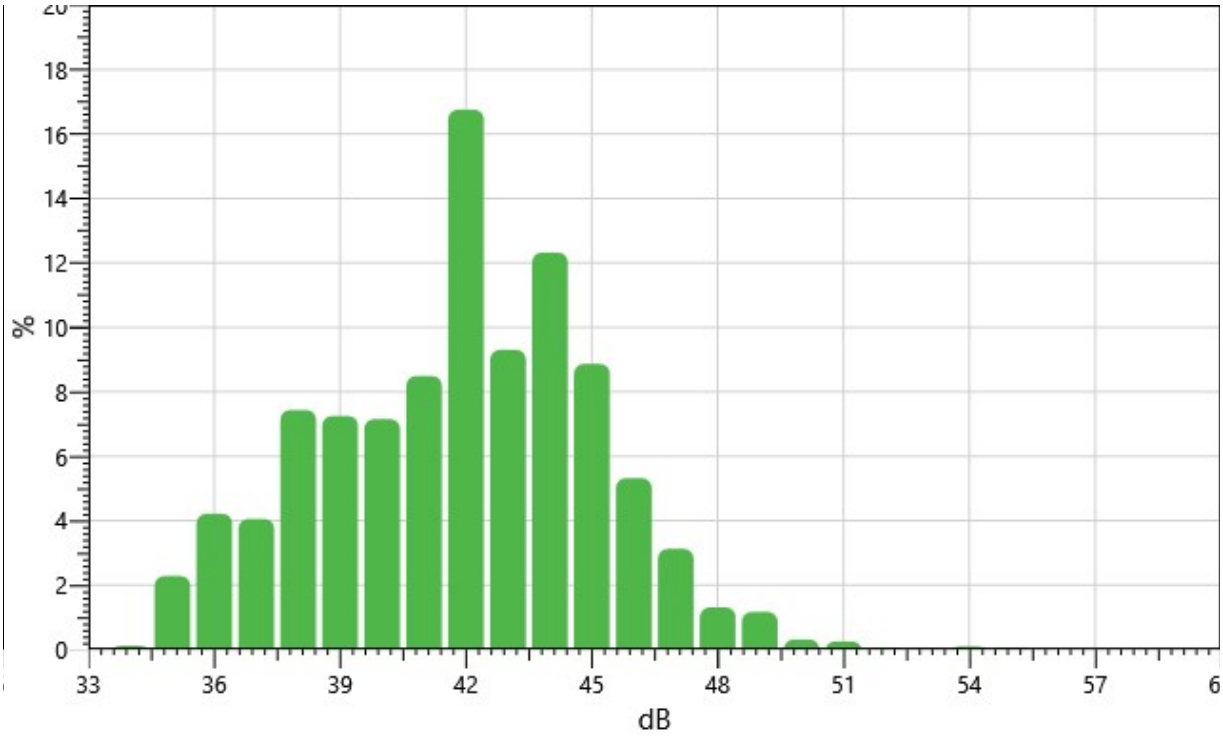
4/6/2022

Information Panel

Name	S015_BJM120003_05042022_234856
Start Time	4/5/2022 10:58:50 AM
Stop Time	4/5/2022 11:22:07 AM
Device Name	BJM120003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	00:23:17
Serial Number	BJM120003
User Name	

Statistics Chart

S015_BJM120003_05042022_234856: Statistics Chart

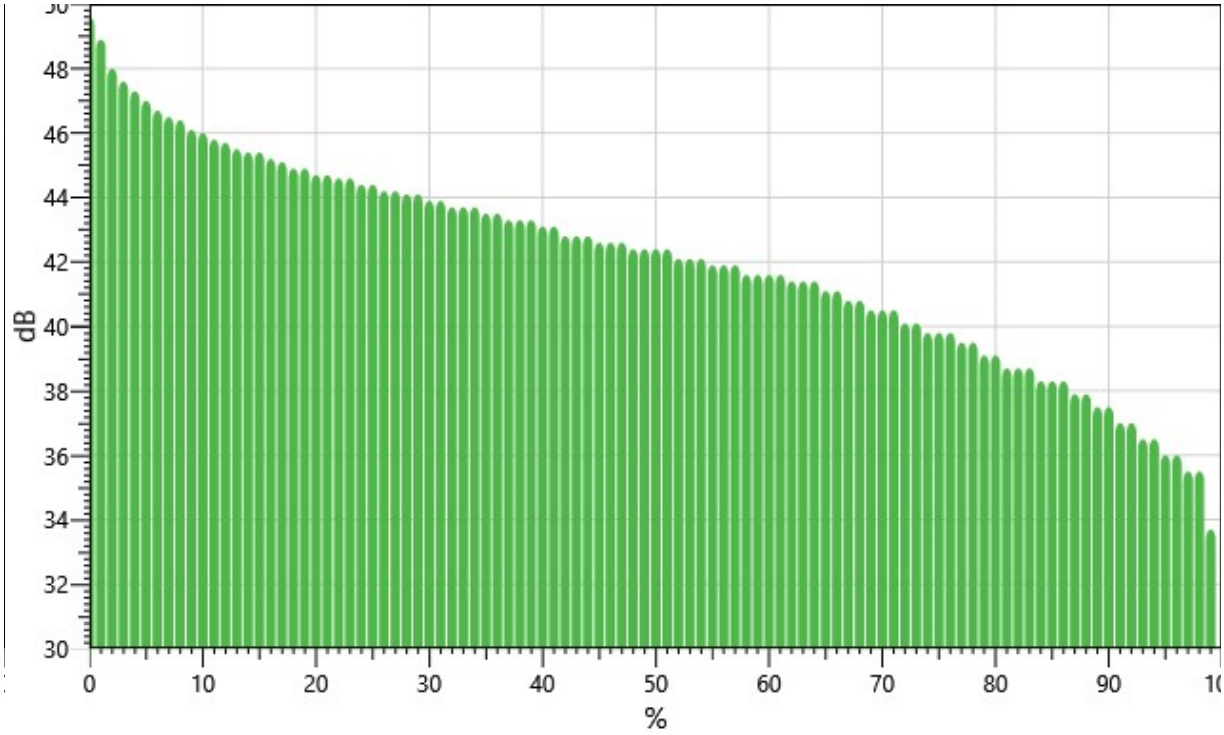


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
33:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
34:	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.12
35:	0.69	0.00	0.00	0.00	0.00	0.00	1.59	0.00	0.00	0.00	2.28
36:	0.00	1.93	0.00	0.00	0.00	0.00	2.28	0.00	0.00	0.00	4.21
37:	0.00	2.05	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	4.05
38:	2.32	0.00	0.00	0.00	2.49	0.00	0.00	0.00	2.63	0.00	7.43
39:	0.00	0.00	2.09	0.00	0.00	0.00	2.33	0.00	0.00	2.83	7.25
40:	0.00	0.00	2.45	0.00	0.00	0.00	2.35	0.00	0.00	2.36	7.15
41:	0.00	0.00	2.45	0.00	0.00	2.87	0.00	3.17	0.00	0.00	8.49
42:	3.43	0.00	3.51	0.00	0.00	3.49	0.00	3.34	0.00	2.98	16.75
43:	0.00	0.00	1.79	0.00	2.47	0.00	2.55	0.00	2.48	0.00	9.30
44:	2.27	0.00	2.17	2.16	0.00	2.09	0.00	1.89	1.74	0.00	12.32
45:	1.79	0.00	1.42	1.20	0.00	1.24	1.05	0.00	1.07	1.08	8.86
46:	0.00	0.88	0.89	0.00	0.82	0.82	0.74	0.00	0.62	0.55	5.32
47:	0.00	0.58	0.54	0.00	0.56	0.41	0.00	0.45	0.39	0.20	3.13
48:	0.00	0.34	0.31	0.19	0.00	0.14	0.12	0.10	0.00	0.11	1.31
49:	0.13	0.15	0.17	0.00	0.17	0.19	0.10	0.15	0.06	0.05	1.17
50:	0.00	0.05	0.06	0.03	0.00	0.04	0.04	0.03	0.03	0.03	0.31
51:	0.03	0.03	0.00	0.04	0.04	0.03	0.01	0.02	0.02	0.02	0.25
52:	0.02	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.06
53:	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.04
54:	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.03	0.01	0.01	0.10
55:	0.01	0.01	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.07

Exceedance Chart

S015_BJM120003_05042022_234856: Exceedance Chart

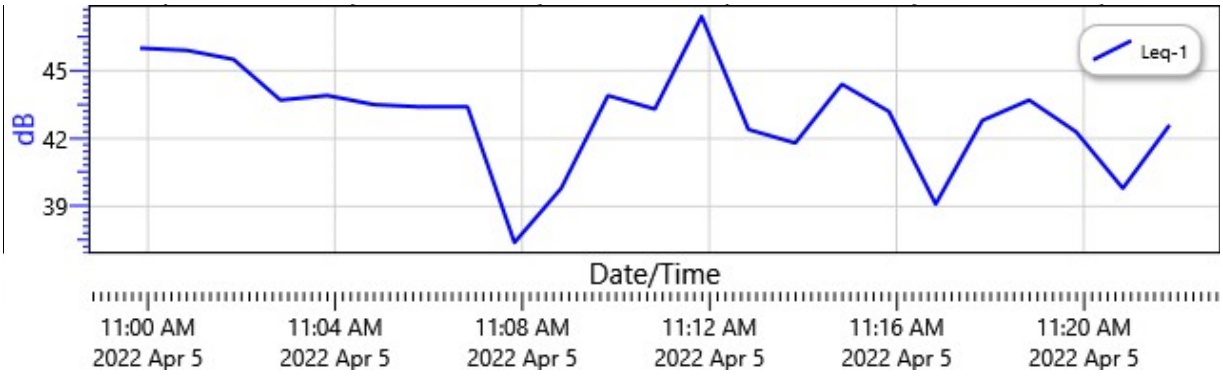


Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		49.6	48.9	48.0	47.6	47.3	47.0	46.7	46.5	46.4
10%:	46.1	46.0	45.8	45.7	45.5	45.4	45.4	45.2	45.1	44.9
20%:	44.9	44.7	44.7	44.6	44.6	44.4	44.4	44.2	44.2	44.1
30%:	44.1	43.9	43.9	43.7	43.7	43.7	43.5	43.5	43.3	43.3
40%:	43.3	43.1	43.1	42.8	42.8	42.8	42.6	42.6	42.6	42.4
50%:	42.4	42.4	42.4	42.1	42.1	42.1	41.9	41.9	41.9	41.6
60%:	41.6	41.6	41.6	41.4	41.4	41.4	41.1	41.1	40.8	40.8
70%:	40.5	40.5	40.5	40.1	40.1	39.8	39.8	39.8	39.5	39.5
80%:	39.1	39.1	38.7	38.7	38.7	38.3	38.3	38.3	37.9	37.9
90%:	37.5	37.5	37.0	37.0	36.5	36.5	36.0	36.0	35.5	35.5
100%:	33.7									

Logged Data Chart

S015_BJM120003_05042022_234856: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	14.5 dB			
Leq	1	43.5 dB	CNEL	1	43.5 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0 Pa²-Sec
L1	1	49.6 dB	L10	1	46.1 dB
L50	1	42.4 dB	L90	1	37.5 dB
LDN	1	43.5 dB	Lmax	1	55.4 dB
Lmin	1	33.8 dB	Lpk	1	79.3 dB
Mntime	1	4/5/2022 11:20:27 AM	Mxtime	1	4/5/2022 11:14:16 AM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/5/2022 11:14:16 AM	ProjectedTWA (1.00:00)	1	48.3 dB
Rtime	1	00:23:17	SEL	1	74.9 dB
Takt	1	45.1 dB	TWA	1	30.4 dB
UL Time	1	00:00:00	UR%	1	99.2 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	80 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s
Meter Floor	1	0 dB	Peak Weighting	1	A

Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0 %	Dose8	2	0.1 %
Exp Hrs	2	0 Pa²-Hours	Exp Sec	2	0.4 Pa²-Sec
Leq	2	58 dB	Lmax	2	80.4 dB
Lmin	2	45.5 dB	Lpk	2	97.2 dB
Mntime	2	4/5/2022 11:07:04 AM	Mxtime	2	4/5/2022 11:11:12 AM
OL%	2	0 %	Pdose (1.00:00)	2	0.2 %
PKtime	2	4/5/2022 11:14:16 AM	ProjectedTWA (1.00:00)	2	62.8 dB
Rtime	2	00:23:17	SEL	2	89.5 dB
TWA	2	44.9 dB	UL Time	2	00:00:00
UR%	2	6 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW			

Session Report

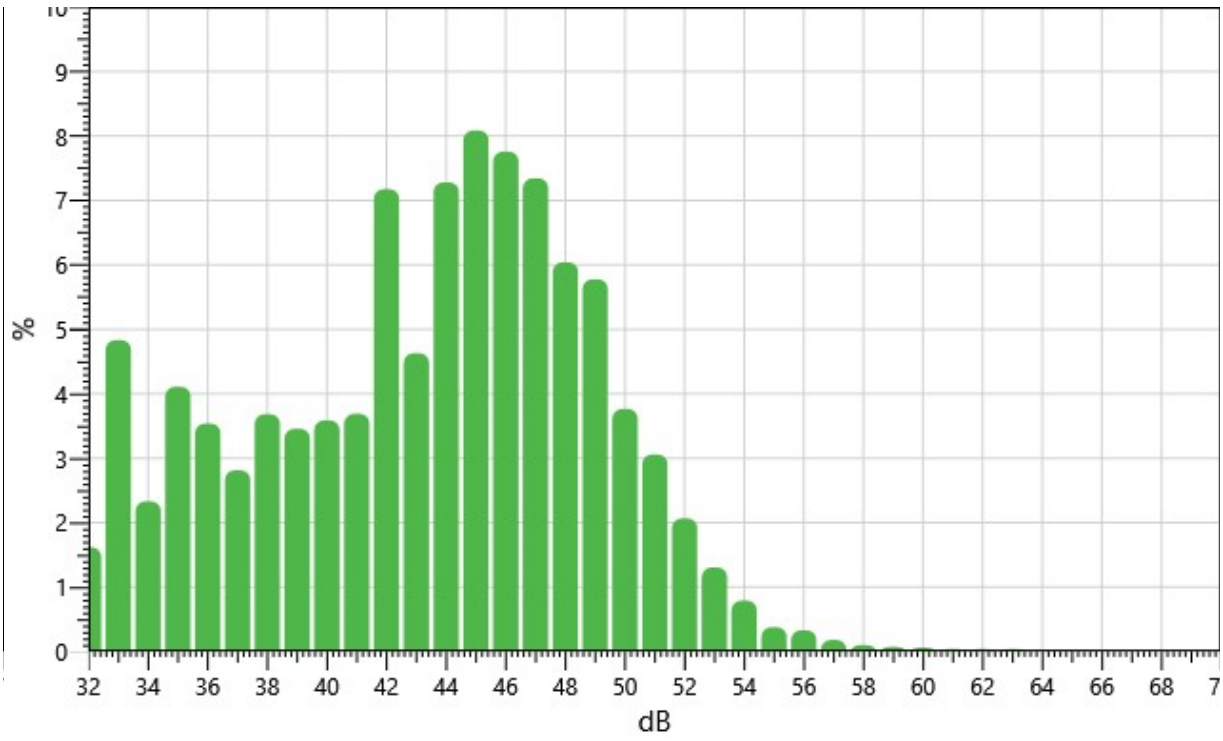
4/6/2022

Information Panel

Name	S010_BJM120003_05042022_234853
Start Time	4/4/2022 5:28:33 PM
Stop Time	4/4/2022 11:08:35 PM
Device Name	BJM120003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	05:40:02
Serial Number	BJM120003
User Name	

Statistics Chart

S010_BJM120003_05042022_234853: Statistics Chart

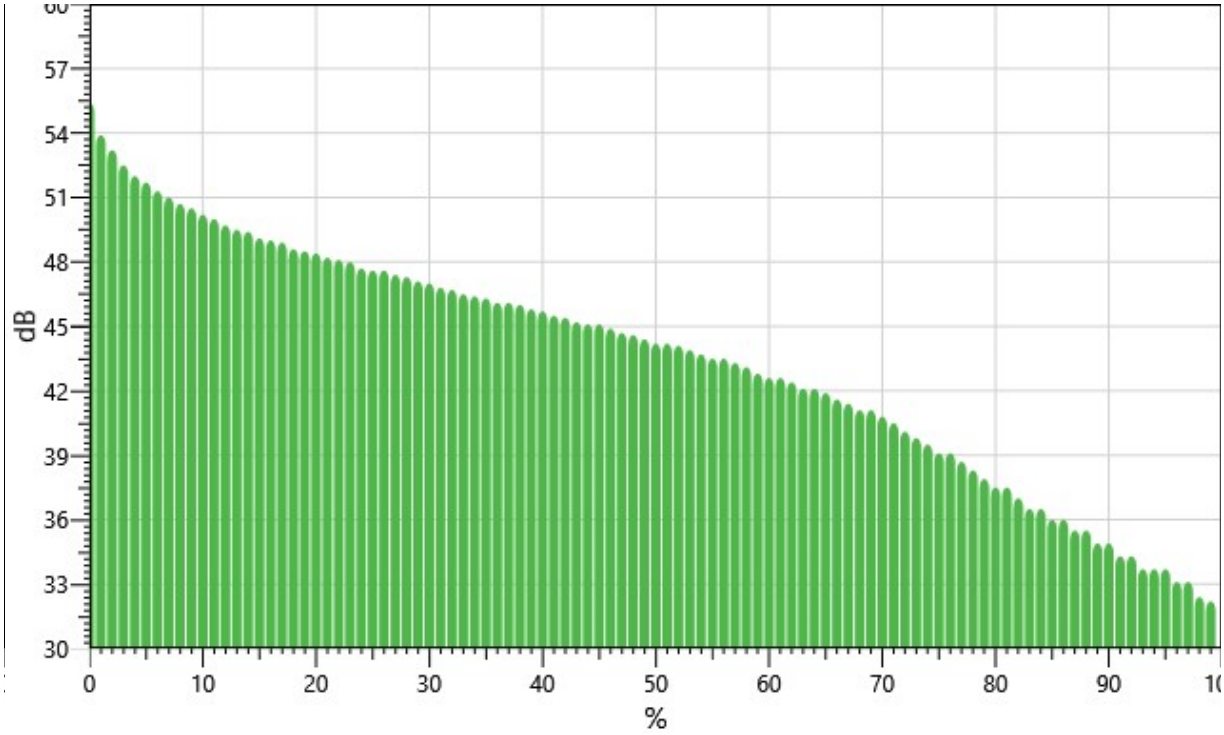


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
32:	0.00	0.00	0.00	0.02	0.35	1.24	0.00	0.00	0.00	0.00	1.62
33:	0.00	0.00	2.33	0.00	0.00	0.00	0.00	0.00	2.50	0.00	4.83
34:	0.00	0.00	0.00	0.00	2.33	0.00	0.00	0.00	0.00	0.00	2.33
35:	2.16	0.00	0.00	0.00	0.00	0.00	1.95	0.00	0.00	0.00	4.11
36:	0.00	1.87	0.00	0.00	0.00	0.00	1.67	0.00	0.00	0.00	3.54
37:	0.00	1.49	0.00	0.00	0.00	0.00	1.32	0.00	0.00	0.00	2.81
38:	1.29	0.00	0.00	0.00	1.23	0.00	0.00	0.00	1.16	0.00	3.68
39:	0.00	0.00	1.19	0.00	0.00	0.00	1.07	0.00	0.00	1.19	3.46
40:	0.00	0.00	1.17	0.00	0.00	0.00	1.21	0.00	0.00	1.20	3.59
41:	0.00	0.00	1.24	0.00	0.00	1.24	0.00	1.21	0.00	0.00	3.69
42:	1.31	0.00	1.46	0.00	0.00	1.52	0.00	1.52	0.00	1.36	7.17
43:	0.00	0.00	0.87	0.00	1.24	0.00	1.27	0.00	1.24	0.00	4.63
44:	1.25	0.00	1.24	1.24	0.00	1.17	0.00	1.19	1.19	0.00	7.28
45:	1.14	0.00	1.15	1.19	0.00	1.16	1.14	0.00	1.15	1.17	8.08
46:	0.00	1.09	1.09	0.00	1.06	1.11	1.12	0.00	1.16	1.12	7.76
47:	0.00	1.08	1.10	0.00	1.09	1.10	0.00	1.13	1.17	0.67	7.34
48:	0.00	0.96	0.91	0.87	0.00	0.82	0.86	0.83	0.00	0.79	6.04
49:	0.75	0.72	0.66	0.00	0.63	0.67	0.63	0.56	0.56	0.58	5.78
50:	0.00	0.58	0.52	0.48	0.00	0.50	0.46	0.41	0.40	0.42	3.77
51:	0.42	0.40	0.00	0.39	0.39	0.38	0.15	0.34	0.31	0.29	3.06
52:	0.28	0.27	0.26	0.00	0.24	0.23	0.21	0.21	0.19	0.19	2.07
53:	0.18	0.00	0.18	0.18	0.15	0.14	0.13	0.11	0.11	0.12	1.31
54:	0.11	0.11	0.00	0.09	0.09	0.09	0.08	0.09	0.08	0.05	0.79
55:	0.06	0.05	0.05	0.05	0.04	0.03	0.03	0.00	0.03	0.04	0.38
56:	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.33
57:	0.02	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.18
58:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.10
59:	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.07
60:	0.01	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.06
61:	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.04
62:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
63:	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.04
64:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
65:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
66:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Chart

S010_BJM120003_05042022_234853: Exceedance Chart

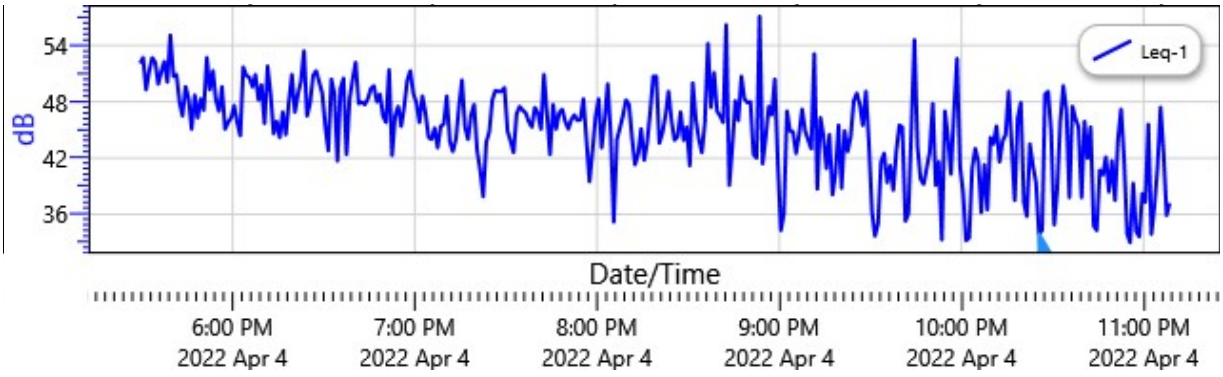


Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		55.4	53.9	53.2	52.5	52.0	51.7	51.3	51.0	50.7
10%:	50.5	50.2	50.0	49.7	49.5	49.4	49.1	49.0	48.9	48.6
20%:	48.5	48.4	48.2	48.1	48.0	47.7	47.6	47.6	47.4	47.3
30%:	47.1	47.0	46.8	46.7	46.5	46.4	46.3	46.1	46.1	46.0
40%:	45.8	45.7	45.5	45.4	45.2	45.1	45.1	44.9	44.7	44.6
50%:	44.4	44.2	44.2	44.1	43.9	43.7	43.5	43.5	43.3	43.1
60%:	42.8	42.6	42.6	42.4	42.1	42.1	41.9	41.6	41.4	41.1
70%:	41.1	40.8	40.5	40.1	39.8	39.5	39.1	39.1	38.7	38.3
80%:	37.9	37.5	37.5	37.0	36.5	36.5	36.0	36.0	35.5	35.5
90%:	34.9	34.9	34.3	34.3	33.7	33.7	33.7	33.1	33.1	32.4
100%:	32.2									

Logged Data Chart

S010_BJM120003_05042022_234853: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	14.7 dB			
Leq	1	47.1 dB	CNEL	1	51.5 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0.4 Pa²-Sec
L1	1	55.4 dB	L10	1	50.5 dB
L50	1	44.4 dB	L90	1	34.9 dB
LDN	1	49.5 dB	Lmax	1	66.6 dB
Lmin	1	32.3 dB	Lpk	1	87.6 dB
Mntime	1	4/4/2022 9:52:48 PM	Mxtime	1	4/4/2022 5:35:40 PM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/4/2022 5:38:20 PM	ProjectedTWA (1.00:00)	1	51.9 dB
Rtime	1	05:40:02	SEL	1	90.2 dB
Takt	1	48.5 dB	TWA	1	45.6 dB
UL Time	1	00:00:00	UR%	1	87.7 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	80 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s
Meter Floor	1	0 dB	Peak Weighting	1	A

Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0.1 %	Dose8	2	0.2 %
Exp Hrs	2	0 Pa²-Hours	Exp Sec	2	12.4 Pa²-Sec
Leq	2	61.8 dB	Lmax	2	83.9 dB
Lmin	2	46.4 dB	Lpk	2	97.1 dB
Mntime	2	4/4/2022 9:52:42 PM	Mxtime	2	4/4/2022 8:53:03 PM
OL%	2	0 %	Pdose (1.00:00)	2	0.5 %
PKtime	2	4/4/2022 5:51:29 PM	ProjectedTWA (1.00:00)	2	66.6 dB
Rtime	2	05:40:02	SEL	2	104.9 dB
TWA	2	60.3 dB	UL Time	2	00:00:00
UR%	2	5 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW	Count Rate	2	64 #
Criterion Level	2	90 dB	Criterion Time	2	8 hrs.
Int Threshold Enable	2	False	Integrating Threshold	2	80 dB
Peak Weighting	2	C	Projection Time	2	1440 mins.
ULL	2	115 dB			

Session Report

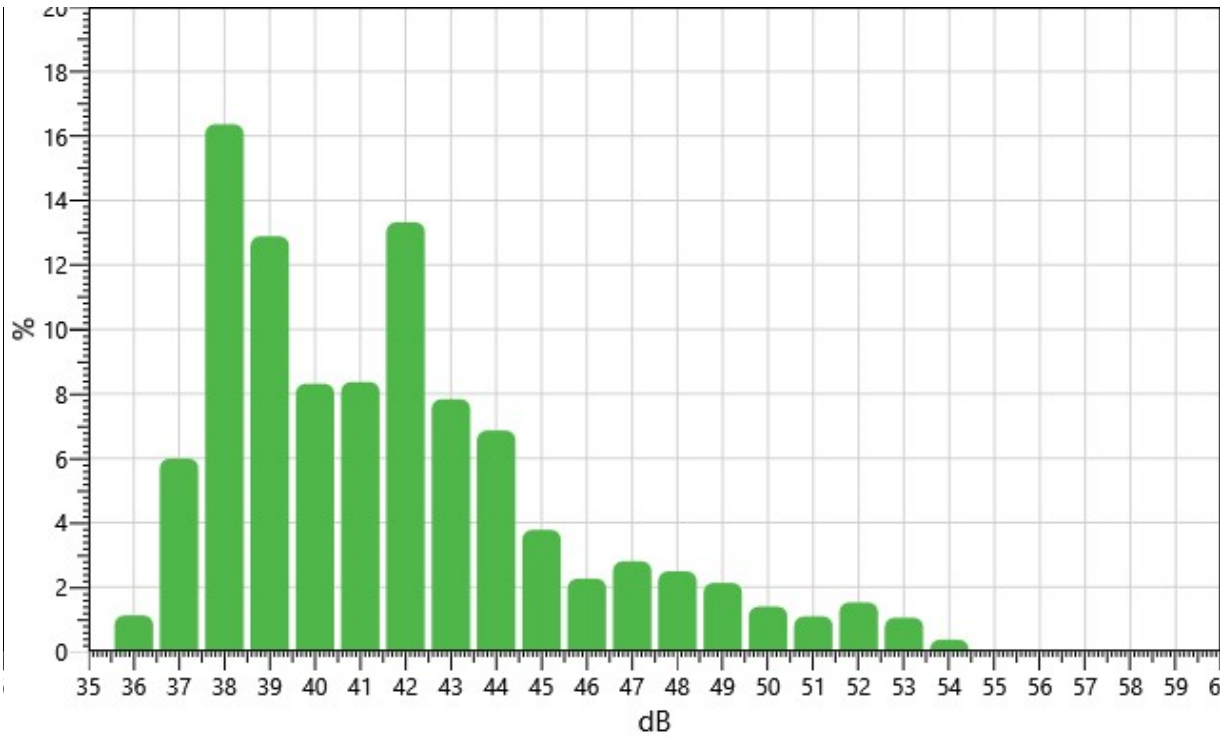
4/6/2022

Information Panel

Name	S014_BJM120003_05042022_234856
Start Time	4/5/2022 10:30:34 AM
Stop Time	4/5/2022 10:39:03 AM
Device Name	BJM120003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	00:08:29
Serial Number	BJM120003
User Name	

Statistics Chart

S014_BJM120003_05042022_234856: Statistics Chart

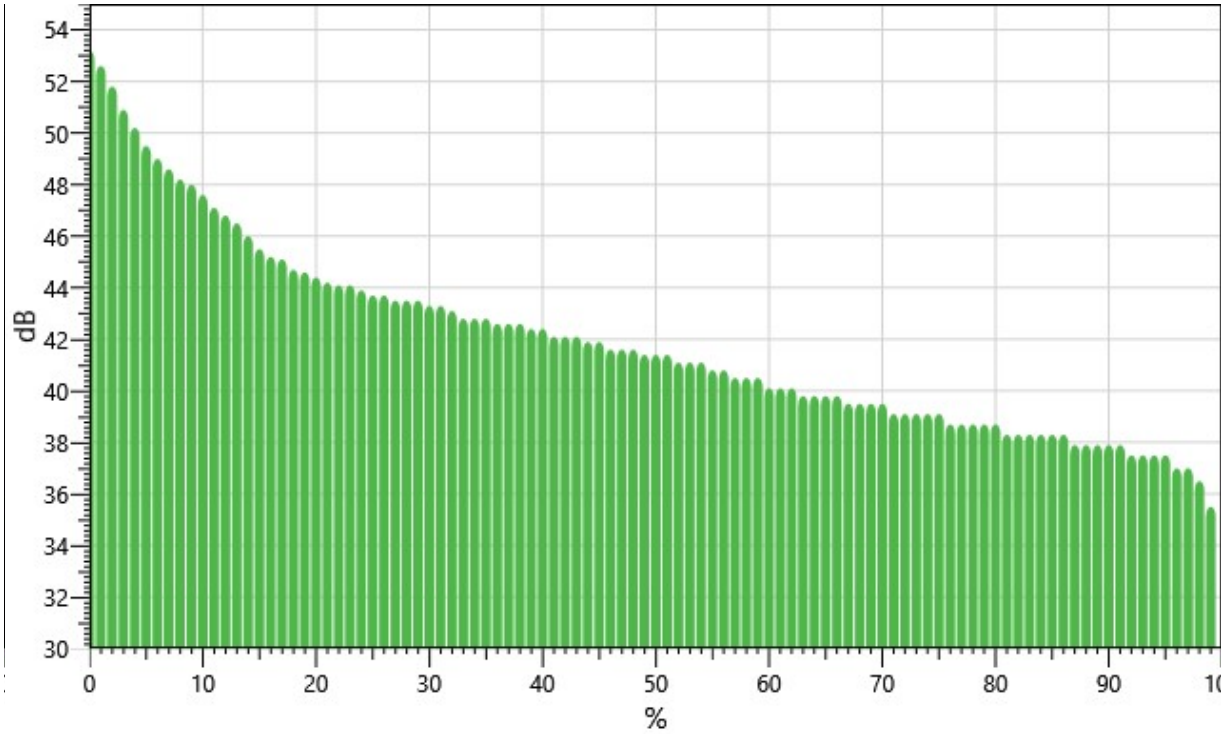


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
35:	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05
36:	0.00	0.22	0.00	0.00	0.00	0.00	0.91	0.00	0.00	0.00	1.12
37:	0.00	2.39	0.00	0.00	0.00	0.00	3.59	0.00	0.00	0.00	5.99
38:	5.26	0.00	0.00	0.00	5.85	0.00	0.00	0.00	5.26	0.00	16.36
39:	0.00	0.00	4.63	0.00	0.00	0.00	4.38	0.00	0.00	3.88	12.89
40:	0.00	0.00	2.89	0.00	0.00	0.00	2.84	0.00	0.00	2.58	8.31
41:	0.00	0.00	2.75	0.00	0.00	3.09	0.00	2.53	0.00	0.00	8.37
42:	2.86	0.00	2.18	0.00	0.00	2.50	0.00	2.90	0.00	2.89	13.32
43:	0.00	0.00	1.56	0.00	1.88	0.00	2.25	0.00	2.14	0.00	7.83
44:	1.70	0.00	1.66	1.16	0.00	0.82	0.00	0.83	0.69	0.00	6.86
45:	0.86	0.00	0.67	0.75	0.00	0.51	0.39	0.00	0.31	0.28	3.78
46:	0.00	0.28	0.21	0.00	0.25	0.36	0.30	0.00	0.40	0.46	2.26
47:	0.00	0.42	0.52	0.00	0.40	0.49	0.00	0.38	0.37	0.21	2.80
48:	0.00	0.42	0.33	0.44	0.00	0.45	0.34	0.21	0.00	0.30	2.49
49:	0.40	0.26	0.28	0.00	0.24	0.19	0.21	0.22	0.20	0.14	2.13
50:	0.00	0.15	0.18	0.22	0.00	0.17	0.16	0.17	0.16	0.17	1.40
51:	0.14	0.17	0.00	0.19	0.16	0.13	0.02	0.08	0.10	0.10	1.09
52:	0.15	0.22	0.13	0.00	0.12	0.14	0.16	0.18	0.18	0.25	1.53
53:	0.14	0.00	0.16	0.13	0.09	0.14	0.12	0.09	0.09	0.10	1.05
54:	0.08	0.06	0.00	0.10	0.12	0.01	0.00	0.00	0.00	0.00	0.37

Exceedance Chart

S014_BJM120003_05042022_234856: Exceedance Chart

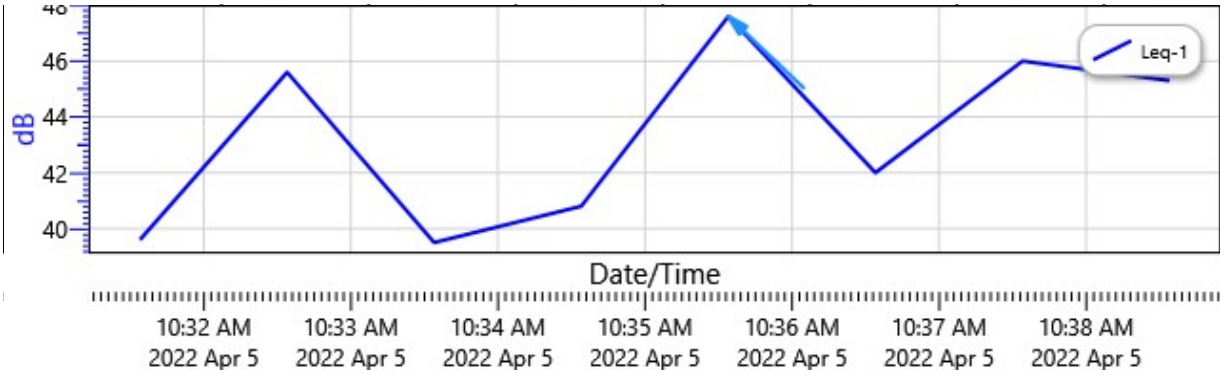


Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		53.2	52.6	51.8	50.9	50.2	49.5	49.0	48.6	48.2
10%:	48.0	47.6	47.1	46.8	46.5	46.0	45.5	45.2	45.1	44.7
20%:	44.6	44.4	44.2	44.1	44.1	43.9	43.7	43.7	43.5	43.5
30%:	43.5	43.3	43.3	43.1	42.8	42.8	42.8	42.6	42.6	42.6
40%:	42.4	42.4	42.1	42.1	42.1	41.9	41.9	41.6	41.6	41.6
50%:	41.4	41.4	41.4	41.1	41.1	41.1	40.8	40.8	40.5	40.5
60%:	40.5	40.1	40.1	40.1	39.8	39.8	39.8	39.8	39.5	39.5
70%:	39.5	39.5	39.1	39.1	39.1	39.1	39.1	38.7	38.7	38.7
80%:	38.7	38.7	38.3	38.3	38.3	38.3	38.3	38.3	37.9	37.9
90%:	37.9	37.9	37.9	37.5	37.5	37.5	37.5	37.0	37.0	36.5
100%:	35.5									

Logged Data Chart

S014_BJM120003_05042022_234856: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	22.8 dB			
Leq	1	44.3 dB	CNEL	1	44.3 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0 Pa²-Sec
L1	1	53.2 dB	L10	1	48 dB
L50	1	41.4 dB	L90	1	37.9 dB
LDN	1	44.3 dB	Lmax	1	54.5 dB
Lmin	1	35.6 dB	Lpk	1	80.4 dB
Mntime	1	4/5/2022 10:32:25 AM	Mxtime	1	4/5/2022 10:36:05 AM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/5/2022 10:36:05 AM	ProjectedTWA (1.00:00)	1	49.1 dB
Rtime	1	00:08:29	SEL	1	71.4 dB
Takt	1	45.9 dB	TWA	1	26.8 dB
UL Time	1	00:00:00	UR%	1	94.6 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Dose	2	0 %	Dose8	2	0.5 %
Exp Hrs	2	0 Pa²-Hours	Exp Sec	2	1 Pa²-Sec
Leq	2	67.1 dB	Lmax	2	81.7 dB
Lmin	2	51.4 dB	Lpk	2	93.5 dB
Mntime	2	4/5/2022 10:32:21 AM	Mxtime	2	4/5/2022 10:35:27 AM
OL%	2	0 %	Pdose (1.00:00)	2	1.6 %

PKtime	2	4/5/2022 10:38:02 AM	ProjectedTWA (1.00:00)	2	71.9 dB
Rtime	2	00:08:29	SEL	2	94.2 dB
TWA	2	49.6 dB	UL Time	2	00:00:00
UR%	2	0 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW			

Session Report

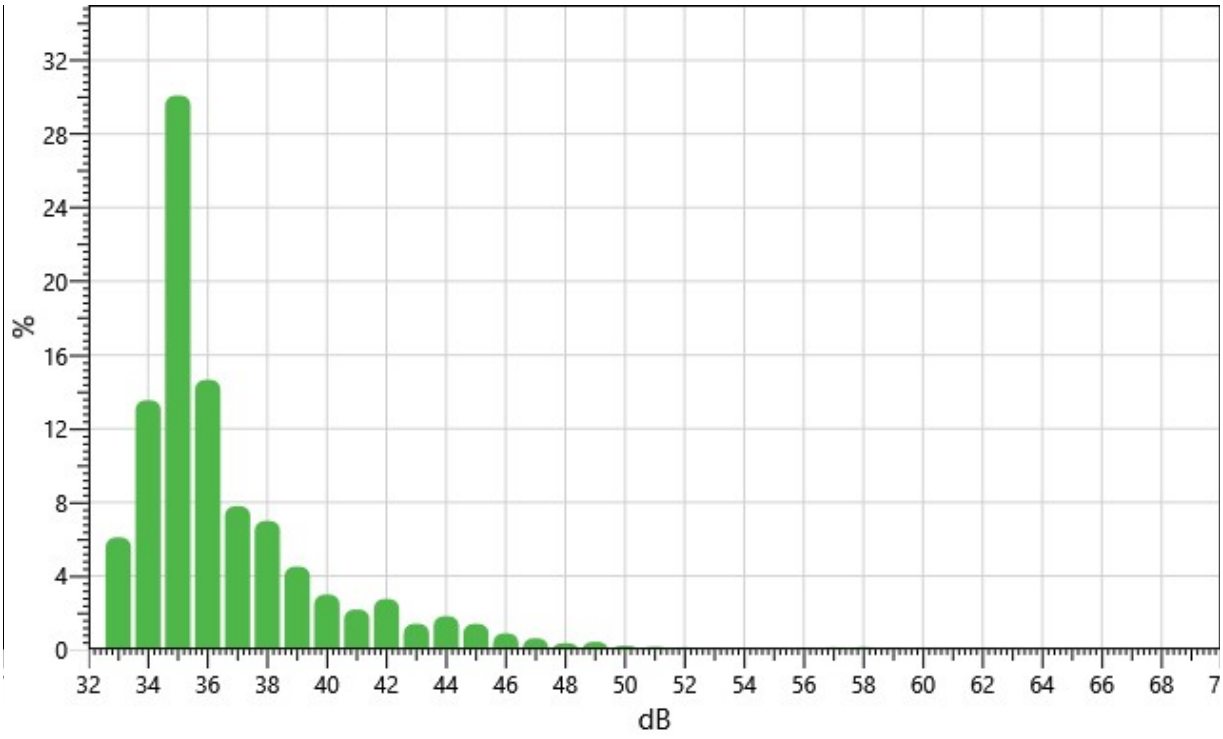
4/8/2022

Information Panel

Name	S016_BJM120003_08042022_050537
Start Time	4/5/2022 12:39:01 PM
Stop Time	4/5/2022 2:45:25 PM
Device Name	BJM120003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	02:06:24
Serial Number	BJM120003
User Name	

Statistics Chart

S016_BJM120003_08042022_050537: Statistics Chart



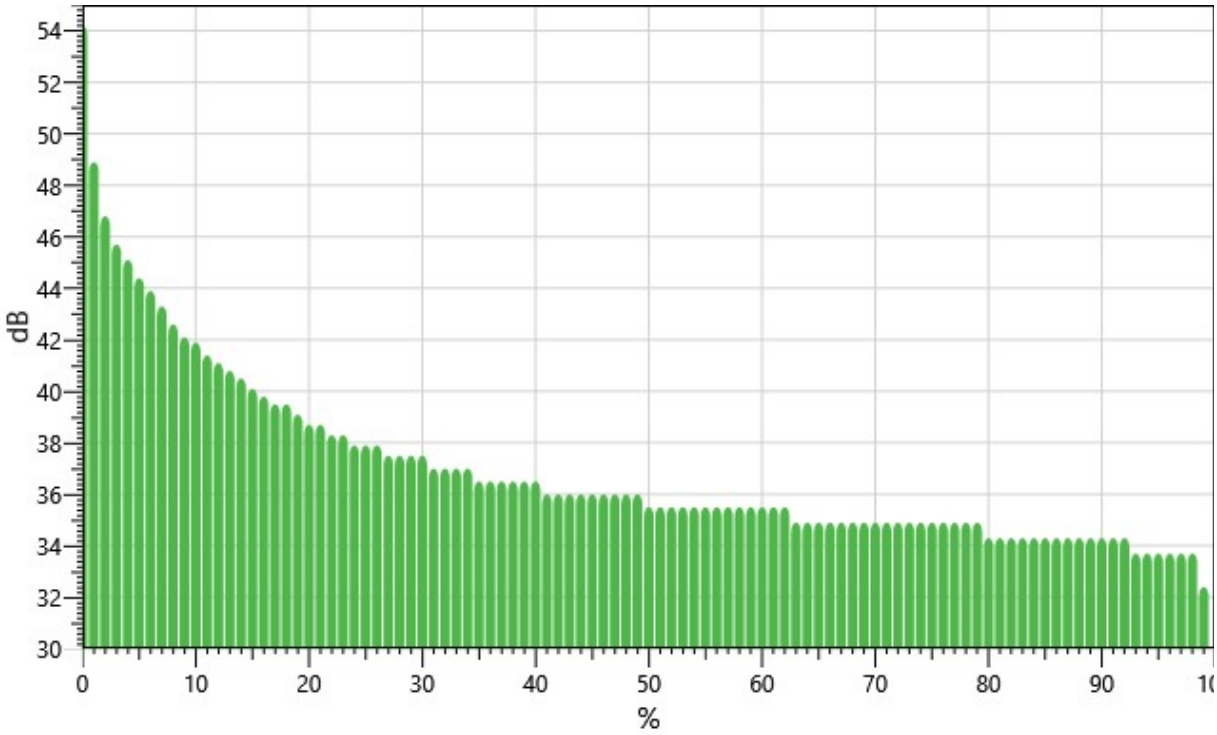
Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
32:	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01
33:	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	5.34	0.00	6.09
34:	0.00	0.00	0.00	0.00	13.54	0.00	0.00	0.00	0.00	0.00	13.54
35:	16.53	0.00	0.00	0.00	0.00	0.00	13.56	0.00	0.00	0.00	30.09
36:	0.00	8.95	0.00	0.00	0.00	0.00	5.70	0.00	0.00	0.00	14.65
37:	0.00	4.23	0.00	0.00	0.00	0.00	3.56	0.00	0.00	0.00	7.79
38:	2.93	0.00	0.00	0.00	2.24	0.00	0.00	0.00	1.81	0.00	6.99
39:	0.00	0.00	1.67	0.00	0.00	0.00	1.51	0.00	0.00	1.32	4.50
40:	0.00	0.00	1.13	0.00	0.00	0.00	0.98	0.00	0.00	0.87	2.98
41:	0.00	0.00	0.81	0.00	0.00	0.71	0.00	0.66	0.00	0.00	2.18
42:	0.64	0.00	0.58	0.00	0.00	0.52	0.00	0.49	0.00	0.52	2.74
43:	0.00	0.00	0.32	0.00	0.41	0.00	0.36	0.00	0.32	0.00	1.40
44:	0.30	0.00	0.33	0.32	0.00	0.30	0.00	0.30	0.26	0.00	1.81
45:	0.23	0.00	0.24	0.21	0.00	0.20	0.19	0.00	0.16	0.16	1.39
46:	0.00	0.14	0.14	0.00	0.13	0.12	0.12	0.00	0.12	0.11	0.88
47:	0.00	0.11	0.09	0.00	0.09	0.09	0.00	0.10	0.09	0.04	0.61
48:	0.00	0.06	0.06	0.05	0.00	0.05	0.05	0.05	0.00	0.04	0.35
49:	0.04	0.05	0.06	0.00	0.06	0.05	0.04	0.05	0.03	0.03	0.42
50:	0.00	0.04	0.03	0.02	0.00	0.02	0.03	0.02	0.02	0.02	0.20
51:	0.02	0.02	0.00	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.16
52:	0.02	0.01	0.01	0.00	0.01	0.02	0.01	0.01	0.01	0.01	0.12
53:	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.09
54:	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.08
55:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.06
56:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.10
57:	0.02	0.02	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.13
58:	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.02	0.01	0.01	0.14
59:	0.01	0.01	0.02	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.10
60:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.09
61:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.08
62:	0.01	0.01	0.00	0.01	0.01	0.02	0.01	0.00	0.00	0.00	0.07
63:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
64:	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03
65:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
66:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
67:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
68:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03

69:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01

Exceedance Chart

S016_BJM120003_08042022_050537: Exceedance Chart

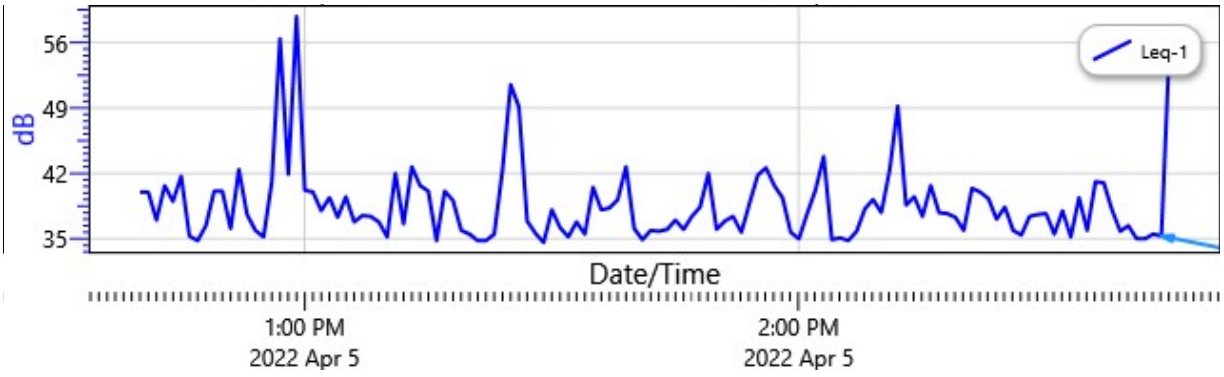


Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		54.2	48.9	46.8	45.7	45.1	44.4	43.9	43.3	42.6
10%:	42.1	41.9	41.4	41.1	40.8	40.5	40.1	39.8	39.5	39.5
20%:	39.1	38.7	38.7	38.3	38.3	37.9	37.9	37.9	37.5	37.5
30%:	37.5	37.5	37.0	37.0	37.0	37.0	36.5	36.5	36.5	36.5
40%:	36.5	36.5	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
50%:	36.0	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5
60%:	35.5	35.5	35.5	35.5	34.9	34.9	34.9	34.9	34.9	34.9
70%:	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9
80%:	34.9	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3
90%:	34.3	34.3	34.3	34.3	33.7	33.7	33.7	33.7	33.7	33.7
100%:	32.4									

Logged Data Chart

S016_BJM120003_08042022_050537: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	16 dB			
CMinusAEnabled	--	True			
Leq	1	43.3 dB	CNEL	1	43.3 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0.1 Pa²-Sec
L1	1	54.2 dB	L10	1	42.1 dB
L50	1	36 dB	L90	1	34.3 dB
LDN	1	43.3 dB	Lmax	1	69.8 dB
Lmin	1	32.5 dB	Lpk	1	102.2 dB
Mntime	1	4/5/2022 2:12:28 PM	Mxtime	1	4/5/2022 12:56:12 PM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/5/2022 2:11:26 PM	ProjectedTWA (1.00:00)	1	48.1 dB
Rtime	1	02:06:24	SEL	1	82.1 dB
Takt	1	46.2 dB	TWA	1	37.5 dB
UL Time	1	00:00:00	UR%	1	98.4 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	80 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s

Meter Floor	1	0 dB	Peak Weighting	1	A
Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0 %	Dose8	2	0.1 %
Exp Hrs	2	0 Pa^2-Hours	Exp Sec	2	2.6 Pa^2-Sec
Leq	2	59.3 dB	Lmax	2	81.6 dB
Lmin	2	38.4 dB	Lpk	2	103.4 dB
Mntime	2	4/5/2022 12:39:51 PM	Mxtime	2	4/5/2022 12:58:11 PM
OL%	2	0 %	Pdose (1.00:00)	2	0.3 %
PKtime	2	4/5/2022 2:11:26 PM	ProjectedTWA (1.00:00)	2	64 dB
Rtime	2	02:06:24	SEL	2	98.1 dB
TWA	2	53.5 dB	UL Time	2	00:00:00
UR%	2	36.6 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW	Count Rate	2	64 #
Criterion Level	2	90 dB	Criterion Time	2	8 hrs.
Int Threshold Enable	2	False	Integrating Threshold	2	80 dB
Peak Weighting	2	C	Projection Time	2	1440 mins.
ULL	2	115 dB			

Session Report

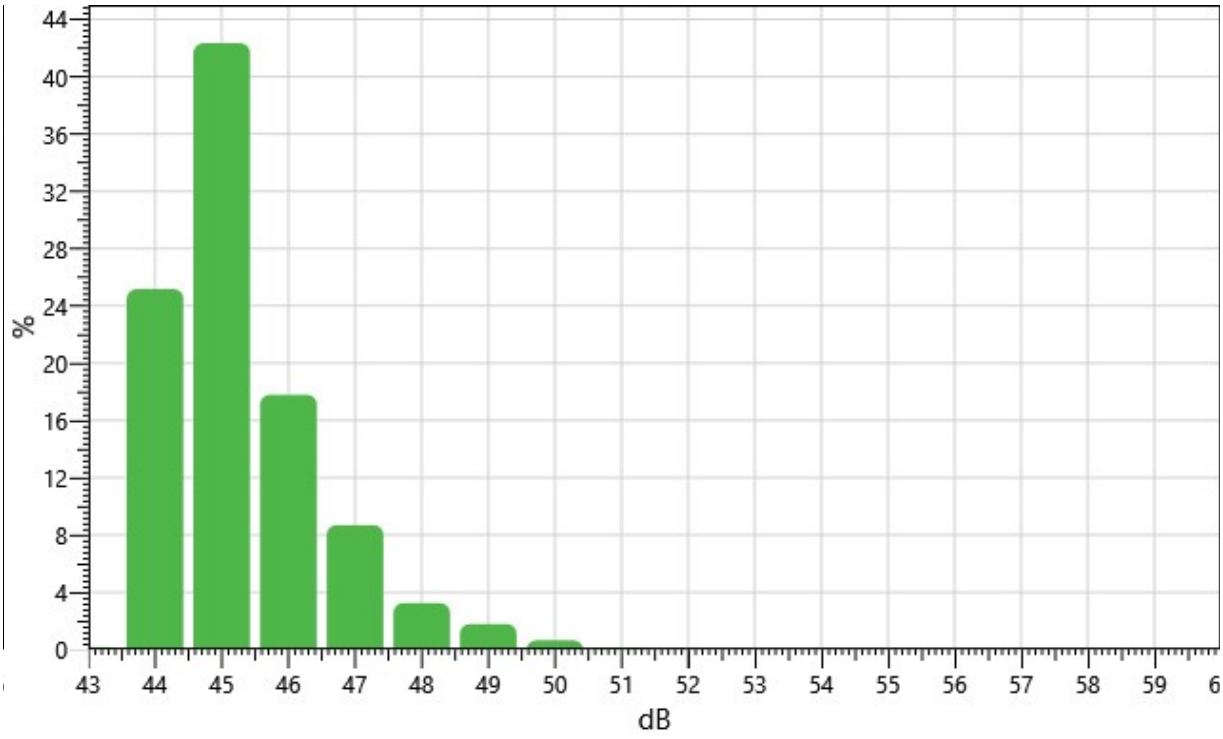
4/8/2022

Information Panel

Name	S127_BLI050007_08042022_032950
Start Time	4/6/2022 12:32:59 PM
Stop Time	4/6/2022 2:03:03 PM
Device Name	BLI050007
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	01:30:04
Serial Number	BLI050007
User Name	

Statistics Chart

S127_BLI050007_08042022_032950: Statistics Chart

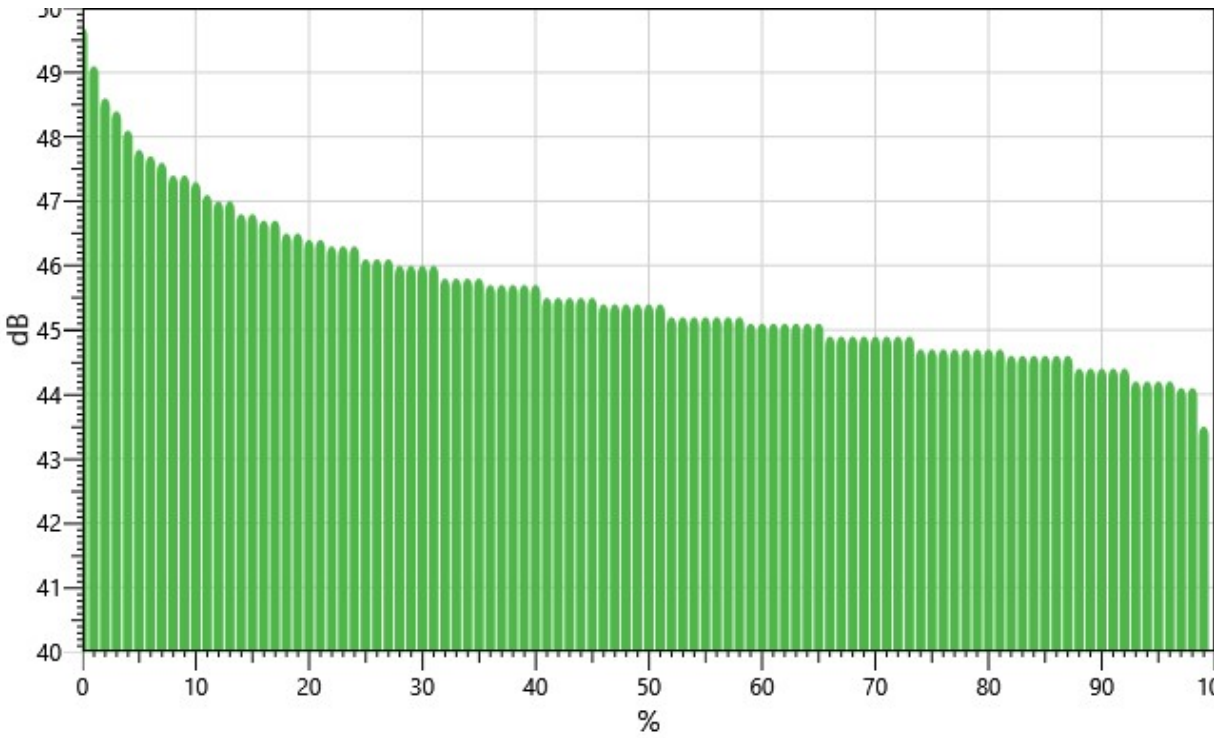


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
43:	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.15	0.00	0.17
44:	0.66	0.00	1.79	3.42	0.00	5.21	0.00	6.63	7.47	0.00	25.18
45:	7.77	0.00	7.55	6.87	0.00	6.02	5.27	0.00	4.73	4.13	42.33
46:	0.00	3.63	3.18	0.00	2.76	2.37	2.10	0.00	1.95	1.80	17.79
47:	0.00	1.61	1.42	0.00	1.43	1.36	0.00	1.23	1.10	0.55	8.69
48:	0.00	0.73	0.60	0.47	0.00	0.43	0.37	0.33	0.00	0.29	3.24
49:	0.28	0.26	0.21	0.00	0.21	0.21	0.17	0.16	0.15	0.12	1.78
50:	0.00	0.09	0.10	0.12	0.00	0.08	0.07	0.07	0.06	0.05	0.65
51:	0.03	0.03	0.00	0.03	0.02	0.02	0.00	0.01	0.01	0.01	0.15
52:	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.03

Exceedance Chart

S127_BLI050007_08042022_032950: Exceedance Chart



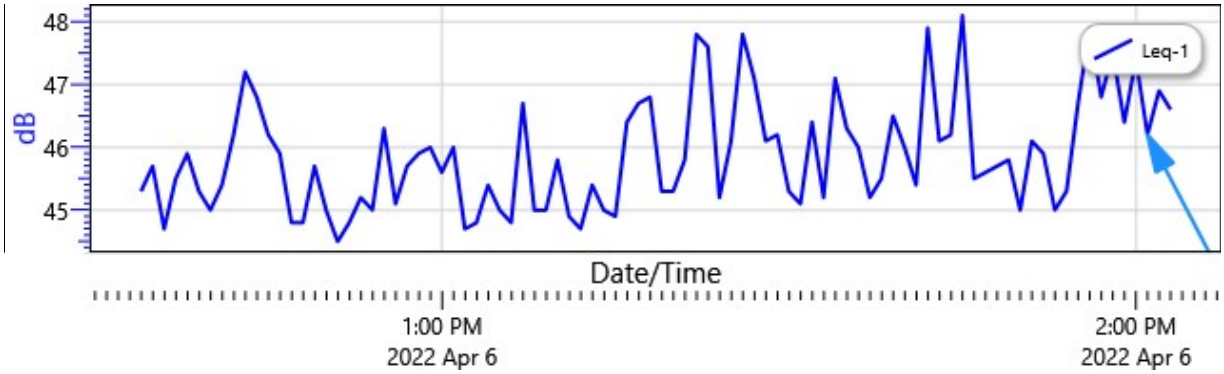
Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		49.7	49.1	48.6	48.4	48.1	47.8	47.7	47.6	47.4
10%:	47.4	47.3	47.1	47.0	47.0	46.8	46.8	46.7	46.7	46.5
20%:	46.5	46.4	46.4	46.3	46.3	46.3	46.1	46.1	46.1	46.0

30%:	46.0	46.0	46.0	45.8	45.8	45.8	45.8	45.7	45.7	45.7
40%:	45.7	45.7	45.5	45.5	45.5	45.5	45.5	45.4	45.4	45.4
50%:	45.4	45.4	45.4	45.2	45.2	45.2	45.2	45.2	45.2	45.2
60%:	45.1	45.1	45.1	45.1	45.1	45.1	45.1	44.9	44.9	44.9
70%:	44.9	44.9	44.9	44.9	44.9	44.7	44.7	44.7	44.7	44.7
80%:	44.7	44.7	44.7	44.6	44.6	44.6	44.6	44.6	44.6	44.4
90%:	44.4	44.4	44.4	44.4	44.2	44.2	44.2	44.2	44.1	44.1
100%:	43.5									

Logged Data Chart

S127_BLI050007_08042022_032950: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	7.3 dB			
CMinusAEnabled	--	True			
Leq	1	45.9 dB	CNEL	1	45.9 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0.1 Pa²-Sec
L1	1	49.7 dB	L10	1	47.4 dB
L50	1	45.4 dB	L90	1	44.4 dB
LDN	1	45.9 dB	Lmax	1	52.6 dB
Lmin	1	43.6 dB	Lpk	1	82.9 dB
Mntime	1	4/6/2022 12:39:30 PM	Mxtime	1	4/6/2022 1:44:27 PM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/6/2022 1:58:06 PM	ProjectedTWA (1.00:00)	1	50.7 dB
Rtime	1	01:30:04	SEL	1	83.2 dB
Takt	1	46.6 dB	TWA	1	38.6 dB

UL Time	1	00:00:00	UR%	1	99.2 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	60 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s
Meter Floor	1	0 dB	Peak Weighting	1	A
Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0 %	Dose8	2	0 %
Exp Hrs	2	0 Pa^2-Hours	Exp Sec	2	0.5 Pa^2-Sec
Leq	2	53.2 dB	Lmax	2	67.9 dB
Lmin	2	50.2 dB	Lpk	2	81.3 dB
Mntime	2	4/6/2022 12:35:21 PM	Mxtime	2	4/6/2022 1:44:20 PM
OL%	2	0 %	Pdose (1.00:00)	2	0.1 %
PKtime	2	4/6/2022 2:02:18 PM	ProjectedTWA (1.00:00)	2	58 dB
Rtime	2	01:30:04	SEL	2	90.5 dB
TWA	2	45.9 dB	UL Time	2	00:00:00
UR%	2	0 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW	Count Rate	2	64 #
Criterion Level	2	90 dB	Criterion Time	2	8 hrs.
Int Threshold Enable	2	False	Integrating Threshold	2	80 dB
Peak Weighting	2	C	Projection Time	2	1440 mins.
ULL	2	115 dB			

Session Report

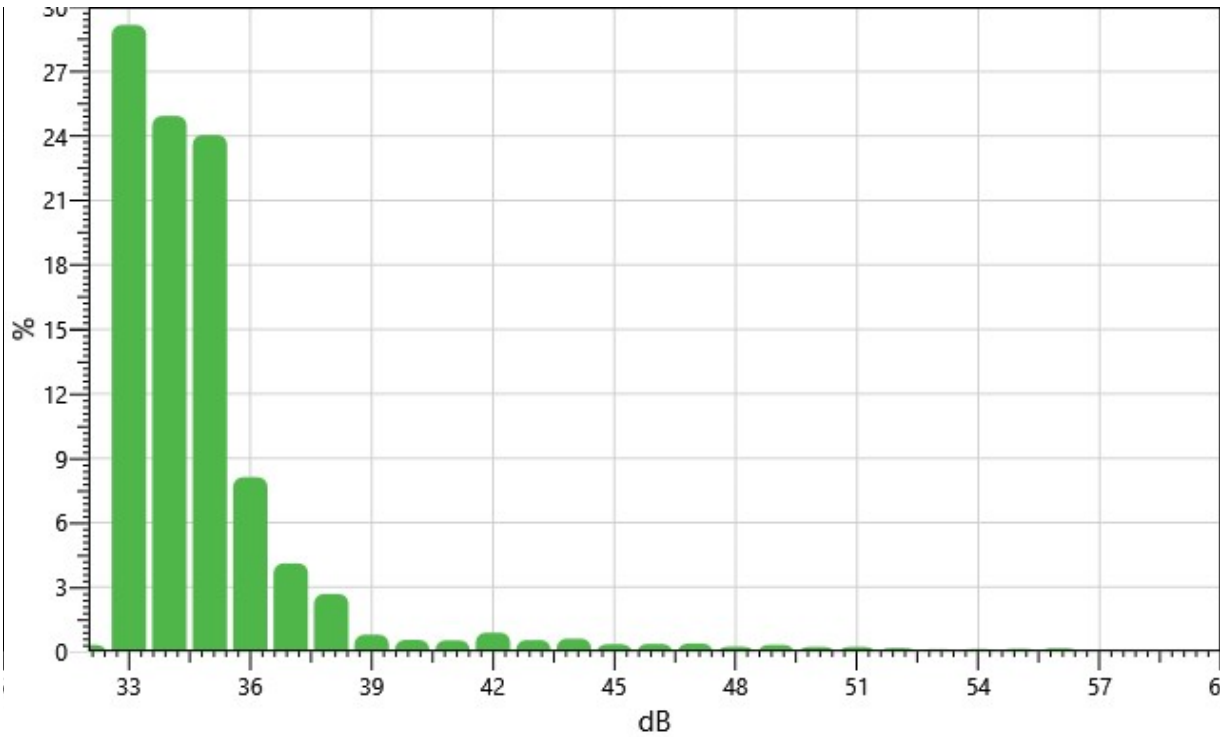
4/8/2022

Information Panel

Name	S017_BJM120003_08042022_050538
Start Time	4/5/2022 2:58:03 PM
Stop Time	4/5/2022 3:08:07 PM
Device Name	BJM120003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	00:10:04
Serial Number	BJM120003
User Name	

Statistics Chart

S017_BJM120003_08042022_050538: Statistics Chart

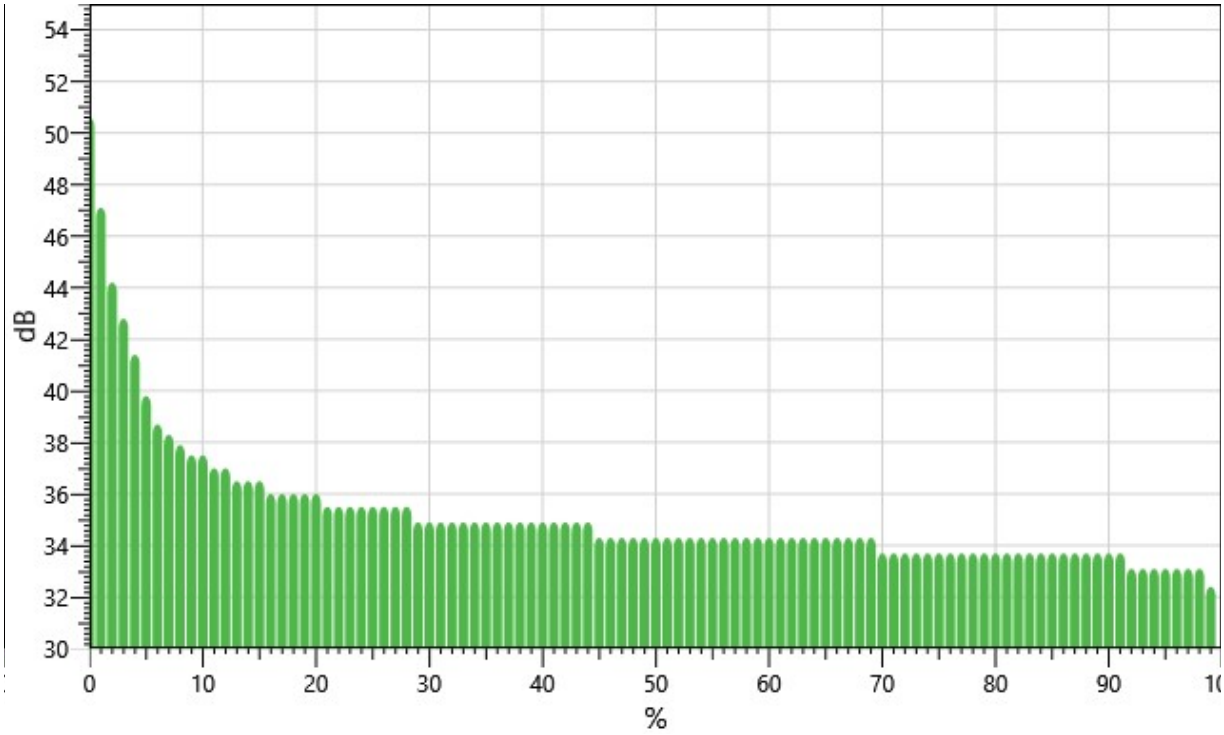


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
32:	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.31
33:	0.00	0.00	6.90	0.00	0.00	0.00	0.00	0.00	22.27	0.00	29.17
34:	0.00	0.00	0.00	0.00	24.94	0.00	0.00	0.00	0.00	0.00	24.94
35:	15.66	0.00	0.00	0.00	0.00	0.00	8.38	0.00	0.00	0.00	24.05
36:	0.00	4.92	0.00	0.00	0.00	0.00	3.20	0.00	0.00	0.00	8.12
37:	0.00	2.30	0.00	0.00	0.00	0.00	1.80	0.00	0.00	0.00	4.11
38:	1.17	0.00	0.00	0.00	0.97	0.00	0.00	0.00	0.54	0.00	2.68
39:	0.00	0.00	0.34	0.00	0.00	0.00	0.26	0.00	0.00	0.18	0.78
40:	0.00	0.00	0.16	0.00	0.00	0.00	0.17	0.00	0.00	0.21	0.54
41:	0.00	0.00	0.15	0.00	0.00	0.16	0.00	0.21	0.00	0.00	0.52
42:	0.17	0.00	0.21	0.00	0.00	0.25	0.00	0.13	0.00	0.12	0.88
43:	0.00	0.00	0.09	0.00	0.11	0.00	0.17	0.00	0.17	0.00	0.54
44:	0.20	0.00	0.11	0.09	0.00	0.08	0.00	0.06	0.06	0.00	0.60
45:	0.05	0.00	0.05	0.05	0.00	0.06	0.04	0.00	0.05	0.05	0.34
46:	0.00	0.05	0.05	0.00	0.04	0.04	0.05	0.00	0.06	0.05	0.36
47:	0.00	0.06	0.07	0.00	0.06	0.05	0.00	0.05	0.05	0.04	0.38
48:	0.00	0.03	0.03	0.03	0.00	0.03	0.03	0.03	0.00	0.04	0.23
49:	0.04	0.04	0.03	0.00	0.04	0.03	0.04	0.03	0.03	0.03	0.32
50:	0.00	0.03	0.03	0.03	0.00	0.03	0.03	0.03	0.02	0.03	0.22
51:	0.02	0.03	0.00	0.03	0.03	0.03	0.01	0.03	0.03	0.02	0.22
52:	0.02	0.02	0.01	0.00	0.02	0.03	0.02	0.02	0.02	0.02	0.17
53:	0.02	0.00	0.01	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.11
54:	0.01	0.01	0.00	0.02	0.01	0.02	0.01	0.02	0.02	0.01	0.12
55:	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.00	0.02	0.02	0.13
56:	0.02	0.01	0.02	0.02	0.01	0.02	0.01	0.02	0.02	0.01	0.16
57:	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02

Exceedance Chart

S017_BJM120003_08042022_050538: Exceedance Chart

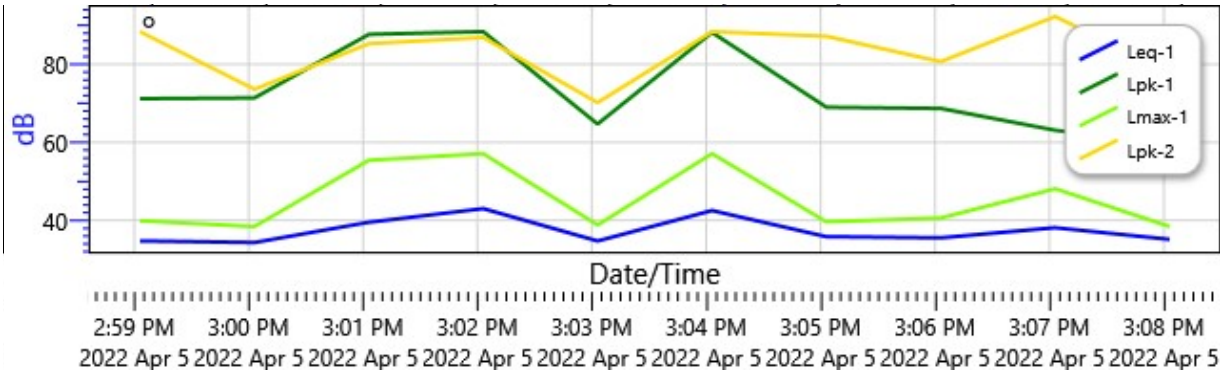


Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		50.6	47.1	44.2	42.8	41.4	39.8	38.7	38.3	37.9
10%:	37.5	37.5	37.0	37.0	36.5	36.5	36.5	36.0	36.0	36.0
20%:	36.0	36.0	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5
30%:	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9
40%:	34.9	34.9	34.9	34.9	34.9	34.9	34.3	34.3	34.3	34.3
50%:	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3
60%:	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3
70%:	34.3	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7
80%:	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7
90%:	33.7	33.7	33.7	33.1	33.1	33.1	33.1	33.1	33.1	33.1
100%:	32.4									

Logged Data Chart

S017_BJM120003_08042022_050538: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	23.9 dB			
CMinusAEnabled	--	True			
Leq	1	38.5 dB	CNEL	1	38.5 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0 Pa²-Sec
L1	1	50.6 dB	L10	1	37.5 dB
L50	1	34.3 dB	L90	1	33.7 dB
LDN	1	38.5 dB	Lmax	1	57.1 dB
Lmin	1	32.5 dB	Lpk	1	88.4 dB
Mntime	1	4/5/2022 3:02:04 PM	Mxtime	1	4/5/2022 3:06:53 PM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/5/2022 3:06:53 PM	ProjectedTWA (1.00:00)	1	43.3 dB
Rtime	1	00:10:04	SEL	1	66.3 dB
Takt	1	42.1 dB	TWA	1	21.7 dB
UL Time	1	00:00:00	UR%	1	98.9 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	80 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s

Meter Floor	1	0 dB	Peak Weighting	1	A
Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0 %	Dose8	2	0.2 %
Exp Hrs	2	0 Pa^2-Hours	Exp Sec	2	0.4 Pa^2-Sec
Leq	2	62.4 dB	Lmax	2	80.5 dB
Lmin	2	38 dB	Lpk	2	92.3 dB
Mntime	2	4/5/2022 2:58:54 PM	Mxtime	2	4/5/2022 3:01:13 PM
OL%	2	0 %	Pdose (1.00:00)	2	0.5 %
PKtime	2	4/5/2022 3:01:13 PM	ProjectedTWA (1.00:00)	2	67.1 dB
Rtime	2	00:10:04	SEL	2	90.2 dB
TWA	2	45.6 dB	UL Time	2	00:00:00
UR%	2	45.3 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW	Count Rate	2	64 #
Criterion Level	2	90 dB	Criterion Time	2	8 hrs.
Int Threshold Enable	2	False	Integrating Threshold	2	80 dB
Peak Weighting	2	C	Projection Time	2	1440 mins.
ULL	2	115 dB			

Session Report

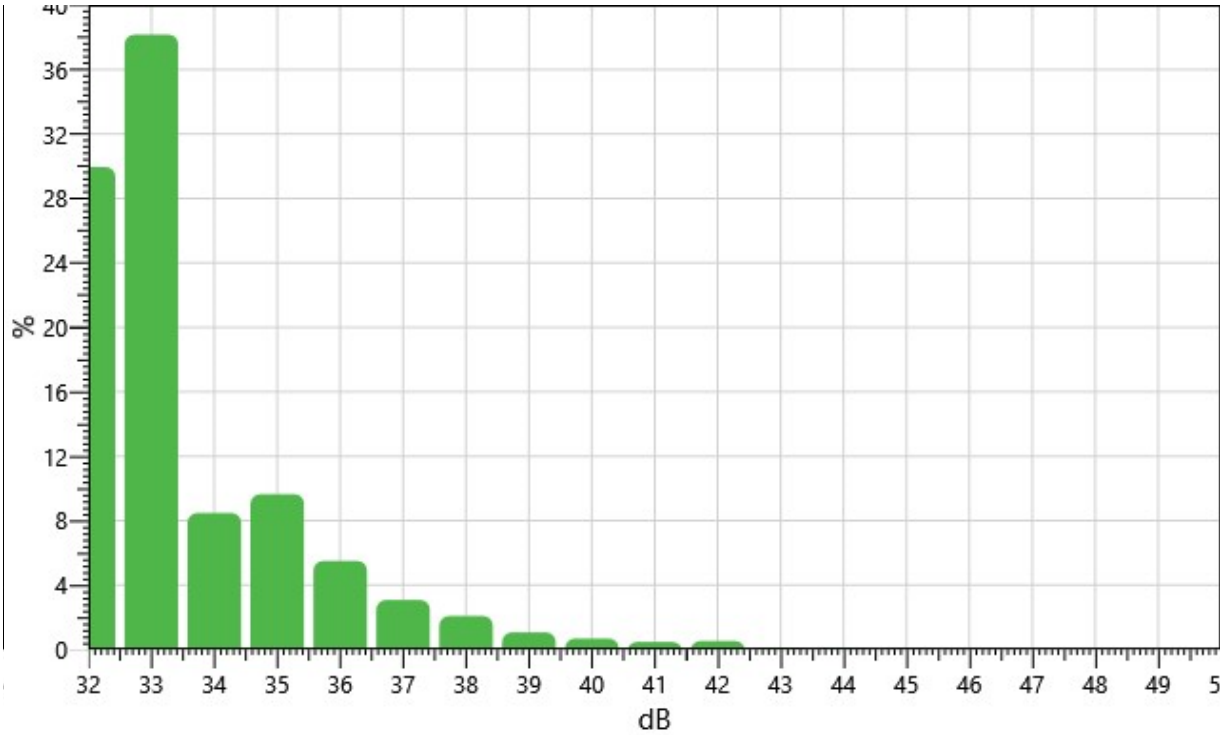
4/8/2022

Information Panel

Name	S033_BJM120003_08042022_050558
Start Time	4/7/2022 4:57:01 PM
Stop Time	4/7/2022 5:57:05 PM
Device Name	BJM120003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	01:00:04
Serial Number	BJM120003
User Name	

Statistics Chart

S033_BJM120003_08042022_050558: Statistics Chart

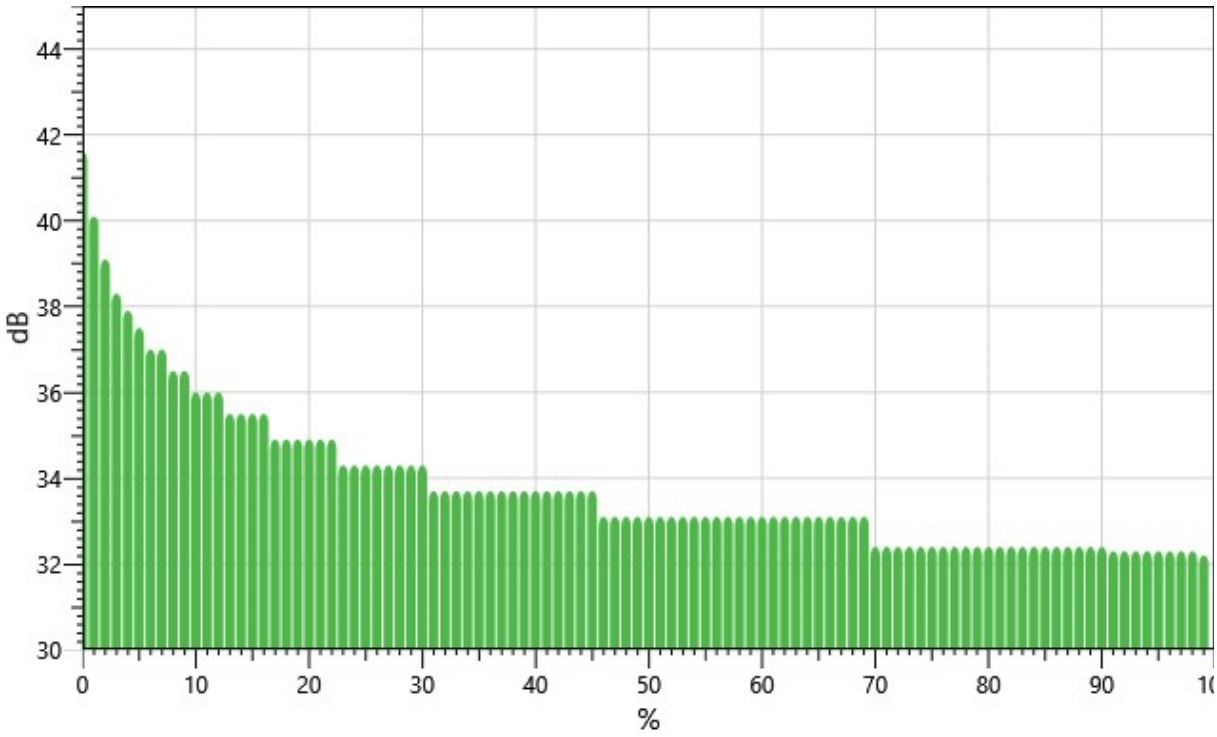


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
32:	0.00	0.00	0.00	0.49	7.60	21.85	0.00	0.00	0.00	0.00	29.95
33:	0.00	0.00	23.35	0.00	0.00	0.00	0.00	0.00	14.82	0.00	38.16
34:	0.00	0.00	0.00	0.00	8.48	0.00	0.00	0.00	0.00	0.00	8.48
35:	5.64	0.00	0.00	0.00	0.00	0.00	4.01	0.00	0.00	0.00	9.64
36:	0.00	3.15	0.00	0.00	0.00	0.00	2.35	0.00	0.00	0.00	5.50
37:	0.00	1.70	0.00	0.00	0.00	0.00	1.38	0.00	0.00	0.00	3.08
38:	0.95	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.51	0.00	2.08
39:	0.00	0.00	0.39	0.00	0.00	0.00	0.34	0.00	0.00	0.33	1.06
40:	0.00	0.00	0.25	0.00	0.00	0.00	0.21	0.00	0.00	0.22	0.68
41:	0.00	0.00	0.18	0.00	0.00	0.16	0.00	0.15	0.00	0.00	0.48
42:	0.15	0.00	0.10	0.00	0.00	0.09	0.00	0.12	0.00	0.08	0.54
43:	0.00	0.00	0.03	0.00	0.05	0.00	0.04	0.00	0.02	0.00	0.12
44:	0.02	0.00	0.03	0.02	0.00	0.02	0.00	0.01	0.00	0.00	0.11
45:	0.01	0.00	0.03	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.07
46:	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.03

Exceedance Chart

S033_BJM120003_08042022_050558: Exceedance Chart

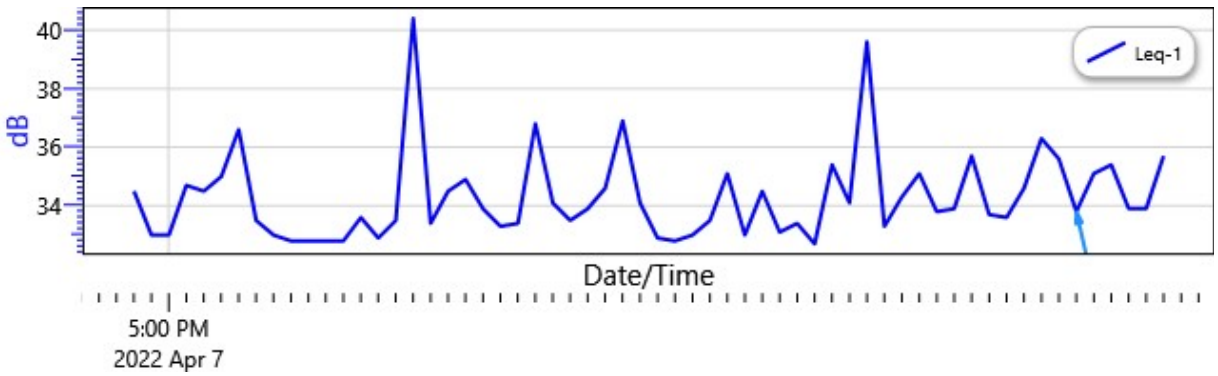


Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		41.6	40.1	39.1	38.3	37.9	37.5	37.0	37.0	36.5
10%:	36.5	36.0	36.0	36.0	35.5	35.5	35.5	35.5	34.9	34.9
20%:	34.9	34.9	34.9	34.9	34.3	34.3	34.3	34.3	34.3	34.3
30%:	34.3	34.3	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7
40%:	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.1	33.1	33.1
50%:	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1
60%:	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1
70%:	33.1	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
80%:	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
90%:	32.4	32.4	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3
100%:	32.2									

Logged Data Chart

S033_BJM120003_08042022_050558: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	23.2 dB			
CMinusAEnabled	--	True			
Leq	1	34.6 dB	CNEL	1	34.6 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0 Pa²-Sec
L1	1	41.6 dB	L10	1	36.5 dB
L50	1	33.1 dB	L90	1	32.4 dB
LDN	1	34.6 dB	Lmax	1	46.8 dB
Lmin	1	32.3 dB	Lpk	1	75.5 dB

Mntime	1	4/7/2022 5:09:21 PM	Mxtime	1	4/7/2022 5:39:33 PM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/7/2022 5:13:05 PM	ProjectedTWA (1.00:00)	1	39.3 dB
Rtime	1	01:00:04	SEL	1	70.1 dB
Takt	1	35.9 dB	TWA	1	25.5 dB
UL Time	1	00:00:00	UR%	1	100 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	80 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s
Meter Floor	1	0 dB	Peak Weighting	1	A
Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0 %	Dose8	2	0.1 %
Exp Hrs	2	0 Pa^2-Hours	Exp Sec	2	0.9 Pa^2-Sec
Leq	2	57.8 dB	Lmax	2	72.4 dB
Lmin	2	32.3 dB	Lpk	2	83.8 dB
Mntime	2	4/7/2022 4:57:17 PM	Mxtime	2	4/7/2022 5:13:17 PM
OL%	2	0 %	Pdose (1.00:00)	2	0.2 %
PKtime	2	4/7/2022 5:48:24 PM	ProjectedTWA (1.00:00)	2	62.6 dB
Rtime	2	01:00:04	SEL	2	93.4 dB
TWA	2	48.8 dB	UL Time	2	00:00:00
UR%	2	29.5 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW	Count Rate	2	64 #
Criterion Level	2	90 dB	Criterion Time	2	8 hrs.
Int Threshold Enable	2	False	Integrating Threshold	2	80 dB
Peak Weighting	2	C	Projection Time	2	1440 mins.
ULL	2	115 dB			

Session Report

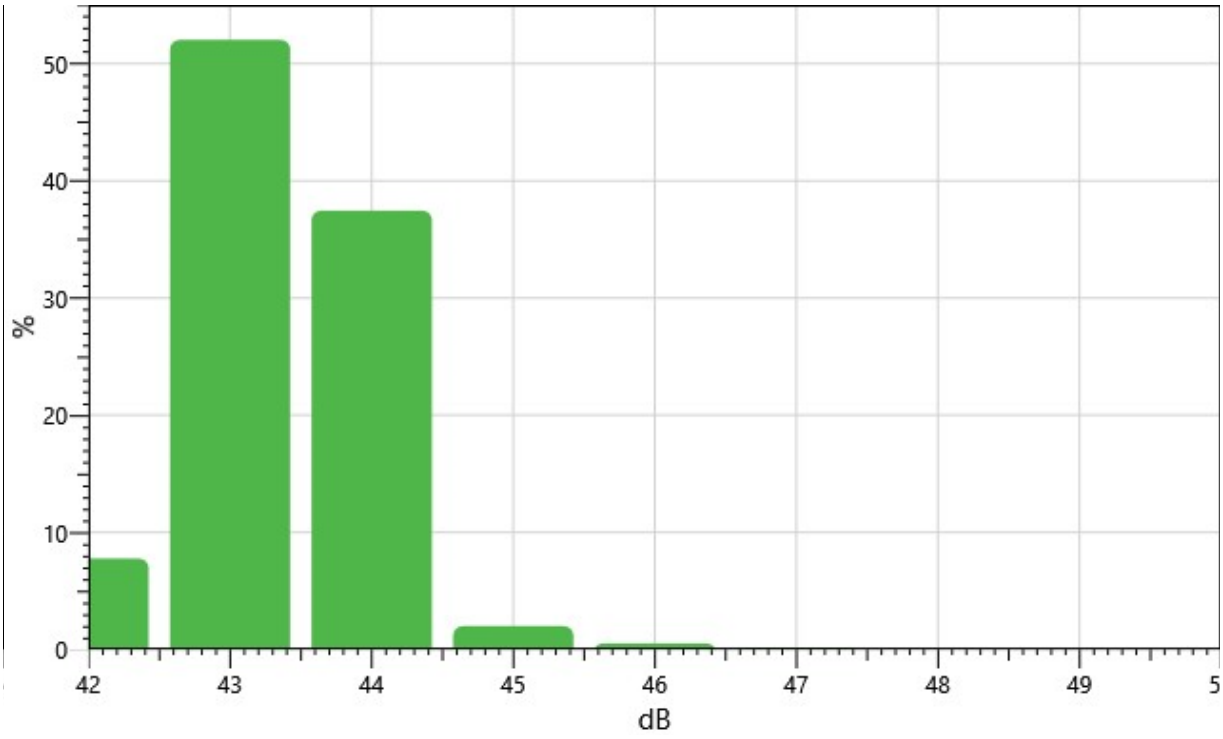
4/8/2022

Information Panel

Name	S136_BLI050007_08042022_032958
Start Time	4/7/2022 5:11:13 PM
Stop Time	4/7/2022 5:26:29 PM
Device Name	BLI050007
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	00:15:16
Serial Number	BLI050007
User Name	

Statistics Chart

S136_BLI050007_08042022_032958: Statistics Chart

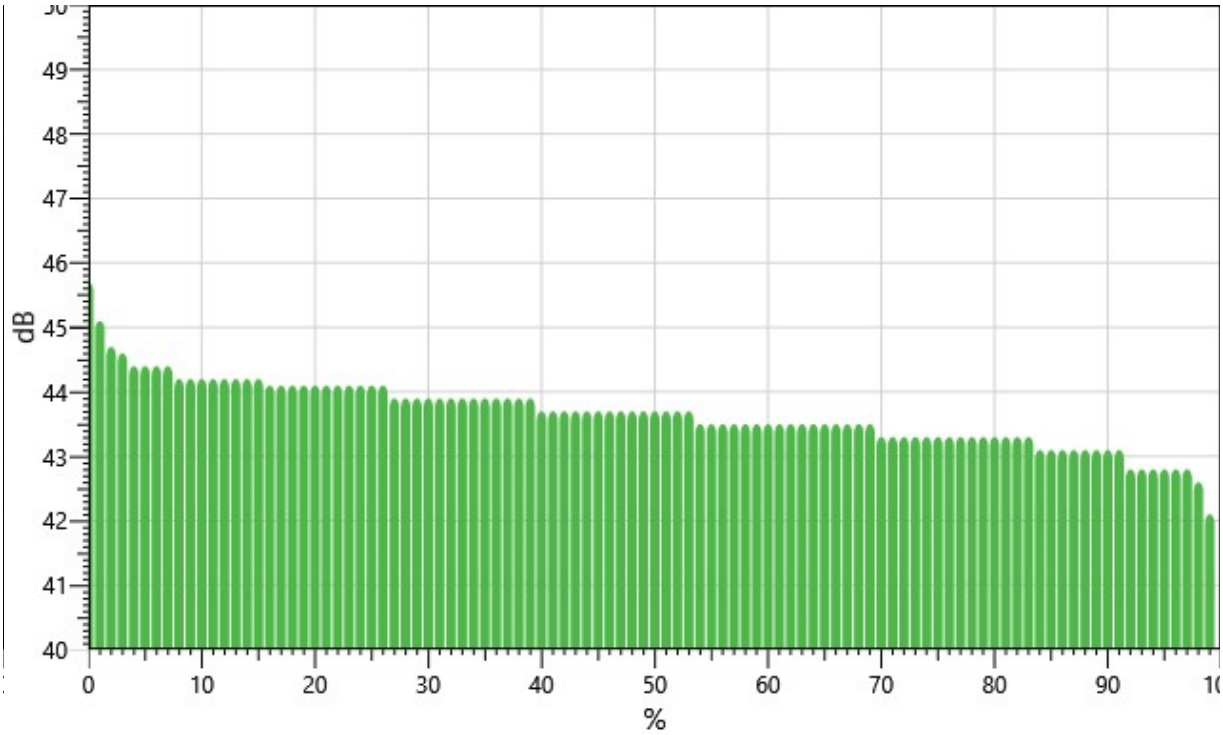


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
42:	0.00	0.00	0.01	0.00	0.00	0.14	0.00	1.57	0.00	6.04	7.76
43:	0.00	0.00	7.46	0.00	14.11	0.00	15.75	0.00	14.70	0.00	52.03
44:	13.04	0.00	10.98	7.57	0.00	3.74	0.00	1.48	0.66	0.00	37.47
45:	0.46	0.00	0.39	0.30	0.00	0.25	0.23	0.00	0.21	0.16	2.00
46:	0.00	0.13	0.10	0.00	0.08	0.09	0.07	0.00	0.03	0.03	0.53
47:	0.00	0.04	0.02	0.00	0.02	0.02	0.00	0.02	0.02	0.01	0.15
48:	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.04
49:	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02

Exceedance Chart

S136_BLI050007_08042022_032958: Exceedance Chart



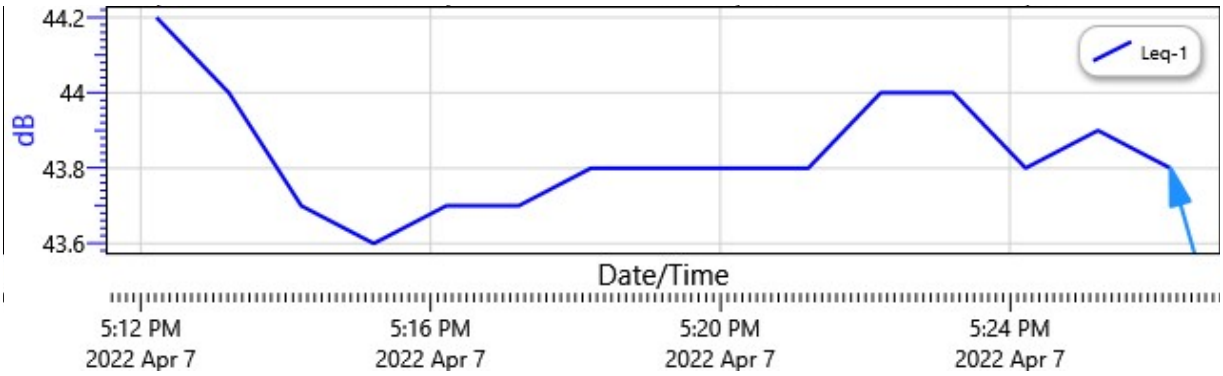
Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		45.7	45.1	44.7	44.6	44.4	44.4	44.4	44.4	44.2
10%:	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.1	44.1	44.1
20%:	44.1	44.1	44.1	44.1	44.1	44.1	44.1	44.1	43.9	43.9
30%:	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9
40%:	43.9	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7

50%:	43.7	43.7	43.7	43.7	43.7	43.5	43.5	43.5	43.5	43.5
60%:	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5
70%:	43.5	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
80%:	43.3	43.3	43.3	43.3	43.3	43.1	43.1	43.1	43.1	43.1
90%:	43.1	43.1	43.1	42.8	42.8	42.8	42.8	42.8	42.8	42.6
100%:	42.1									

Logged Data Chart

S136_BLI050007_08042022_032958: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	5.3 dB			
CMinusAEnabled	--	True			
Leq	1	43.8 dB	CNEL	1	43.8 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0 Pa²-Sec
L1	1	45.7 dB	L10	1	44.2 dB
L50	1	43.7 dB	L90	1	43.1 dB
LDN	1	43.8 dB	Lmax	1	49.1 dB
Lmin	1	42.2 dB	Lpk	1	80.8 dB
Mntime	1	4/7/2022 5:11:22 PM	Mxtime	1	4/7/2022 5:19:22 PM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/7/2022 5:19:21 PM	ProjectedTWA (1.00:00)	1	48.6 dB
Rtime	1	00:15:16	SEL	1	73.4 dB
Takt	1	44.7 dB	TWA	1	28.8 dB
UL Time	1	00:00:00	UR%	1	100 %
Exchange Rate	1	3 dB	Weighting	1	A

Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	60 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s
Meter Floor	1	0 dB	Peak Weighting	1	A
Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0 %	Dose8	2	0 %
Exp Hrs	2	0 Pa^2-Hours	Exp Sec	2	0 Pa^2-Sec
Leq	2	49.1 dB	Lmax	2	64.6 dB
Lmin	2	42 dB	Lpk	2	78.5 dB
Mntime	2	4/7/2022 5:14:50 PM	Mxtime	2	4/7/2022 5:11:13 PM
OL%	2	0 %	Pdose (1.00:00)	2	0 %
PKtime	2	4/7/2022 5:21:17 PM	ProjectedTWA (1.00:00)	2	53.8 dB
Rtime	2	00:15:16	SEL	2	78.7 dB
TWA	2	34.1 dB	UL Time	2	00:00:00
UR%	2	86.7 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW	Count Rate	2	64 #
Criterion Level	2	90 dB	Criterion Time	2	8 hrs.
Int Threshold Enable	2	False	Integrating Threshold	2	80 dB
Peak Weighting	2	C	Projection Time	2	1440 mins.
ULL	2	115 dB			

Session Report

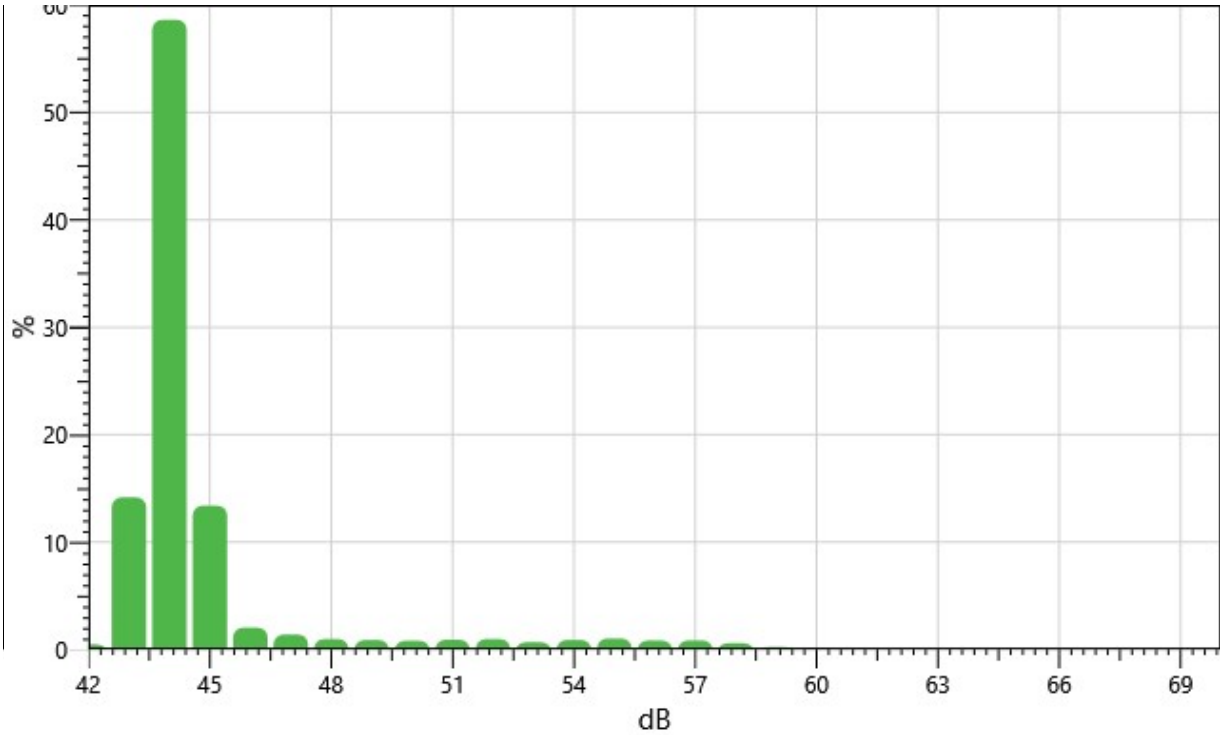
4/8/2022

Information Panel

Name	S128_BLI050007_08042022_032951
Start Time	4/6/2022 5:24:03 PM
Stop Time	4/6/2022 6:24:55 PM
Device Name	BLI050007
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	01:00:52
Serial Number	BLI050007
User Name	

Statistics Chart

S128_BLI050007_08042022_032951: Statistics Chart

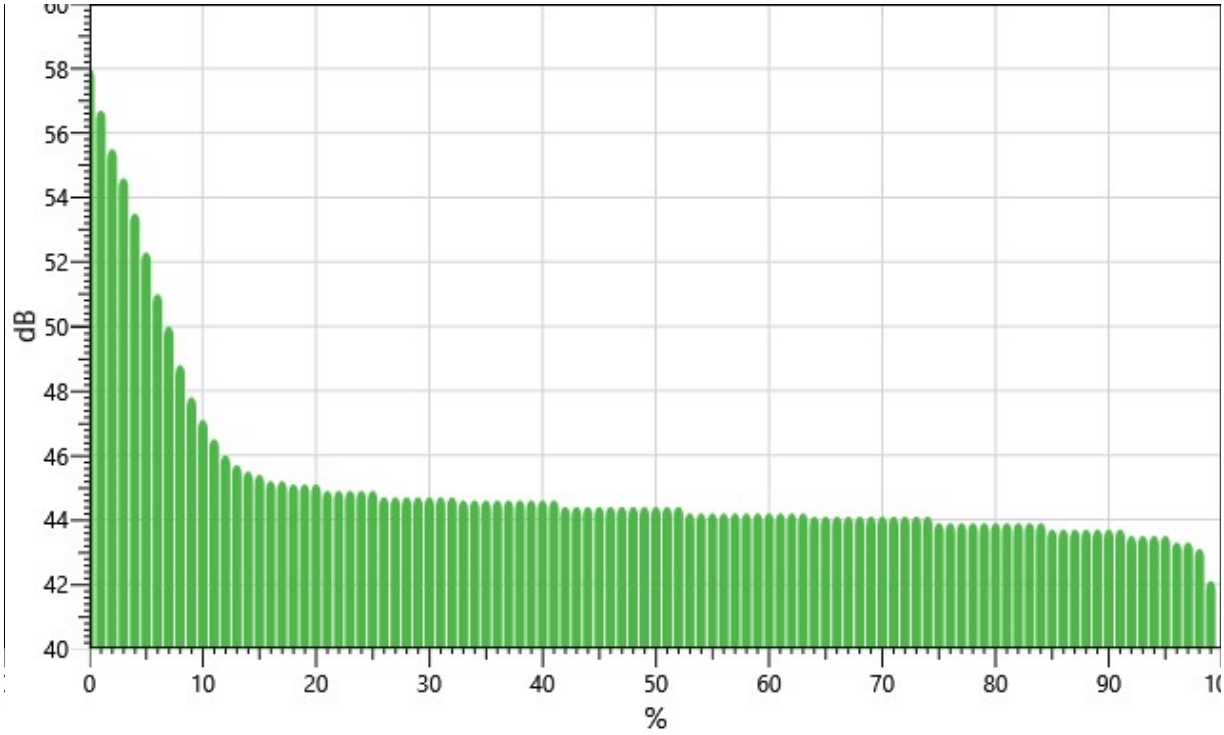


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
42:	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.08	0.00	0.38	0.48
43:	0.00	0.00	0.68	0.00	2.16	0.00	4.35	0.00	6.97	0.00	14.17
44:	9.48	0.00	11.00	11.37	0.00	10.56	0.00	9.11	7.11	0.00	58.63
45:	4.95	0.00	3.12	1.98	0.00	1.32	0.90	0.00	0.65	0.48	13.40
46:	0.00	0.35	0.30	0.00	0.28	0.28	0.30	0.00	0.28	0.24	2.04
47:	0.00	0.24	0.21	0.00	0.20	0.20	0.00	0.20	0.22	0.11	1.39
48:	0.00	0.14	0.14	0.15	0.00	0.15	0.14	0.13	0.00	0.11	0.96
49:	0.11	0.12	0.11	0.00	0.09	0.10	0.09	0.07	0.09	0.10	0.88
50:	0.00	0.10	0.11	0.11	0.00	0.10	0.08	0.09	0.10	0.11	0.82
51:	0.11	0.11	0.00	0.10	0.12	0.10	0.05	0.10	0.10	0.10	0.90
52:	0.09	0.10	0.12	0.00	0.12	0.13	0.11	0.12	0.11	0.08	0.97
53:	0.08	0.00	0.08	0.07	0.06	0.06	0.07	0.08	0.09	0.08	0.68
54:	0.08	0.08	0.00	0.10	0.13	0.10	0.09	0.12	0.11	0.08	0.89
55:	0.13	0.11	0.14	0.12	0.11	0.11	0.10	0.00	0.11	0.09	1.03
56:	0.12	0.10	0.09	0.07	0.08	0.08	0.08	0.08	0.07	0.07	0.84
57:	0.07	0.06	0.07	0.09	0.09	0.10	0.12	0.07	0.09	0.08	0.85
58:	0.07	0.09	0.09	0.06	0.04	0.06	0.06	0.05	0.04	0.04	0.60
59:	0.03	0.03	0.02	0.02	0.00	0.02	0.03	0.04	0.02	0.01	0.24
60:	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.14
61:	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.05
62:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
63:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02

Exceedance Chart

S128_BLI050007_08042022_032951: Exceedance Chart

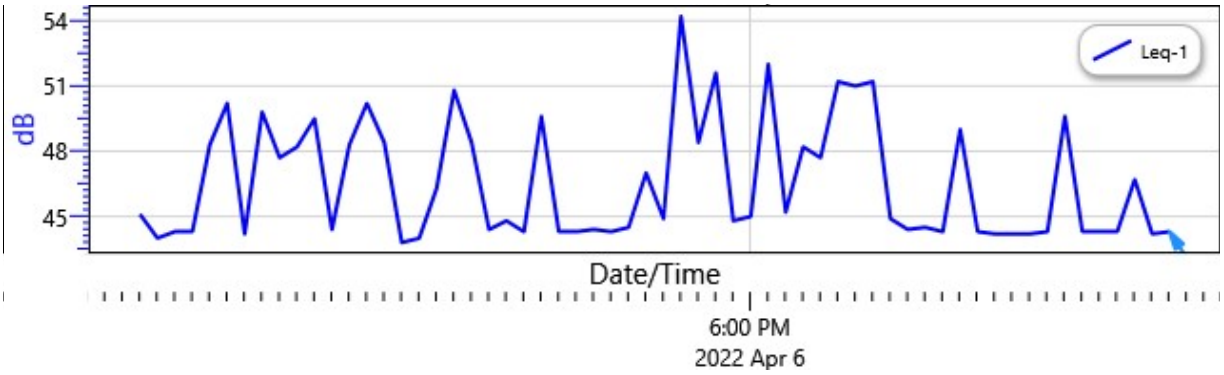


Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		58.0	56.7	55.5	54.6	53.5	52.3	51.0	50.0	48.8
10%:	47.8	47.1	46.5	46.0	45.7	45.5	45.4	45.2	45.2	45.1
20%:	45.1	45.1	44.9	44.9	44.9	44.9	44.9	44.7	44.7	44.7
30%:	44.7	44.7	44.7	44.7	44.6	44.6	44.6	44.6	44.6	44.6
40%:	44.6	44.6	44.6	44.4	44.4	44.4	44.4	44.4	44.4	44.4
50%:	44.4	44.4	44.4	44.4	44.2	44.2	44.2	44.2	44.2	44.2
60%:	44.2	44.2	44.2	44.2	44.2	44.1	44.1	44.1	44.1	44.1
70%:	44.1	44.1	44.1	44.1	44.1	44.1	43.9	43.9	43.9	43.9
80%:	43.9	43.9	43.9	43.9	43.9	43.9	43.7	43.7	43.7	43.7
90%:	43.7	43.7	43.7	43.5	43.5	43.5	43.5	43.3	43.3	43.1
100%:	42.1									

Logged Data Chart

S128_BLI050007_08042022_032951: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	10.8 dB			
CMinusAEnabled	--	True			
Leq	1	47.5 dB	CNEL	1	47.5 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0.1 Pa²-Sec
L1	1	58 dB	L10	1	47.8 dB
L50	1	44.4 dB	L90	1	43.7 dB
LDN	1	47.5 dB	Lmax	1	63.8 dB
Lmin	1	42.2 dB	Lpk	1	84.4 dB
Mntime	1	4/6/2022 5:26:03 PM	Mxtime	1	4/6/2022 5:54:42 PM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/6/2022 6:05:00 PM	ProjectedTWA (1.00:00)	1	52.2 dB
Rtime	1	01:00:52	SEL	1	83.1 dB
Takt	1	49.1 dB	TWA	1	38.5 dB
UL Time	1	00:00:00	UR%	1	92 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	60 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s

Meter Floor	1	0 dB	Peak Weighting	1	A
Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0 %	Dose8	2	0.1 %
Exp Hrs	2	0 Pa^2-Hours	Exp Sec	2	1 Pa^2-Sec
Leq	2	58.3 dB	Lmax	2	75.9 dB
Lmin	2	43.2 dB	Lpk	2	91.1 dB
Mntime	2	4/6/2022 5:25:21 PM	Mxtime	2	4/6/2022 6:05:00 PM
OL%	2	0 %	Pdose (1.00:00)	2	0.2 %
PKtime	2	4/6/2022 6:05:00 PM	ProjectedTWA (1.00:00)	2	63.1 dB
Rtime	2	01:00:52	SEL	2	93.9 dB
TWA	2	49.3 dB	UL Time	2	00:00:00
UR%	2	30 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW	Count Rate	2	64 #
Criterion Level	2	90 dB	Criterion Time	2	8 hrs.
Int Threshold Enable	2	False	Integrating Threshold	2	80 dB
Peak Weighting	2	C	Projection Time	2	1440 mins.
ULL	2	115 dB			

Session Report

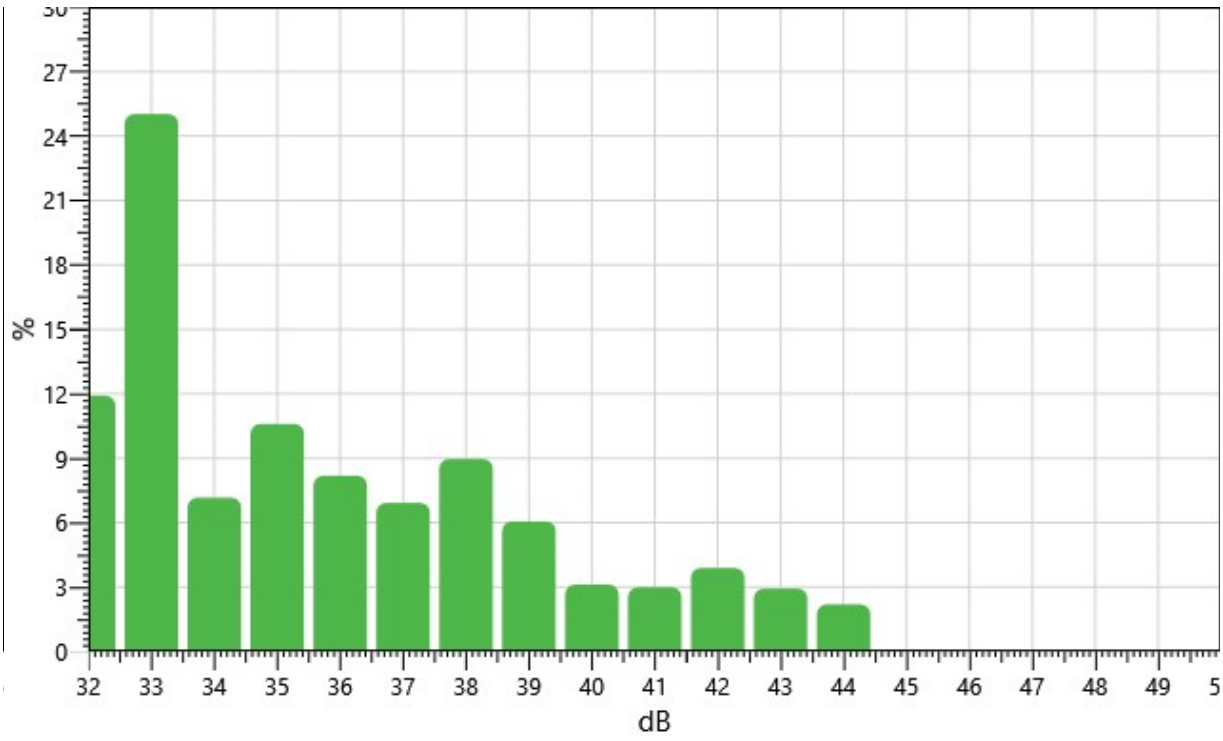
4/8/2022

Information Panel

Name	S025_BJM120003_08042022_050547
Start Time	4/6/2022 5:48:29 PM
Stop Time	4/6/2022 5:53:48 PM
Device Name	BJM120003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	00:05:19
Serial Number	BJM120003
User Name	

Statistics Chart

S025_BJM120003_08042022_050547: Statistics Chart

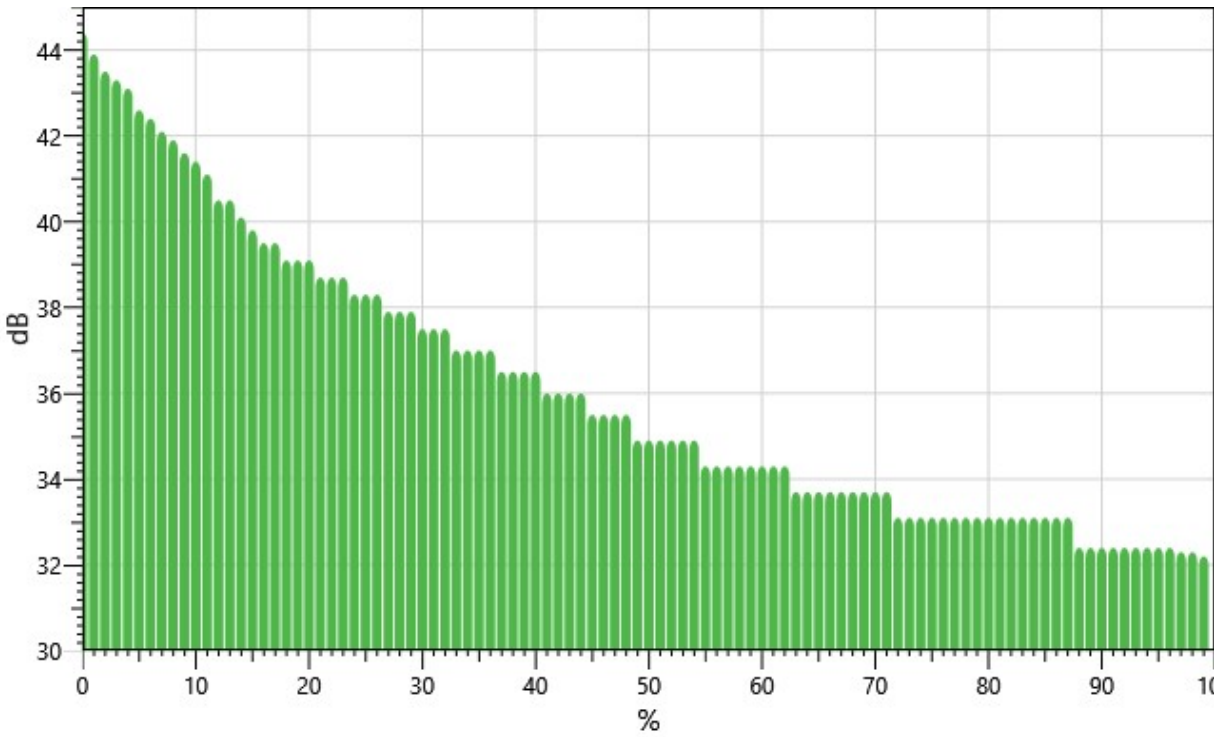


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
32:	0.00	0.00	0.00	0.15	1.95	9.80	0.00	0.00	0.00	0.00	11.91
33:	0.00	0.00	15.13	0.00	0.00	0.00	0.00	0.00	9.89	0.00	25.02
34:	0.00	0.00	0.00	0.00	7.16	0.00	0.00	0.00	0.00	0.00	7.16
35:	6.31	0.00	0.00	0.00	0.00	0.00	4.29	0.00	0.00	0.00	10.59
36:	0.00	3.84	0.00	0.00	0.00	0.00	4.34	0.00	0.00	0.00	8.18
37:	0.00	3.92	0.00	0.00	0.00	0.00	2.99	0.00	0.00	0.00	6.92
38:	3.02	0.00	0.00	0.00	3.15	0.00	0.00	0.00	2.78	0.00	8.96
39:	0.00	0.00	2.29	0.00	0.00	0.00	2.22	0.00	0.00	1.54	6.06
40:	0.00	0.00	1.16	0.00	0.00	0.00	1.25	0.00	0.00	0.71	3.12
41:	0.00	0.00	0.92	0.00	0.00	1.15	0.00	0.93	0.00	0.00	2.99
42:	0.83	0.00	0.76	0.00	0.00	0.67	0.00	0.96	0.00	0.67	3.89
43:	0.00	0.00	0.60	0.00	0.85	0.00	0.94	0.00	0.54	0.00	2.93
44:	0.44	0.00	0.42	0.33	0.00	0.35	0.00	0.32	0.33	0.00	2.19
45:	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08

Exceedance Chart

S025_BJM120003_08042022_050547: Exceedance Chart

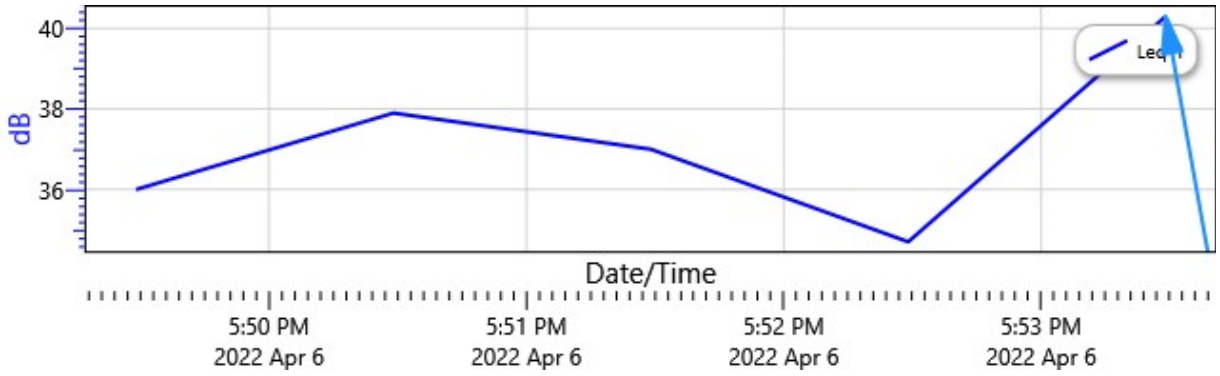


Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		44.4	43.9	43.5	43.3	43.1	42.6	42.4	42.1	41.9
10%:	41.6	41.4	41.1	40.5	40.5	40.1	39.8	39.5	39.5	39.1
20%:	39.1	39.1	38.7	38.7	38.7	38.3	38.3	38.3	37.9	37.9
30%:	37.9	37.5	37.5	37.5	37.0	37.0	37.0	37.0	36.5	36.5
40%:	36.5	36.5	36.0	36.0	36.0	36.0	35.5	35.5	35.5	35.5
50%:	34.9	34.9	34.9	34.9	34.9	34.9	34.3	34.3	34.3	34.3
60%:	34.3	34.3	34.3	34.3	33.7	33.7	33.7	33.7	33.7	33.7
70%:	33.7	33.7	33.7	33.1	33.1	33.1	33.1	33.1	33.1	33.1
80%:	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1	32.4
90%:	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.3	32.3
100%:	32.2									

Logged Data Chart

S025_BJM120003_08042022_050547: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	28.6 dB			
CMinusAEnabled	--	True			
Leq	1	37.7 dB	CNEL	1	37.7 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0 Pa²-Sec
L1	1	44.4 dB	L10	1	41.6 dB
L50	1	34.9 dB	L90	1	32.4 dB
LDN	1	37.7 dB	Lmax	1	45 dB
Lmin	1	32.3 dB	Lpk	1	70.9 dB

Mntime	1	4/6/2022 5:49:39 PM	Mxtime	1	4/6/2022 5:53:42 PM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/6/2022 5:53:41 PM	ProjectedTWA (1.00:00)	1	42.5 dB
Rtime	1	00:05:19	SEL	1	62.7 dB
Takt	1	39.1 dB	TWA	1	18.1 dB
UL Time	1	00:00:00	UR%	1	100 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	80 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s
Meter Floor	1	0 dB	Peak Weighting	1	A
Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0 %	Dose8	2	0.4 %
Exp Hrs	2	0 Pa^2-Hours	Exp Sec	2	0.5 Pa^2-Sec
Leq	2	66.3 dB	Lmax	2	78.9 dB
Lmin	2	45.6 dB	Lpk	2	93.6 dB
Mntime	2	4/6/2022 5:52:15 PM	Mxtime	2	4/6/2022 5:52:43 PM
OL%	2	0 %	Pdose (1.00:00)	2	1.3 %
PKtime	2	4/6/2022 5:49:23 PM	ProjectedTWA (1.00:00)	2	71 dB
Rtime	2	00:05:19	SEL	2	91.3 dB
TWA	2	46.7 dB	UL Time	2	00:00:00
UR%	2	2.2 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW	Count Rate	2	64 #
Criterion Level	2	90 dB	Criterion Time	2	8 hrs.
Int Threshold Enable	2	False	Integrating Threshold	2	80 dB
Peak Weighting	2	C	Projection Time	2	1440 mins.
ULL	2	115 dB			

Session Report

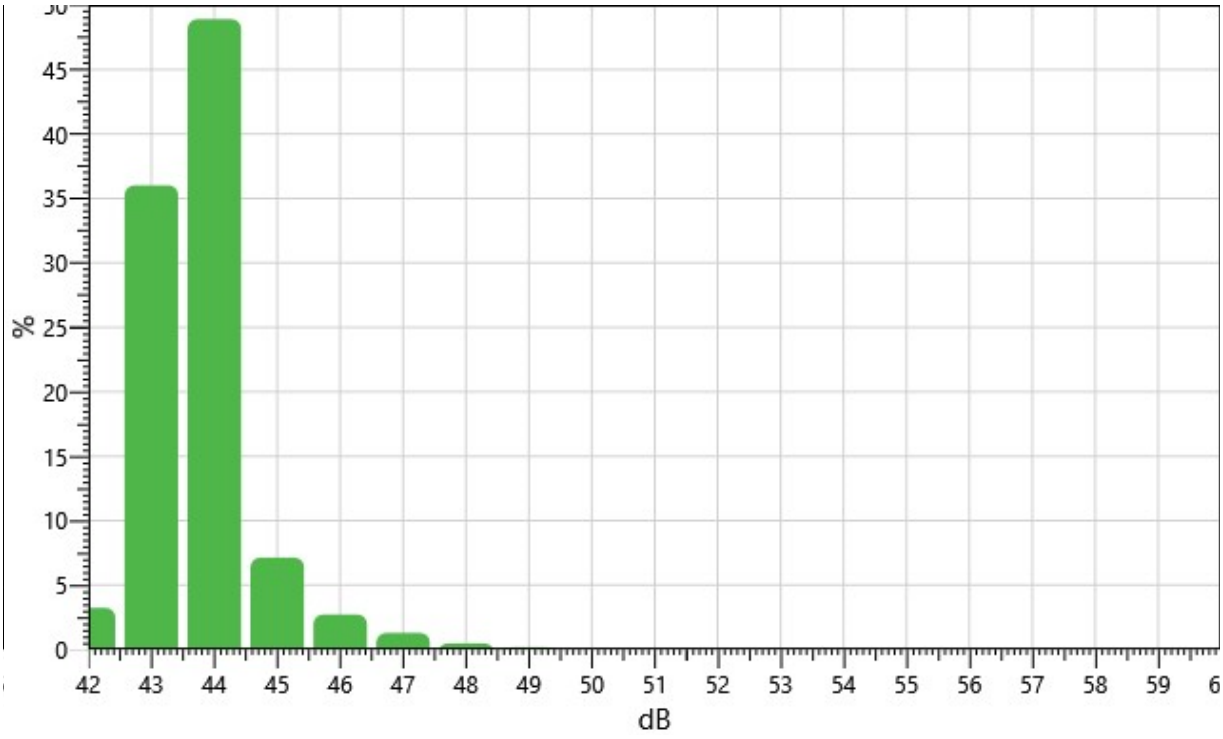
4/8/2022

Information Panel

Name	S129_BLI050007_08042022_032952
Start Time	4/7/2022 10:18:58 AM
Stop Time	4/7/2022 11:29:57 AM
Device Name	BLI050007
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	01:10:59
Serial Number	BLI050007
User Name	

Statistics Chart

S129_BLI050007_08042022_032952: Statistics Chart

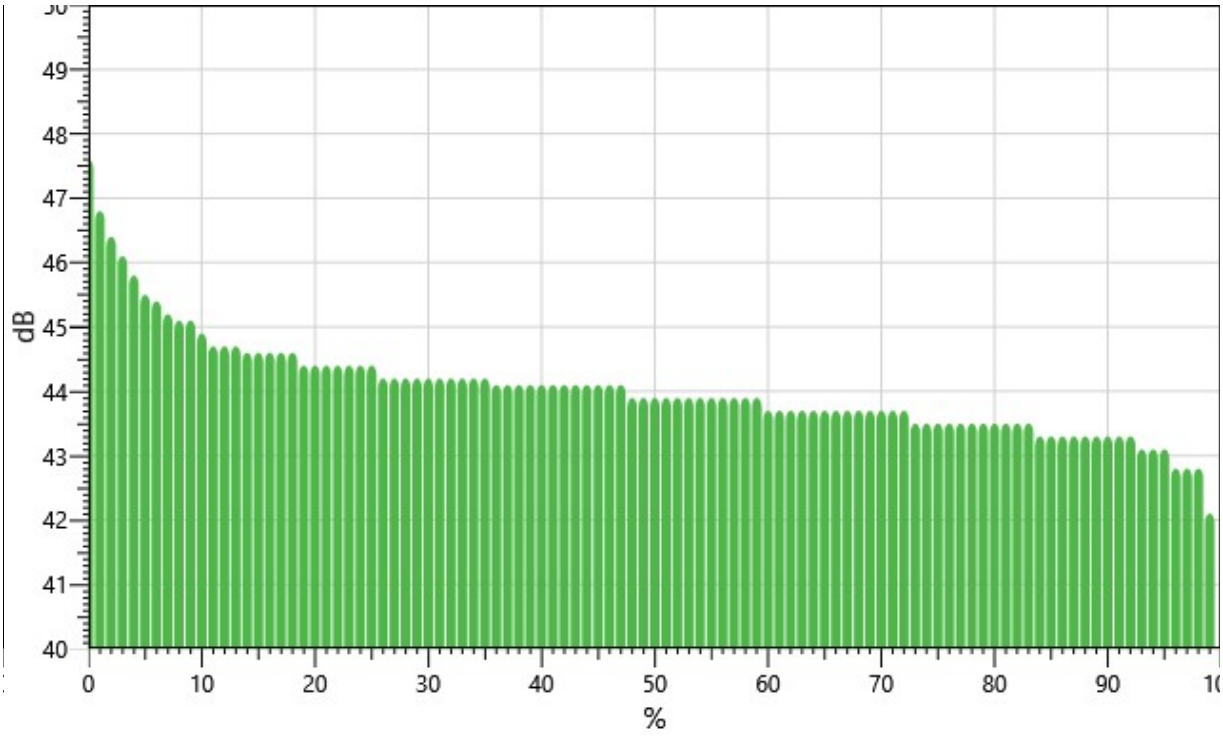


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
42:	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.61	0.00	2.57	3.24
43:	0.00	0.00	3.70	0.00	8.23	0.00	11.31	0.00	12.78	0.00	36.01
44:	12.61	0.00	11.56	9.68	0.00	7.32	0.00	4.87	2.89	0.00	48.91
45:	1.80	0.00	1.31	1.09	0.00	0.90	0.74	0.00	0.65	0.64	7.13
46:	0.00	0.55	0.51	0.00	0.47	0.38	0.31	0.00	0.26	0.25	2.73
47:	0.00	0.24	0.27	0.00	0.25	0.19	0.00	0.15	0.14	0.06	1.29
48:	0.00	0.09	0.09	0.08	0.00	0.06	0.05	0.06	0.00	0.05	0.49
49:	0.04	0.04	0.03	0.00	0.03	0.01	0.01	0.01	0.00	0.01	0.18
50:	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02

Exceedance Chart

S129_BLI050007_08042022_032952: Exceedance Chart



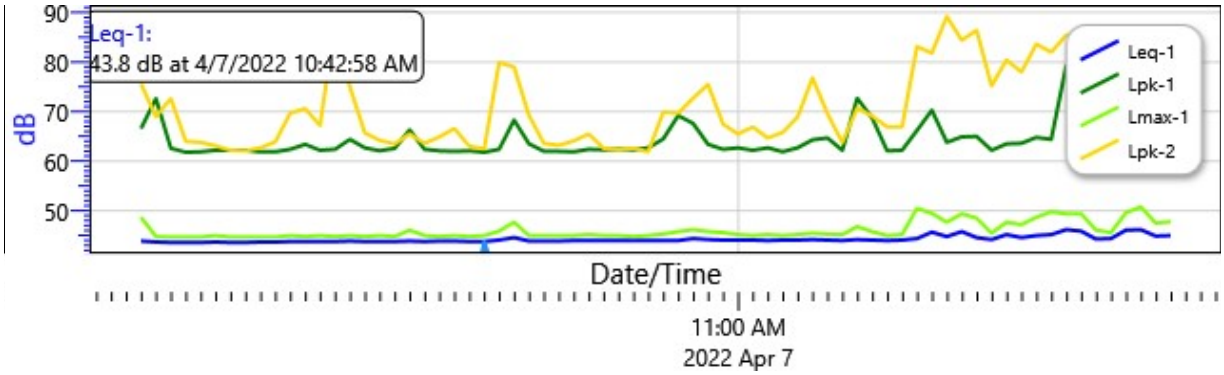
Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		47.6	46.8	46.4	46.1	45.8	45.5	45.4	45.2	45.1
10%:	45.1	44.9	44.7	44.7	44.7	44.6	44.6	44.6	44.6	44.6
20%:	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.2	44.2	44.2
30%:	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.1	44.1	44.1

40%:	44.1	44.1	44.1	44.1	44.1	44.1	44.1	44.1	44.1	43.9
50%:	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9
60%:	43.9	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7
70%:	43.7	43.7	43.7	43.7	43.5	43.5	43.5	43.5	43.5	43.5
80%:	43.5	43.5	43.5	43.5	43.5	43.3	43.3	43.3	43.3	43.3
90%:	43.3	43.3	43.3	43.3	43.1	43.1	43.1	42.8	42.8	42.8
100%:	42.1									

Logged Data Chart

S129_BLI050007_08042022_032952: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	12.8 dB			
CMinusAEnabled	--	True			
Leq	1	44.2 dB	CNEL	1	44.2 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0 Pa²-Sec
L1	1	47.6 dB	L10	1	45.1 dB
L50	1	43.9 dB	L90	1	43.3 dB
LDN	1	44.2 dB	Lmax	1	50.8 dB
Lmin	1	42.2 dB	Lpk	1	79.2 dB
Mntime	1	4/7/2022 10:27:08 AM	Mxtime	1	4/7/2022 11:13:38 AM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/7/2022 11:13:38 AM	ProjectedTWA (1.00:00)	1	49 dB
Rtime	1	01:10:59	SEL	1	80.5 dB
Takt	1	45.1 dB	TWA	1	35.9 dB
UL Time	1	00:00:00	UR%	1	100 %

Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	60 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s
Meter Floor	1	0 dB	Peak Weighting	1	A
Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0 %	Dose8	2	0.1 %
Exp Hrs	2	0 Pa^2-Hours	Exp Sec	2	0.9 Pa^2-Sec
Leq	2	57 dB	Lmax	2	74.3 dB
Lmin	2	42.2 dB	Lpk	2	89.2 dB
Mntime	2	4/7/2022 10:20:18 AM	Mxtime	2	4/7/2022 11:26:03 AM
OL%	2	0 %	Pdose (1.00:00)	2	0.2 %
PKtime	2	4/7/2022 11:21:06 AM	ProjectedTWA (1.00:00)	2	61.8 dB
Rtime	2	01:10:59	SEL	2	93.3 dB
TWA	2	48.7 dB	UL Time	2	00:00:00
UR%	2	64.7 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW	Count Rate	2	64 #
Criterion Level	2	90 dB	Criterion Time	2	8 hrs.
Int Threshold Enable	2	False	Integrating Threshold	2	80 dB
Peak Weighting	2	C	Projection Time	2	1440 mins.
ULL	2	115 dB			

Session Report

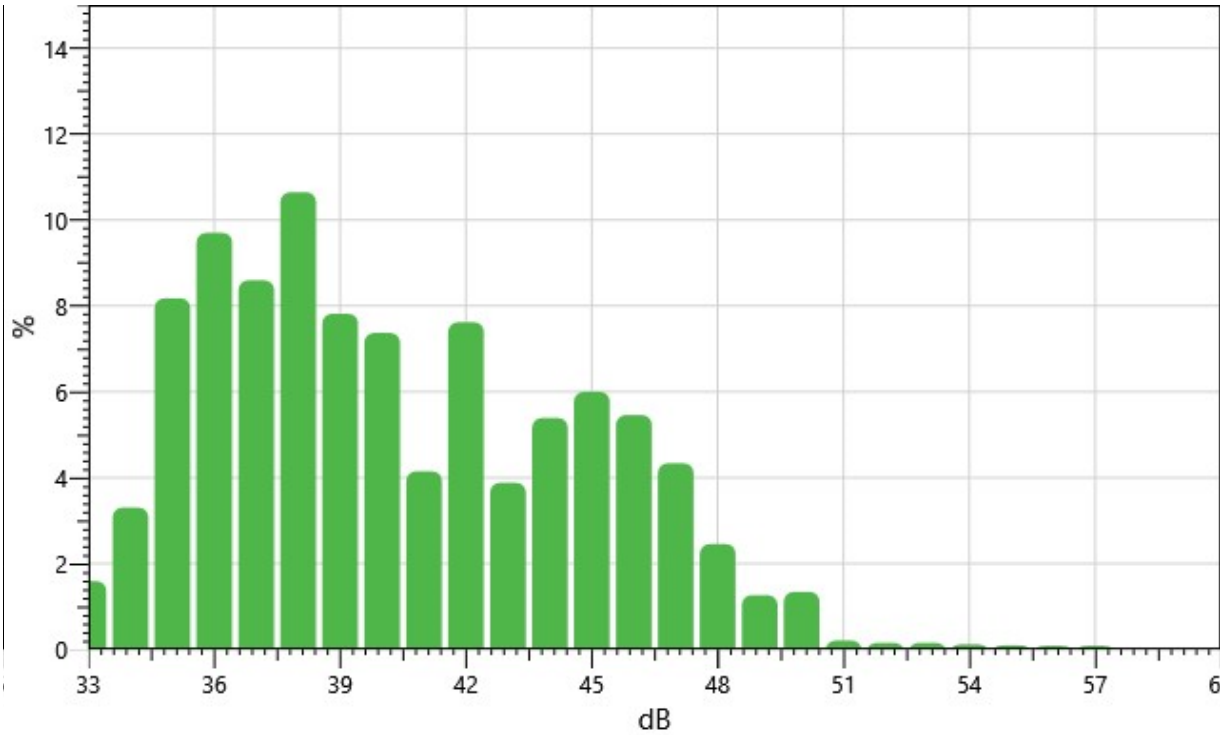
4/8/2022

Information Panel

Name	S029_BJM120003_08042022_050552
Start Time	4/7/2022 11:44:04 AM
Stop Time	4/7/2022 11:51:56 AM
Device Name	BJM120003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	00:07:52
Serial Number	BJM120003
User Name	

Statistics Chart

S029_BJM120003_08042022_050552: Statistics Chart

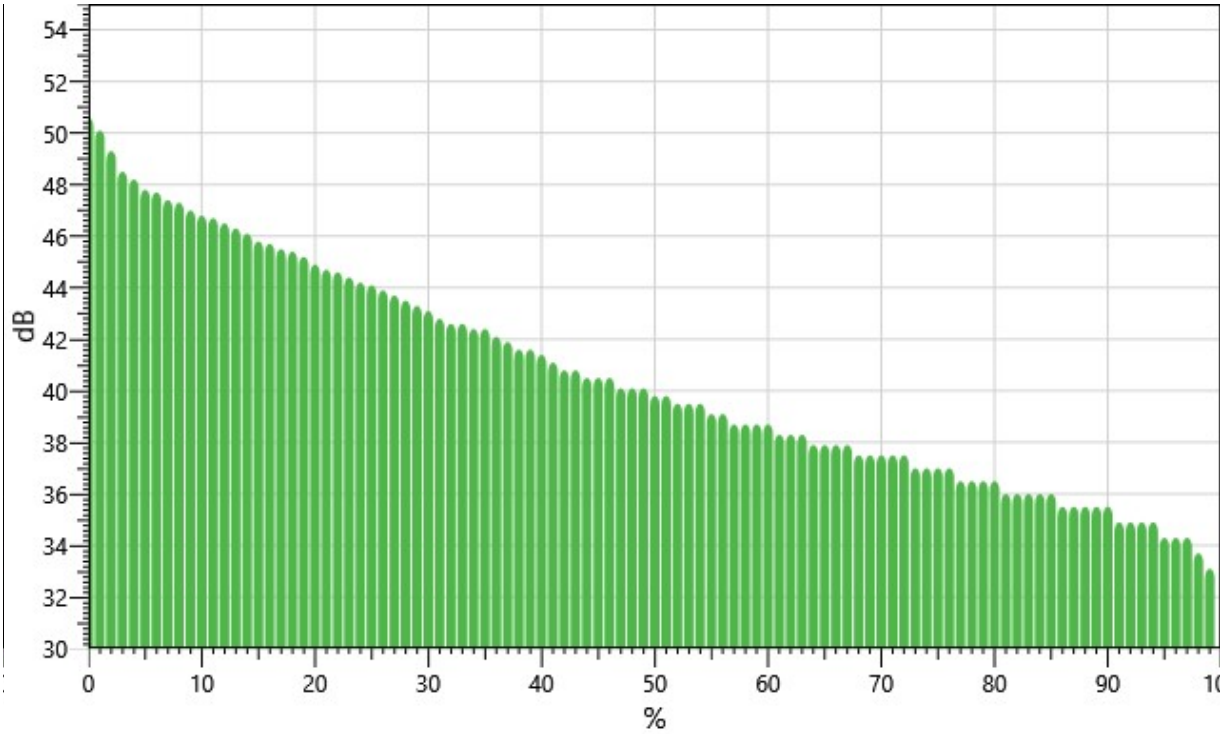


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
33:	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	1.41	0.00	1.59
34:	0.00	0.00	0.00	0.00	3.30	0.00	0.00	0.00	0.00	0.00	3.30
35:	4.09	0.00	0.00	0.00	0.00	0.00	4.09	0.00	0.00	0.00	8.18
36:	0.00	4.96	0.00	0.00	0.00	0.00	4.74	0.00	0.00	0.00	9.70
37:	0.00	4.20	0.00	0.00	0.00	0.00	4.40	0.00	0.00	0.00	8.59
38:	3.64	0.00	0.00	0.00	3.62	0.00	0.00	0.00	3.38	0.00	10.64
39:	0.00	0.00	2.51	0.00	0.00	0.00	2.69	0.00	0.00	2.62	7.82
40:	0.00	0.00	3.02	0.00	0.00	0.00	2.57	0.00	0.00	1.78	7.37
41:	0.00	0.00	1.08	0.00	0.00	1.43	0.00	1.63	0.00	0.00	4.15
42:	1.42	0.00	1.18	0.00	0.00	1.66	0.00	1.81	0.00	1.54	7.62
43:	0.00	0.00	0.79	0.00	1.14	0.00	1.10	0.00	0.85	0.00	3.88
44:	0.94	0.00	0.89	0.87	0.00	0.92	0.00	0.75	1.02	0.00	5.39
45:	0.89	0.00	0.78	0.81	0.00	0.89	1.09	0.00	0.86	0.67	6.00
46:	0.00	0.62	0.68	0.00	0.68	0.68	1.03	0.00	0.91	0.87	5.46
47:	0.00	0.68	0.54	0.00	0.57	0.57	0.00	0.83	0.87	0.28	4.34
48:	0.00	0.57	0.41	0.53	0.00	0.29	0.26	0.20	0.00	0.19	2.46
49:	0.18	0.16	0.12	0.00	0.15	0.13	0.16	0.10	0.13	0.13	1.26
50:	0.00	0.24	0.28	0.23	0.00	0.16	0.19	0.16	0.05	0.03	1.34
51:	0.03	0.04	0.00	0.04	0.02	0.03	0.01	0.02	0.02	0.02	0.21
52:	0.02	0.02	0.02	0.00	0.02	0.01	0.02	0.02	0.02	0.01	0.16
53:	0.02	0.00	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.16
54:	0.02	0.01	0.00	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.12
55:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.10
56:	0.01	0.02	0.02	0.01	0.01	0.00	0.01	0.01	0.00	0.01	0.09
57:	0.00	0.01	0.00	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.09

Exceedance Chart

S029_BJM120003_08042022_050552: Exceedance Chart

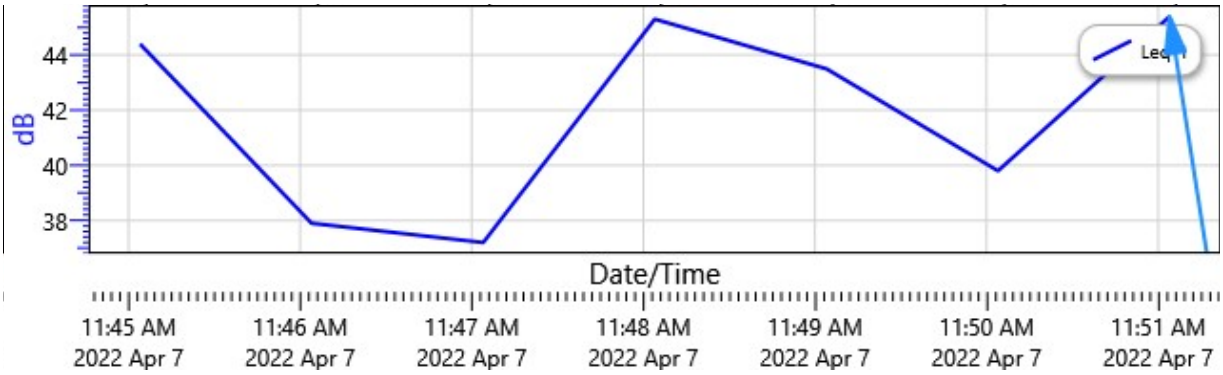


Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		50.6	50.1	49.3	48.5	48.2	47.8	47.7	47.4	47.3
10%:	47.0	46.8	46.7	46.5	46.3	46.1	45.8	45.7	45.5	45.4
20%:	45.2	44.9	44.7	44.6	44.4	44.2	44.1	43.9	43.7	43.5
30%:	43.3	43.1	42.8	42.6	42.6	42.4	42.4	42.1	41.9	41.6
40%:	41.6	41.4	41.1	40.8	40.8	40.5	40.5	40.5	40.1	40.1
50%:	40.1	39.8	39.8	39.5	39.5	39.5	39.1	39.1	38.7	38.7
60%:	38.7	38.7	38.3	38.3	38.3	37.9	37.9	37.9	37.9	37.5
70%:	37.5	37.5	37.5	37.5	37.0	37.0	37.0	37.0	36.5	36.5
80%:	36.5	36.5	36.0	36.0	36.0	36.0	36.0	35.5	35.5	35.5
90%:	35.5	35.5	34.9	34.9	34.9	34.9	34.3	34.3	34.3	33.7
100%:	33.1									

Logged Data Chart

S029_BJM120003_08042022_050552: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	23.1 dB			
CMinusAEnabled	--	True			
Leq	1	43.3 dB	CNEL	1	43.3 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0 Pa²-Sec
L1	1	50.6 dB	L10	1	47 dB
L50	1	40.1 dB	L90	1	35.5 dB
LDN	1	43.3 dB	Lmax	1	57.9 dB
Lmin	1	33.2 dB	Lpk	1	89.2 dB
Mntime	1	4/7/2022 11:50:37 AM	Mxtime	1	4/7/2022 11:47:44 AM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/7/2022 11:51:38 AM	ProjectedTWA (1.00:00)	1	48.1 dB
Rtime	1	00:07:52	SEL	1	70 dB
Takt	1	45.7 dB	TWA	1	25.4 dB
UL Time	1	00:00:00	UR%	1	97.8 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	80 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s

Meter Floor	1	0 dB	Peak Weighting	1	A
Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0 %	Dose8	2	0.4 %
Exp Hrs	2	0 Pa^2-Hours	Exp Sec	2	0.8 Pa^2-Sec
Leq	2	66.4 dB	Lmax	2	78 dB
Lmin	2	42.7 dB	Lpk	2	91.5 dB
Mntime	2	4/7/2022 11:46:19 AM	Mxtime	2	4/7/2022 11:50:18 AM
OL%	2	0 %	Pdose (1.00:00)	2	1.3 %
PKtime	2	4/7/2022 11:50:17 AM	ProjectedTWA (1.00:00)	2	71.2 dB
Rtime	2	00:07:52	SEL	2	93.1 dB
TWA	2	48.5 dB	UL Time	2	00:00:00
UR%	2	7.7 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW	Count Rate	2	64 #
Criterion Level	2	90 dB	Criterion Time	2	8 hrs.
Int Threshold Enable	2	False	Integrating Threshold	2	80 dB
Peak Weighting	2	C	Projection Time	2	1440 mins.
ULL	2	115 dB			

Session Report

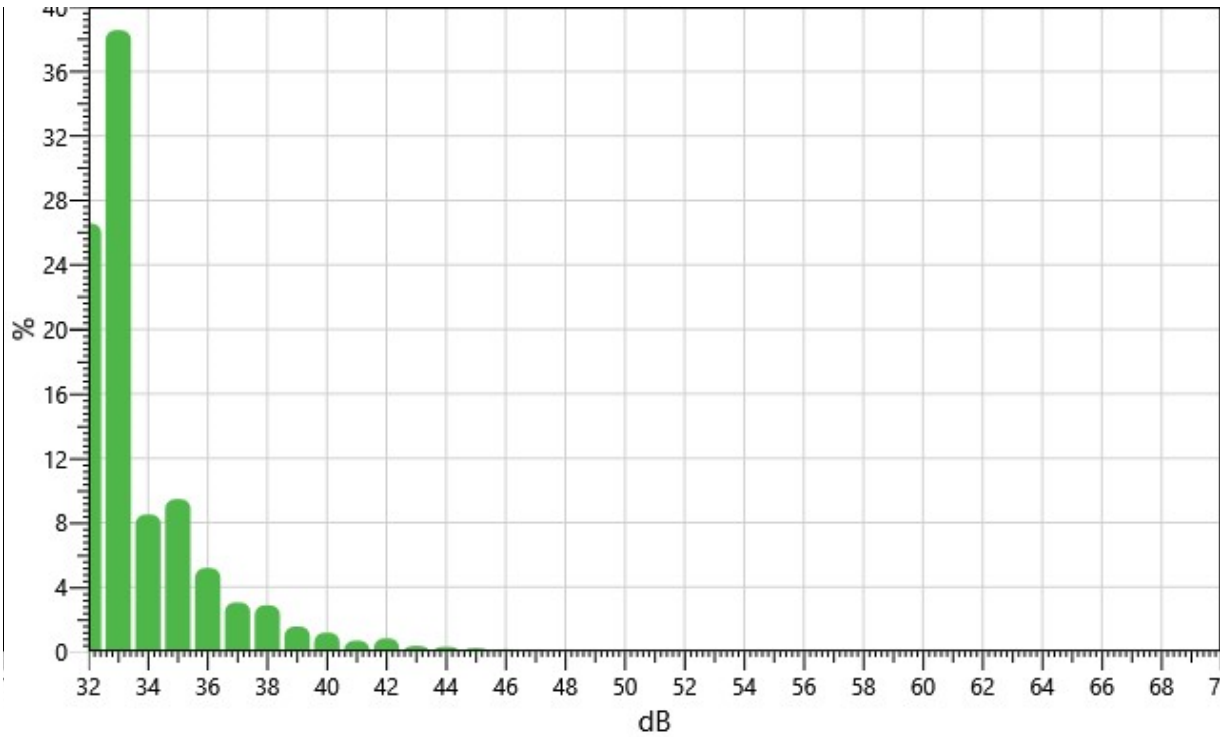
4/8/2022

Information Panel

Name	S028_BJM120003_08042022_050551
Start Time	4/7/2022 10:34:56 AM
Stop Time	4/7/2022 11:15:07 AM
Device Name	BJM120003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Company Name	
Description	
Location	
Run Time	00:40:11
Serial Number	BJM120003
User Name	

Statistics Chart

S028_BJM120003_08042022_050551: Statistics Chart

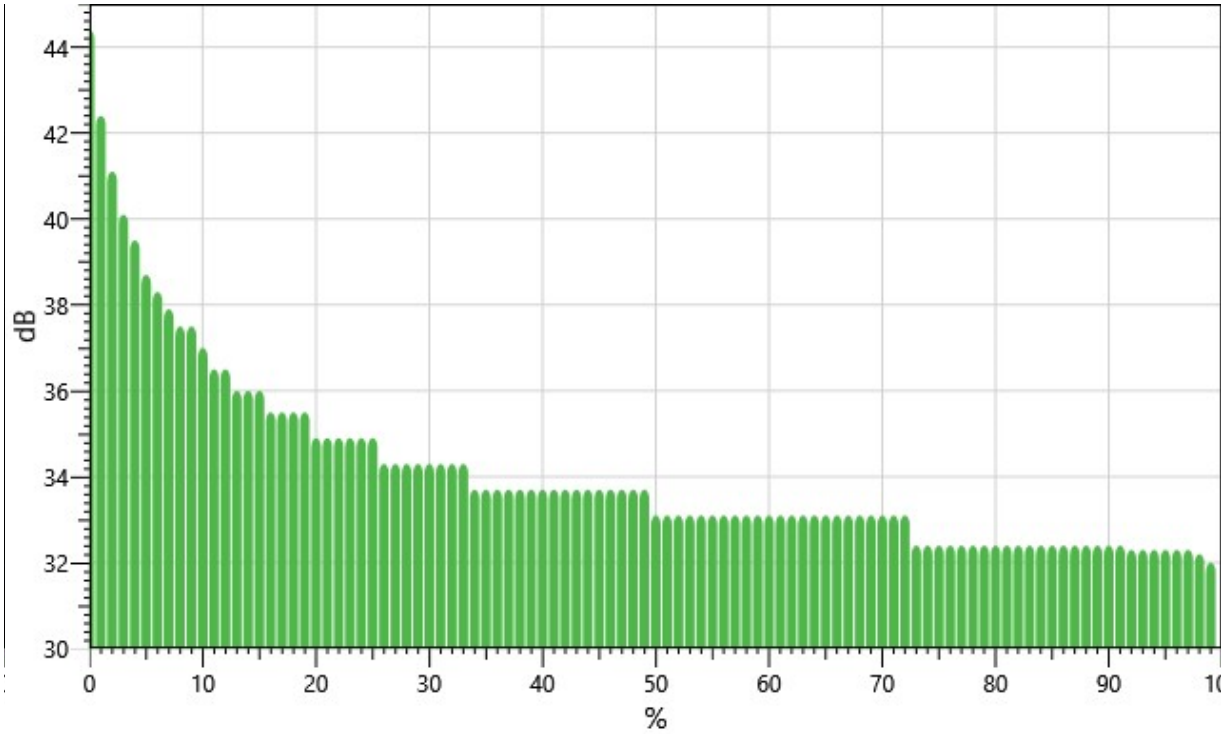


Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
32:	0.00	0.08	0.21	1.01	6.62	18.65	0.00	0.00	0.00	0.00	26.57
33:	0.00	0.00	23.16	0.00	0.00	0.00	0.00	0.00	15.40	0.00	38.56
34:	0.00	0.00	0.00	0.00	8.50	0.00	0.00	0.00	0.00	0.00	8.50
35:	5.59	0.00	0.00	0.00	0.00	0.00	3.88	0.00	0.00	0.00	9.46
36:	0.00	3.02	0.00	0.00	0.00	0.00	2.17	0.00	0.00	0.00	5.19
37:	0.00	1.63	0.00	0.00	0.00	0.00	1.42	0.00	0.00	0.00	3.05
38:	1.24	0.00	0.00	0.00	0.93	0.00	0.00	0.00	0.70	0.00	2.87
39:	0.00	0.00	0.55	0.00	0.00	0.00	0.54	0.00	0.00	0.46	1.55
40:	0.00	0.00	0.49	0.00	0.00	0.00	0.36	0.00	0.00	0.31	1.17
41:	0.00	0.00	0.29	0.00	0.00	0.21	0.00	0.17	0.00	0.00	0.67
42:	0.18	0.00	0.15	0.00	0.00	0.15	0.00	0.17	0.00	0.16	0.81
43:	0.00	0.00	0.08	0.00	0.10	0.00	0.09	0.00	0.08	0.00	0.35
44:	0.06	0.00	0.05	0.07	0.00	0.05	0.00	0.03	0.04	0.00	0.30
45:	0.03	0.00	0.04	0.03	0.00	0.03	0.03	0.00	0.02	0.03	0.22
46:	0.00	0.02	0.03	0.00	0.02	0.02	0.02	0.00	0.02	0.01	0.15
47:	0.00	0.01	0.01	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.09
48:	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.06
49:	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.07
50:	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.00	0.04
51:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
52:	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
53:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
54:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
55:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
56:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
57:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
58:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
59:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
60:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
61:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
62:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
63:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
64:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
65:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
66:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01

Exceedance Chart

S028_BJM120003_08042022_050551: Exceedance Chart

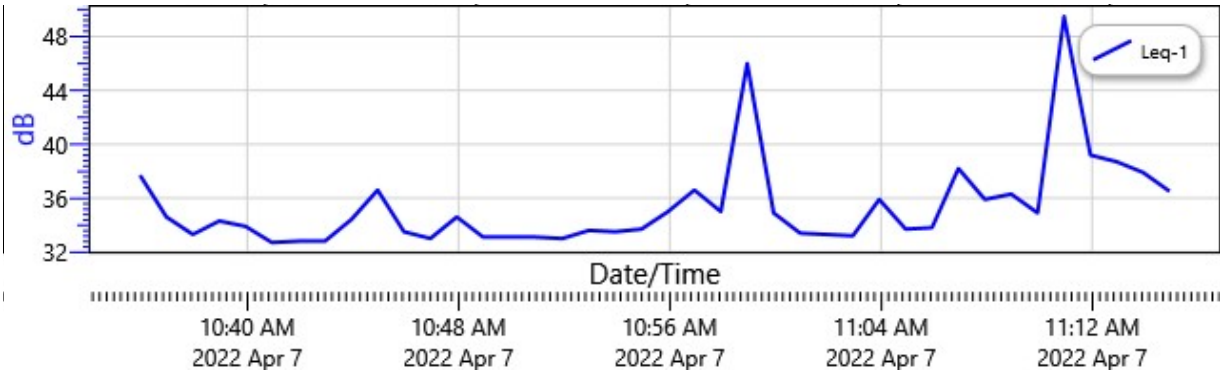


Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		44.4	42.4	41.1	40.1	39.5	38.7	38.3	37.9	37.5
10%:	37.5	37.0	36.5	36.5	36.0	36.0	36.0	35.5	35.5	35.5
20%:	35.5	34.9	34.9	34.9	34.9	34.9	34.9	34.3	34.3	34.3
30%:	34.3	34.3	34.3	34.3	34.3	33.7	33.7	33.7	33.7	33.7
40%:	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7
50%:	33.7	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1
60%:	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1
70%:	33.1	33.1	33.1	33.1	32.4	32.4	32.4	32.4	32.4	32.4
80%:	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
90%:	32.4	32.4	32.4	32.3	32.3	32.3	32.3	32.3	32.3	32.2
100%:	32.0									

Logged Data Chart

S028_BJM120003_08042022_050551: Logged Data Chart



Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc-a	--	15.5 dB			
CMinusAEnabled	--	True			
Leq	1	38 dB	CNEL	1	38 dB
Dose	1	0 %	Dose8	1	0 %
Exp Hrs	1	0 Pa²-Hours	Exp Sec	1	0 Pa²-Sec
L1	1	44.4 dB	L10	1	37.5 dB
L50	1	33.7 dB	L90	1	32.4 dB
LDN	1	38 dB	Lmax	1	66.7 dB
Lmin	1	32.1 dB	Lpk	1	98 dB
Mntime	1	4/7/2022 10:36:45 AM	Mxtime	1	4/7/2022 11:12:12 AM
OL%	1	0 %	Pdose (1.00:00)	1	0 %
PKtime	1	4/7/2022 11:10:46 AM	ProjectedTWA (1.00:00)	1	42.7 dB
Rtime	1	00:40:11	SEL	1	71.8 dB
Takt	1	42.9 dB	TWA	1	27.2 dB
UL Time	1	00:00:00	UR%	1	99.7 %
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Count Rate	1	64 #	Criterion Level	1	90 dB
Criterion Time	1	8 hrs.	Int Threshold Enable	1	False
Integrating Threshold	1	80 dB	Ln1	1	1 %
Ln2	1	10 %	Ln3	1	50 %
Ln4	1	90 %	Log Rate	1	60 s

Meter Floor	1	0 dB	Peak Weighting	1	A
Projection Time	1	1440 mins.	ULL	1	115 dB
Dose	2	0 %	Dose8	2	0 %
Exp Hrs	2	0 Pa^2-Hours	Exp Sec	2	0.2 Pa^2-Sec
Leq	2	53.5 dB	Lmax	2	71.2 dB
Lmin	2	33.8 dB	Lpk	2	97 dB
Mntime	2	4/7/2022 10:35:00 AM	Mxtime	2	4/7/2022 11:10:46 AM
OL%	2	0 %	Pdose (1.00:00)	2	0.1 %
PKtime	2	4/7/2022 11:10:46 AM	ProjectedTWA (1.00:00)	2	58.2 dB
Rtime	2	00:40:11	SEL	2	87.3 dB
TWA	2	42.7 dB	UL Time	2	00:00:00
UR%	2	69.4 %			
Exchange Rate	2	3 dB	Weighting	2	C
Response	2	SLOW	Count Rate	2	64 #
Criterion Level	2	90 dB	Criterion Time	2	8 hrs.
Int Threshold Enable	2	False	Integrating Threshold	2	80 dB
Peak Weighting	2	C	Projection Time	2	1440 mins.
ULL	2	115 dB			

Attachment B

Photograph 1 - Monitoring location 1A in the City of Hesperia. Location for 24-hour monitoring was at the border of a residential property abutting the transmission line corridor.

Photograph 2 - Location 2B in Apple Valley representative of residents near the EPL Project alignment.

Photograph 3 - Monitoring locations were selected to be representative of residential communities.

Photograph 4 - Monitoring location 3B in Lucerne Valley.

Photograph 5 - Wind speed and direction measurements were used to identify unacceptable monitoring conditions (i.e., wind speed > 11 mph), as occurred at this prospective location in Lucerne Valley.

Photograph 6 - Locations with wind blocks were selected, when necessary, as seen here. The microphone was positioned downwind of a grove of trees that maintained acceptable wind speed at the microphone while wind gusts above 11 mph were present in areas twenty feet away.

Photograph 7 - View from monitoring location 4A on Squaw Bush Road near the EPL Project alignment Johnson Valley. Location 4B was on Toydon Road near the structure on the right side of this image.

Photograph 8 - View from monitoring station 5A near Kelbaker Road. Meteorological data was used to ensure acceptable monitoring conditions.

Photograph 9 - Monitors were repositioned to collect measurements at zero, fifty and one hundred meters from transmission lines in the Mojave National Preserve near Ivanpah Road and Power Line Road. Power Line Road is seen on the left side of this image.

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APPENDIX I

Visual Resources Technical Report

VISUAL RESOURCES TECHNICAL REPORT

Eldorado-Pisgah-Lugo 220 kV Project
Transmission Line Rating Remediation Program (TLRR)

August 2022

Prepared for

ARCADIS

and

Southern California Edison

by

Environmental Vision

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1. Introduction

This technical report examines visual resources in the area of the Proposed Eldorado-Pisgah-Lugo 220 kV Project (EPL Project) to determine how it could affect the aesthetic character of the landscape. The report includes a description of existing visual conditions and an evaluation of potential visual impacts on aesthetic resources resulting from the construction, operation, and maintenance of the Southern California Edison (SCE) EPL Project. The EPL Project includes reconductoring portions of approximately 176 miles of existing 220 kV transmission facilities within an existing utility right of way (ROW) between the existing Lugo Substation in southern California and the existing Eldorado Substation in Nevada.

Visual or aesthetic resources are generally defined as the natural and built features of the landscape that can be seen. Landforms, water, and vegetation patterns are among the natural landscape features that define an area's visual character, whereas buildings, roads and other structures reflect human modifications to the landscape. These natural and built landscape features are considered visual resources that contribute to the public's experience and appreciation of the environment. This report analyzes whether the EPL Project would alter the perceived visual character of the environment and cause visual impacts.

This study conforms to the California Public Utility Commission (CPUC) requirements concerning Proponent's Environmental Assessment (PEA) visual resources evaluation. It also addresses criteria for visual impact analysis set forth by the California Environmental Quality Act (CEQA) and U.S. Department of Interior Bureau of Land Management (BLM). Included are systematic documentation of the visual setting and evaluation of visual change and potential aesthetic impact associated with the EPL Project. The report text is followed by a set of figures including maps, representative photographs, and computer-generated visual simulations showing existing and post-project views as seen from key observation points (KOPs).

1.1 Project Background

The California Public Utility Commission's (CPUC) General Order 95, Rules for Overhead Electric Line Construction (GO 95), establishes "requirements for overhead line design, construction, and maintenance, the application of which will ensure adequate service and secure safety to persons engaged in the construction, maintenance, operation or use of overhead lines and to the public in general." GO 95 includes standards for electrical conductor clearances (e.g., the minimum allowable height-above-ground for conductor, the minimum horizontal separation between conductors or conductor and a structure, etc.).

To ensure compliance with GO 95, as well as address other North American Electric Reliability Corporation (NERC) requirements, SCE has initiated its Transmission Line Rating Remediation (TLRR) Program to identify and remediate conductor clearance discrepancies. The purpose of the EPL Project is to ensure compliance with CPUC GO 95 by remediating clearance standard discrepancies (i.e., inadequate overhead clearance distances) along the Project route identified through SCE's TLRR Program. Remediation will include installation of interset structures and modification of some adjacent existing structures, installation of new conductor and overhead groundwire (OHGW), and modification of equipment at existing substations to accommodate these changes.

1.2 Project Overview

The EPL Project extends an overall length of approximately 176 miles, crossing portions of San Bernardino and Clark counties and traversing Mojave Trails National Monument, Mojave National Preserve, and other Federal lands. The project proposes remediating discrepancies that have been identified along existing 220 kV transmission facilities within existing utility rights of way (ROWs) between the existing Lugo Substation and the existing Eldorado Substation.

The EPL Project consists of six distinct segments, that are delineated according to geographic location and the configuration of existing electrical infrastructure:

1. **Segments 1 and 2** include the Lugo-Pisgah No.1 and No.2 220 kV single circuit transmission alignments that for the most part run parallel and in close proximity to one another, extending approximately 67 and 66 miles respectively from the existing Lugo Substation in the west to the existing Pisgah Switchyard in the east.
2. **Segments 3 and 4** include the Cima-Eldorado-Pisgah No.1 and No.2 220 kV single circuit parallel transmission alignments, that extend approximately 82 and 83 miles respectively from the existing Pisgah Switchyard in the west to the California-Nevada state line, with the Cima Substation between the two.
3. **Segments 5 and 6** comprise a continuation of the Cima-Eldorado-Pisgah No.1 and No. 2 220 kV single circuit transmission alignments, that extend approximately 27 linear miles from the California-Nevada state line to the existing El Dorado Substation in Nevada.

The EPL Project would install new, and modify or replace existing, infrastructure along portions of five of the six segments. Project components include introduction of 12 new steel pole H-frame interset structures, and replacing existing conductor and overhead ground wire (OHGW) along approximately 14 miles of transmission alignment within Segment 1 and 2; replacing existing conductor and OHGW along approximately 106 miles of transmission alignment within Segments 3 and 4, and replacing existing conductor and OHGW along approximately 0.5 miles of transmission alignment within Segment 6. Some existing porcelain insulators and associated hardware may be replaced on some structures within segments where new conductor is to be installed, as well as some structures adjacent to where new interset structures are installed. Additionally, termination structures at substations will be modified as needed.

Section 3.2 contains additional description of the EPL Project's physical characteristics.

1.3 Methodology

The visual analysis is based on site reconnaissance and review of technical data including maps and drawings as well as review of aerial and ground level photographs of the EPL Project area, review of public policy and planning documents, and computer-generated visual simulations that portray the project's appearance. Field observations were conducted in September and December 2017, and April 2022 to document existing visual conditions in the EPL Project's vicinity, including potentially affected sensitive viewing locations.

Visual simulations were prepared to support the impact analysis and illustrate before-and-after visual conditions in the EPL Project area as seen from four key sensitive public viewpoints or Key Observation Points (KOPs) out of a total of 18 representative viewpoints. The KOPs represent views where the project would be most visible to the public from sensitive locations

such as designated scenic roadways, recreation facilities, areas in proximity to residences, or public land subject to scenic resource management policy.

This visual assessment employs methods based, in part, on those adopted by the U.S. Department of Interior Bureau of Land Management (BLM), USDOT Federal Highway Administration (FHWA), and other accepted visual analysis techniques. The impact analysis describes change to existing visual resources and assesses viewer response to that change. Central to this assessment is an evaluation of key views from which the project would be visible to the public. The visual impact assessment is based on evaluation of the project-related changes to the existing visual resources that would result from construction and operation of the project; the changes were assessed, in part, by evaluating views of the EPL Project provided by the computer-generated visual simulations and comparing them to the existing visual environment. A description of the technical methods that were employed to prepare the visual simulations is included in Section 5.4.

2. Environmental Setting

2.1 Landscape Setting

Figure 1 shows the EPL Project location within a regional and local landscape context, as well as the locations where photographs were taken. The project is located in the Mojave Basin and Range Eco-region, open, high-desert landscape of the Mojave Desert, an approximately 47,900 square-mile area confined to southeastern California and the southern tip of Nevada, with small extensions into northwestern Arizona and southwestern Utah.

Within California, the Mojave Desert is bounded to the west by the Tehachapi Mountains, to the southwest by the San Bernardino and San Gabriel Mountains, to the northwest by the southern Sierra Nevada and the lowland portions of the Inyo, Panamint, and White Mountains, and to the east by the lower Colorado River valley. This area is characterized by abrupt changes in topography, with broad expanses of gently sloping shallow playas or dry lakebeds comprised of light-colored alluvial deposits, interspersed with rugged, relatively narrow mountain ranges that include large areas of exposed, multicolored rock. Elevations in the Project area range from approximately 3,750 feet above sea level at Lugo Substation, situated on the northern flank of the San Bernardino Mountains at the southern end of the route, to approximately 1,800 feet above sea level at Eldorado Substation at the route's northern terminus. Elevations along the Project route range from approximately 1,200 feet above sea level in the Devils Playground area of the Mojave National Preserve to approximately 5,000 feet above sea level where the Project crosses the McCullough Mountains northeast of SR-164/Nipton Road, near the terminus of the project in southern Nevada. Vegetation throughout this arid region is relatively sparse, consisting primarily of low-growing desert scrub varieties, grasses, and creosote bush with their distinctive grey-green foliage. This sparse vegetation pattern affords opportunities for largely open, panoramic views across the landscape. Dominated by the visually distinctive Yucca brevifolia, Joshua Tree woodland is an important vegetation type found in the eastern portion of the Project area.

The majority of the Project area consists of largely undeveloped land that is sparsely populated. With a few exceptions, roadways in this area are, lightly traveled and many are unpaved, generally limited to off-road or high-clearance vehicles. Concentrated residential development is limited to the city of Hesperia, situated immediately north and east of Lugo Substation, and gives

way to increasingly isolated, scattered rural residences along the project route as it extends northeast through the unincorporated community of Lucerne Valley, then eventually crosses a series of largely uninhabited alluvial basins and mountains for approximately 140 miles. These areas include the Johnson Valley OHV and the Rodman Mountains Wilderness Areas, situated at the northwestern edge of the Marine Corps 29 Palms training center south of I-40. After crossing I-40 and the BNSF rail line near Pisgah Switchyard, the Project route continues through the rugged, scenic terrain of Mojave Trails National Monument, managed by the Bureau of Land Management (BLM) and the Mojave National Preserve, managed by the National Park Service (NPS). Entering the broad, panoramic Ivanpah Valley at the eastern edge of the Mojave National Preserve the project route subsequently crosses the McCullough Mountains and terminates at El Dorado Substation in Nevada's El Dorado Valley.

Along with the diverse natural scenery that characterizes the Project's landscape setting is a variety of built features including infrastructure associated with regional highways, electrical utility and railway corridors. Established utility elements include wood utility poles supporting distribution and other overhead power lines, telecommunication towers, and substations. In addition, lattice structures support several non-EPL Project transmission lines in the Project area, and cross or closely parallel the Project along much of its route.

2.2 Scenic Resources

Scenic resources are those natural and built landscape patterns and features that are considered visually or aesthetically pleasing, and therefore contribute positively to the definition of a distinct community or region. Scenic resources may include trees or other important vegetation; landform elements, such as hills or mountains, ridgelines or rock outcroppings; water features, such as rivers, bays, or reservoirs; and landmarks, important buildings, or historic sites and structures.

Panoramic views and dramatic rock formations characterize the landscape along much of the Project alignment. Recognized scenic resources within the Project area include an approximately 53-mile section of the Mojave National Preserve, administered by the NPS. Additionally, approximately 103 miles of the Project alignment crosses BLM-administered land, with Visual Resource Management (VRM) Class II, III and IV designations, approximately 28 miles of this area lie within Mojave Trails National Monument.

Sections 2.7 and 3.1 and **Tables 4 and 5** provide additional information regarding BLM administered land and scenic resources management classifications. **Figure 4** is a map showing BLM visual resource management classifications in the Project area.

In the Project vicinity various public roadways are recognized for providing visual access to the area's scenic resources. Scenic roadways in the project area are listed in **Table 1** and shown on **Figure 1**. The State Scenic Highway program is also discussed below in **Section 3.2**, Regulatory Setting. Visual sensitivity considerations along the project alignment include proximity to eligible state scenic highways, San Bernardino County scenic routes, and the National Trails Highway.

Table 1: Summary of Scenic Roadways Within the Project Area

Roadway location	**Designation**	**Relationship to Project**	**Representative Photograph and Viewpoint # (Figures 1 and 2)**
SR-18 San Bernardino County	County Scenic Route	Project Crosses	4
SR-247 San Bernardino County	Eligible State Scenic Highway; County Scenic Route	Project crosses	No project modifications at these locations
I-40 San Bernardino County	Eligible State Scenic Highway; County Scenic Route	Project crosses	9
Route 66 National Trails Highway San Bernardino County	National Scenic Byway	Project crosses	9
Kelbaker Road San Bernardino County	County Scenic Route	Project crosses	12
Cima Road San Bernardino County	County Scenic Route	Project crosses	14
Ivanpah Road San Bernardino County	County Scenic Route	Project crosses	16
SR-164 (Nipton Road) Clark County	Designated as Joshua Tree Highway between Searchlight and the Nevada state line	Project crosses	17
SR-38 San Bernardino County	Eligible State Scenic Highway; Designated as part of the Rim of the World Scenic Byway, a National Forest Scenic Byway	Project comes within 17 miles and is not visible	

2.3 Viewshed Analysis

A project viewshed is defined as the general area from which a project is visible. For purposes of describing a project's visual setting and assessing potential visual impacts, the viewshed can be broken down into foreground, middleground, and background zones. The foreground is defined as the zone within 0.25 to 0.5 mile from the viewer. The middleground is defined as the zone extending from the foreground to a maximum of 3 to 5 miles from the viewer; and the background zone extends from the middleground to infinity (USFS 1995 and USDOT 2015). The BLM defines a foreground-middleground zone out to 3 to 5 miles, a background zone out to 15 miles, and a seldom seen distance zone including portions of the landscape which are generally not visible from key observation points (KOPs), or portions which are visible but at a distance of more than 15 miles (BLM 1986).

Viewing distance is a key factor that affects the potential degree of project visibility. Visual details generally become apparent to the viewer when they are observed in the foreground, at a distance of 0.25 to 0.5 mile or less. Analysis of the project primarily considers the potential effects of project elements on foreground viewshed conditions although consideration is also given to the potential effects on the middleground and background views.

Figure 2 presents a computer-generated viewshed analysis for the EPL Project alignment that identifies the theoretical visibility, up to a distance of 5 miles of the EPL Project's proposed infrastructure based on modeling the height of project components and surrounding topography. Areas on the map are identified where the project could be visible or not. It should also be noted that the majority of the alignment where Project modifications would occur includes only new conductor and associated hardware, thus resulting in barely noticeable permanent visual change when seen beyond a relatively short distance. The introduction of more visible new interset structures would be limited to relatively widely dispersed locations along Segments 1 and 2. The Figure 3 photographs illustrate that, in the absence of intervening vegetation, structures, or other factors such as atmospheric conditions, views of proposed EPL Project infrastructure are generally unobstructed by topography in the entirety of the eastern portion of Segments 3 and 4, and much of the western portion of Segments 1 & 2, where the terrain is relatively flat. Along the eastern portion of Segments 1and 2 and the western portion of Segments 3 & 4, with the exception of an approximately 11-mile portion east and west of I-40, visibility of transmission structures is generally more limited due to intervening topography or by backdrop topography. Within the more mountainous portions of Segments 3 and 4 especially, the scale of surrounding topography in relation to Project structures combined with atmospheric haze common to the desert environment result in reduced visibility of the Project.

2.4 Landscape Units

Four landscape units incorporating the six EPL Project segments have been identified for purposes of documenting and describing existing visual conditions within the Project viewshed. These landscape units or subareas are based upon the physical and cultural landscape characteristics found along the Project's approximately 176-mile-long corridor. With the exception of the westernmost portion of the Project area, encompassing the city of Hesperia and surrounding communities, which is characterized by a relatively diverse mix of land uses, the majority of the Project passes through generally scenic and largely undeveloped landscapes that are for the most part uninhabited. In these areas public access is limited due to topographic constraints including mountains and sand dunes as well as the small number of all-weather, paved roadways and general lack of public services near locations crossed by the Project. **Table 2** summarizes the landscape units in terms of their location and approximate length, and their relationship to Project segments. **Figure 1** depicts the location of landscape units in relationship to the project alignment and photograph viewpoints.

Table 2: Summary of Landscape Units

Landscape Unit	Location	Approximate Length	Project Segments
1: Lugo Substation to Lucerne Valley	San Bernardino County	21 miles	Part of 1 and 2
2: Lucerne Valley to Fry Mountains	San Bernardino County	18 miles	Part of 1and 2
3: Fry Mountains to Kelbaker Road	San Bernardino County	79 miles	Part of 3 and 4
4: Kelbaker Road to El Dorado Substation	San Bernardino County and Clark County	58 miles	Part of 3 and 4; entirety of 5 and 6

2.4.1 Landscape Unit 1 (Photographs 1 through 4)

Landscape Unit 1 encompasses an area of established urban and suburban desert communities situated in the Mojave River basin at the foot of the San Bernardino Mountains and extends approximately 21 miles across Apple Valley to near SR-247 at the western margin of Lucerne Valley. Defined by the historic floodplain of the Mojave River on the west, the landscape traversed by the Project in this landscape unit is predominantly flat. Immediately northeast of its originates at Lugo Substation is an approximately 7-mile-wide developed area comprised of relatively dense, predominantly single-story residences along with roadways and railway infrastructure along the southern periphery of the City of Hesperia. East of Hesperia, the development pattern becomes more sparse, consisting of scattered suburban and rural residences. At the northeast margin of Apple Valley, the Project crosses SR-18, a well-traveled regional highway, and Project Segment 1 converges with a non-EPL transmission alignment that it then closely parallels all the way to Pisgah Switchyard. After traversing the southeastern flank of the Granite Mountains, the Project descends into Lucerne Dry Lake, a broad alluvial expanse north of the unincorporated community of Lucerne Valley, where approximately 3.75 miles west of SR-247 the parallel circuits of the Project alignment (Segments 1 and 2) diverge into separate single circuit segments and enter Landscape Unit 2.

Photographs 1 through 4 show representative views of the Project and surrounding landscape character found within Landscape Unit 1. One of these views is a KOP selected to show the Project as seen from Ranchero Road, a major thoroughfare in the city of Hesperia (refer to Figure 1).

2.4.2 Landscape Unit 2 (Photographs 5 through 7)

Landscape Unit 2 extends approximately 18 miles across Lucerne Dry Lake to the Fry Mountains, traversing the gently sloping terrain bordering the north end of Johnson Valley, an expansive, 20 mile-long alluvial plain extending southeast of the Project. Crossed by SR-247, Lucerne Dry Lake consists of a broad saline flat bordered by a limited number of dispersed rural residences and scattered irrigated cropland. The open desert landscape to the east is a largely uninhabited and sparsely vegetated. Apart from a few paved roadways adjacent to Lucerne Dry Lake, vehicular access in this landscape unit is restricted to unpaved powerline maintenance roads and informal, off-road tracks concentrated in proximity to the BLM administered Johnson Valley and ORD Mountains OHV Recreation areas and the Rodman Mountains Wilderness Area. Throughout Landscape Unit 2 the Lugo-Pisgah Segments 1 and 2 remain separated from

each other by up to approximately 4.75 miles. For the length of this unit Segment 1 runs parallel to a non-EPL transmission line.

Photographs 5 through 7 are representative existing views of the Project and surrounding landscape character found within Landscape Unit 2. Photograph 5 shows the unrelated transmission line that runs parallel to Project Segment 1. Two of the views are KOPs selected to show the Project as seen from locations within the BLM administered Johnson Valley OHV Recreation Area (refer to Figure 1).

2.4.3 Landscape Unit 3 (Photographs 8 through 12)

Landscape Unit 3 extends approximately 79 miles from the Fry Mountains to Kelbaker Road. The Project passes through a series of ancient volcanic outcrops, where Segments 1 and 2 converge to once again closely parallel one another, skirting the northwestern boundary of the Federally administered Marine Corps Combat training center, before descending into a broad alluvial plain, where it crosses I-40 and the historic Route 66 (National Trails Highway). The two Project segments terminate at Pisgah Switchyard located approximately 0.36 miles northeast of I-40. Segment 1 runs parallel to a non-EPL transmission line all the way to Pisgah Switchyard. From Pisgah Switchyard, for approximately the next 44 miles Segments 3 and 4 of the Project alignment extend towards Kelbaker Road in a generally northeasterly direction, crossing BLM administered land that includes a portion of Mojave Trails National Monument, as well as the Mojave National Preserve, through a landscape of isolated mountainous outcrops separated by gently sloping alluvial plains and flat dry lake beds. This area attracts primarily day-use recreational visitors that access the area via Kelbaker Road which bisects the preserve between I-40 to the south and I-15 to the north and serves as the only paved roadway within this landscape unit with the exception of I-40/National Trails Highway. Kelso Depot and Mojave National Preserve Visitor Center are located at the junction of Kelbaker Road and Cima Road, approximately 10 miles south of the Project along a segment of the BNSF/Amtrak rail corridor. With fewer than a dozen permanent dwellings, it represents the area's only permanent settlement. The Project alignment crosses the BNSF/Amtrak rail corridor approximately 20 miles west of Kelso Depot.

Photographs 8 through 12 are representative existing views of the Project and surrounding landscape character found within Landscape Unit 3 (refer to Figure 1).

2.4.4 Landscape Unit 4 (Photographs 13 through 18)

From Kelbaker Road the EPL Project enters the eastern portion of the Mojave National Preserve, crossing a landscape punctuated by scattered volcanic domes and ancient lava beds. The route partially parallels and crosses a segment of the historic Old Mojave Road, a narrow unpaved track limited to offroad vehicles, and gradually descends into the Ivanpah Valley, an approximately 25 mile-long and 7- to 10-mile-wide basin with panoramic views of surrounding mountains that rise to approximately 4,000 feet above the valley floor. In this area the predominant scattered low desert scrub vegetation found elsewhere along the Project route gives way to a more diverse vegetation pattern that includes some of the most extensive concentrations of Joshua Tree (Yucca Brevifolia), endemic to the Mojave Desert. Reaching heights of approximately 15 feet or more, these trees partially screen open views toward the Project from some locations. Cima Dome and nearby Teutonia Peak are popular recreation destinations situated within approximately 5 miles of the Project alignment. Access to these areas is via

several paved roadways that are crossed by the Project, including Cima Road and Morningstar Mine Road; the latter partially parallels the Project alignment where it enters Ivanpah Valley. The Project route continues across Ivanpah Valley, crossing Ivanpah Road, which provides access to several historic mines and ghost towns in the mountains bordering the Ivanpah Valley's southern perimeter. The Project also comes within approximately 2.3 miles of the community of Nipton, a small tourist destination at the eastern edge of Ivanpah Valley located approximately 2.75 miles west of the Nevada state line. With approximately 20 permanent residents, Nipton represents the only location with permanent inhabitants in this landscape unit. The Project crosses the California-Nevada state line approximately 2.9 miles east of Nipton, where it crosses SR 164 and the McCullough Mountains, subsequently entering El Dorado Valley and terminating at the Eldorado Substation.

Photographs 13 through 18 show representative existing views of the Project and surrounding landscape character found within Landscape Unit 4. One of the views is a KOP showing the Project from Cima Road within the Mojave National Preserve (refer to Figure 1).

2.5 Viewers and Viewer Sensitivity

Accepted visual assessment methods, including those adopted by the BLM and other federal agencies, establish sensitivity levels as a measure of public concern for changes to scenic quality. Viewer sensitivity, one of the criteria used to evaluate visual impact significance, can be divided into high, moderate, and low categories. Factors considered in assigning a sensitivity level include viewer activity, view duration, viewing distance, adjacent land use, and special management or planning designation. According to the BLM (1984), visual sensitivity will vary with the type of users. The primary viewer groups within the Project viewshed are described below.

2.5.1 Motorists

Motorists or roadway travelers are the largest viewer group in the project area. Included in this group are motorists traveling on the region's network of paved roadways with views of the Project. Within the City of Hesperia in Landscape Unit 1, the Project crosses and parallels Ranchero Road, a well travelled 4-lane arterial, and also crosses a number of residential streets and less heavily used roadways in the suburban fringe northeast of Hesperia. Important regional highways crossed by the Project to the east include SR-18, county scenic route in Landscape Unit 1, and in Landscape Unit 2, SR- 247, a county scenic route and an eligible state scenic highway. In Landscape Unit 3 the Project crosses I-40, an eligible state scenic highway and the historic Route 66/National Trails Highway which parallels I-40 at this location. Kelbaker Road, which marks the boundary between Landscape Unit 3 and 4, and Cima Road to the east, both crossed by the Project, are county scenic routes where they traverse Mojave National Preserve.

Motorists include both local and regional travelers who are familiar with the visual setting and recreational travelers using area roadways on a less regular basis. Local travelers include those commuting to or residents of communities in the vicinity of the Project area as well as drivers of commercial vehicles in and near the city of Hesperia, including the communities of Victorville, Apple Valley and Lucerne Valley. Regional motorists also include long distance truck drivers, and recreational visitors to the area as noted below. The duration of motorists' views is generally brief, and, depending upon the travel route and type of roadway, could range from a few seconds to up to several minutes or more. Viewer sensitivity is considered low to moderate.

2.5.2 Residents

As described above, most of the Project area is sparsely inhabited and views of Project structures are available to residents near the EPL Project alignment to varying degrees. Within Landscape Unit 1 residential populations are primarily concentrated in and immediately around Hesperia and where residences border the Project corridor along the southern perimeter of Hesperia and Apple Valley to the northeast. Residential viewers generally experience close-range views of the Project, as do scattered residents in Landscape Unit 2 in the area around Lucerne Dry Lake. For the larger remaining part of the Project route there are no residences within view of the Project, with the exception of a limited number of residences in the eastern portion of Landscape Unit 4, where the Project passes within 2.3 miles of Nipton and is barely visible. Residential views tend to be long in duration, and the sensitivity of this viewer group is considered moderate to high.

2.5.3 Recreationalists

Recreationalists including visitors to the Mojave National Preserve, Mojave Trails National Monument, and BLM lands crossed by the project constitute another important viewer group. Recreationalists engaging in activities such as sightseeing, off-road vehicle touring, hiking, bird watching, wildlife viewing, photography, stargazing, camping, running, bicycling, and backpacking may have views of the Project. Off-road vehicle users include those using unpaved off-highway vehicle (OHV) recreation routes within the Johnson Valley/Ord Mountains OHV Areas, Mojave National Preserve and Mojave Trails National Monument, as well as users of other designated OHV routes located on BLM administered land. Other recreationalists include equestrians, bicyclists, and hikers on trails within the City of Hesperia. With the exception of campers, view duration for much of this viewer group tends to be short, and although the general expectation of a natural-appearing landscape setting among some of these recreationalists raises the sensitivity to moderate to high, it should be noted that a substantial segment of the Project passing through these areas shares a ROW with unrelated transmission alignments that include existing structures that are noticeably taller than Project structures.

2.6 Representative Viewpoints and Photographs

Figures 3a through **3i** present a set of 18 photographs taken from representative locations along the Project alignment, within the Project viewshed. **Table 3**, a summary of the set of representative viewpoints, includes information on the viewpoint location, primary type of viewers, approximate viewing distance to the Project and existing viewing conditions. **Table 3** also highlights a subset of the viewpoints that are KOPs. Additional technical detail about the photographs and viewpoints such as information on photography dates and time of day, and global positioning system (GPS) locations is provided in **Appendix A**. Taken together, these photographs convey a general sense of existing visual character of the landscape within the vicinity of the Project. The set of photographs also demonstrates that existing transmission, sub-transmission and distribution facilities within the Project viewshed, including those of the Project, are established elements of the visual setting of the area.

Table 3. Summary of Representative Viewpoints and Photographs

Viewpoint Number, Location, and Viewing Direction (* denotes KOP)	Primary Viewers	Approximate Viewing Distance to Project	Existing Visual Conditions
Landscape Unit 1			
1. Cottonwood Avenue looking southwest towards Lugo Substation	• Local motorists • Nearby residents	425 feet (0.08 mile)	This street view, taken a residential section of Hesperia, looks along the EPL Project ROW toward the western end of the Project. Parallel lattice towers of EPL Segments 1 and 2 lines are in foreground to the left and center, with numerous unrelated adjacent transmission structures visible in the distance to the right. To the left, Lugo Substation is barely visible in the distance against a hazy backdrop of the San Bernardino Mountains. Visible along both sides of Project ROW, residences are partially screened by vegetation.
2. Ranchero Road near Via Quintana looking east	• Local and regional motorists • Nearby residents	360 feet (0.07 mile)	This KOP view from a well- traveled arterial road within the city of Hesperia shows an existing EPL Project lattice transmission tower partially silhouetted against the sky, beyond a low masonry wall on the right (east) side of road. To the left of the roadway a second Project tower is somewhat visible beyond a power line supported by an array of wood utility poles. Mature trees partially screen residences set back from both sides of the road. Multiple overhead conductors are visible against a backdrop of nearby mountains.
3. Roundup Way at Wikiup Way looking northeast	• Local motorists • Nearby residents	1,080 feet (0.20 mile)	In this open view taken approximately 2.75 miles northeast of Hesperia, the parallel array of lattice towers supporting EPL Segments 1 and 2 lines can be seen at relatively close range where the alignment crosses a well- traveled rural highway. Wood utility poles parallel the roadway in the distance together with a number of isolated poles dispersed across the desert landscape along with widely scattered suburban and rural dwellings.
4. SR-18 looking north	• Regional and local motorists	1,490 feet (0.28 mile)	This roadway view shows two towers associated with the EPL Segments 1 and 2 lines on the left where the Project traverses a saddle of the Granite Mountains north of the highway crossing. The weathered steel lattice structures are barely visible when seen against the highly fractured, mottled rock backdrop.
Landscape Unit 2			
5. Harrod Road in Ord Mountain OHV area looking northeast	• Local and regional recreational motorists	1,470 feet (0.28 mile)	This view from the north end of Johnson Valley depicts a gently rising alluvial plain within a BLM administered off-road recreation area. Multiple arrays of lattice transmission towers recede toward a distant ridge in the Ord Mountains visible in the background. Project towers of the EPL Segment 1 alignment are on the right along Powerline Road, and an unpaved maintenance route provides access to popular OHV recreational sites in the area. To the left is a non-EPL transmission line that parallels the entire length of this Project segment.
*6. Red Cedar Ave near Squaw Bush Rd looking east	• Local and regional recreational motorists • Residents (small numbers)	760 feet (0.14 mile)	Taken approximately 5.5 miles southeast of the previous viewpoint at the edge of upper Johnson Valley, this view shows the EPL Segment 2 alignment as it approaches the southern flank of the Ord Mountains. Seen at close range, the Project tower in the immediate foreground is prominent against a sky backdrop while distant towers along the

Table 3. Summary of Representative Viewpoints and Photographs

Viewpoint Number, Location, and Viewing Direction (* denotes KOP)	Primary Viewers	Approximate Viewing Distance to Project	Existing Visual Conditions
			alignment are less distinct against the textured, dark colored mountain backdrop. On the left, low steel structures with light colored fabric are remnants of an abandoned agricultural operation situated within a largely unoccupied area that includes several scattered residential structures.
*7. Johnson Valley OHV Area near Transmission Line Road looking east	• Local and regional recreational motorists	460 feet (0.08 mile)	This is a close-range view toward the EPL Segment 2 alignment where it enters the Ord Mountains north of Johnson Valley, an area favored by recreational OHV motorists in one of two OHV areas within BLM land in and near Johnson Valley. At this location foreground Project towers are noticeable against a backdrop of sky. On the left, more distant Project structures are less distinct against the textured mountain backdrop.
Landscape Unit 3			
8. Powerline Road near Rodman Mountains Wilderness Area looking northeast	• Local and regional recreational motorists	690 feet (0.13 mile)	This panoramic view toward the eastern Mojave Valley shows the combined EPL Segments 1 and 2 alignments along a shared ROW with a non-EPL transmission line that includes parallel sets of towers seen to the left. The Marine Combat Center boundary lies immediately to the right of the Project alignment, and the boundary of the Rodman Mountains Wilderness Area is to the left of the alignment. Descending a broad alluvial fan, the multiple tower arrays stand out against the dark rocks of a large ancient lava flow visible in the distance with Old Dad Mountain in the backdrop.
9. I-40/National Trails Highway looking northeast towards Pisgah Switchyard	• Regional motorists	3,700 feet (0.70 mile)	This view from the heavily traveled I-40, adjacent to the historic National Trails Highway, shows the open, nearly flat surrounding landscape with a mountain backdrop. Motorists have an unobstructed view toward Pisgah Switchyard, located approximately 0.8-mile northeast of the highway. The substation marks the junction of the Lugo- Pisgah alignments (Project Segments 1 and 2) and the Cima-Eldorado-Pisgah alignments (Project Segments 3 and 4). Also visible are transmission structures of a non-EPL transmission line converging on the substation, as well as a prominent lattice steel cell tower with dense steel framework that contrasts with the muted landscape texture seen in the backdrop.
10. Crucero Road in Mojave Trails National Monument looking northeast	• Recreational motorists	225 feet (0.04 mile)	This close-range view of the EPL Project shows the parallel Cima-El Dorado-Pisgah Segments 1 and 2 alignments where it traverses a sandy playa in the vicinity of Kelso Dunes Wilderness, part of the BLM managed Mojave Trails National Monument. Sharing the Project ROW are tall lattice structures supporting an adjacent unrelated transmission line, visible to the left. Within this area public access is limited to off-road vehicles, and is further restricted to designated routes, such as the unpaved powerline access road seen in the foreground.
11. Jackass Canyon OHV route	• Recreational (OHV) motorists and other	590 feet (0.11 mile)	This is a panoramic view toward the EPL Project from the southwestern entrance to Jackass Canyon, looking across

Table 3. Summary of Representative Viewpoints and Photographs

Viewpoint Number, Location, and Viewing Direction (* denotes KOP)	Primary Viewers	Approximate Viewing Distance to Project	Existing Visual Conditions
southwest of Old Dad Mountain looking southwest	recreationalists		Devil's Playground dry lakebed and the Kelso Dunes in the middle distance. Seen in the foreground right, an unpaved powerline access road is part of the historic Old Spanish Trail route. This road largely follow the Project ROW through Jackass Canyon and is popular with OHV users in Mojave National Preserve. At this location, EPL Segment 3 structures are seen on the right, along with larger lattice structures unrelated to the Project. On the left an EPL Segment 4 structure is seen against the sky and is approximately 0.2 miles from the Segment 3 alignment.
12. Kelbaker Road looking west	• Regional motorists and recreationalists	1,200 feet (0.23 mile)	Extending from I-40 to the south to I-15 in the north, Kelbaker Road is a county designated Scenic Route and the only paved roadway that spans the entire breadth of Mojave National Preserve. The view represents a key travel segment for recreational and regional visitors to the area, as it is situated between Kelso Depot, a California historic landmark and only facility with services in the preserve, located approximately 11 miles to the south, and the historic Mojave Road crossing, approximately 7 miles to the north. This motorist's view, shows the roadway as it crests a low summit in the foreground, with the parallel lattice structures of the EPL Segments 3 and 4 alignments seen against a sky backdrop, along with larger transmission structures from a non-EPL transmission line sharing the ROW, as well as an array of wood utility poles.
Landscape Unit 4			
13. Mojave Road OHV route looking southeast	• Recreational motorists, and other recreationalists	2,050 feet (0.39 mile)	Taken from approximately 4.5 miles east of Kelbaker Road, the center of this view shows a pair of EPL Project lattice structures against a panoramic backdrop of low hills and the more distant Ivanpah Valley where the alignment crosses the Old Mojave Road. In the foreground, unrelated transmission structures are visible on the left and right. Alluvial deposits from nearby ancient lava fields combined with the somewhat higher elevation of this location support taller, more varied vegetation, including species of Yucca, visible in the foreground and extending into the middle distance. The unconsolidated alluvium and narrow profile of the unpaved track limits access to the historic road in this location to high clearance off-road vehicles, hikers, and equestrians.
*14. Cima Road looking north	• Regional motorists	500 feet (0.10 mile)	This close-range view of the EPL Project crossing at Cima Road shows a pair of Project structures in the immediate foreground against a sky backdrop. To the right, a taller, unrelated transmission tower sharing the ROW is visible a short distance beyond. When seen at close range the relatively dense stands of Joshua Trees partially screen the lower portion of the structures seen in the foreground, and also partially screen views of more distant structures as well as mountains in the backdrop. Cima Road connects with I-15 approximately 16 miles to the north, while providing trail and OHV access to Cima Dome and Volcanic Field National Landmark as well as Teutonia

Table 3. Summary of Representative Viewpoints and Photographs

Viewpoint Number, Location, and Viewing Direction (* denotes KOP)	Primary Viewers	Approximate Viewing Distance to Project	Existing Visual Conditions
			Peak, approximately 3.3 and 4.8 miles north of the crossing.
15. Morningstar Mine Road looking north	• Regional and recreational motorists	600 feet (0.11 mile)	This motorist's view of the EPL Project crossing shows the roadway as it descends into the northern Ivanpah Valley, affording open, panoramic views of mountains flanking the edge of the valley to the north and east. Project towers are seen against a backdrop of landscape and sky on both sides of the roadway. This road is among three in the Preserve receiving the heaviest use, mainly on weekends by regional motorists travelling between Las Vegas and Palm Springs; motorists also include recreational visitors to nearby historic Morning Star Mine.
16. Ivanpah Road looking north	• Regional and recreational motorists	1,250 feet 0.24 mile	This panoramic view of the EPL Project crossing from Ivanpah Road, includes the two shorter Project structures along with a taller unrelated transmission structure along the shared ROW. Near the center of the view in the distance is Ivanpah Dry Lake, at the northern terminus of Ivanpah Valley, visible against a backdrop of the Clark Mountains. To its left the Ivanpah Solar Electric Generating facility, with its highly reflective parabolic mirrors, is a dominant visual feature in the landscape.
17. Nipton Road/SR-164 looking southwest	• Regional motorists	420 feet 0.08 mile	This view shows the EPL Project alignment crossing Nipton Road/SR-164, approximately 2 miles east of the Nevada State Line. In the foreground view a lattice tower along the Cima-El Dorado-Pisgah #2 (Segment 6) alignment is partially silhouetted against a sky backdrop. Seen against a backdrop of the Clark Mountains at the far edge of Ivanpah Valley, multiple Project structures and unrelated transmission structures recede into the distance at the highway crossing and beyond.
18. US-95 looking northwest towards Eldorado Substation	• Regional motorists	3.7 miles	The view from US-95 looks across the El Dorado Valley toward the Desert Star Energy Center, one of several solar energy facilities located in the area. Beyond the solar facility both the EPL Project alignment and El Dorado Substation are barely visible against the more distant backdrop of the McCullough Mountains.

2.7 Visual Resource Management Areas

More than half of the Project alignment crosses BLM-administered land, which includes Visual Resource Management Objectives (VRM) for areas under BLM jurisdiction. As shown in **Figure 4** and summarized on **Table 4** in section 3.1.2 below, more than half of the land crossed by the Project, and which include new, potentially visible components of the Project is designated as VRM Class III and Class IV. The BLM management goals in Class III areas call for partially retaining the existing landscape character and allow for a moderate level of change to existing landscape character. In these areas management activity may attract attention, but should not dominate the view of the casual observer. Management goals in Class IV areas allow for

management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. In these areas management activity may dominate the view, and may be a major focus of viewer attention. The portions of the Project crossing land designated as Class II is limited to modifications to the existing Project infrastructure (reconductoring and hardware replacement) that would be largely imperceptible to the majority of viewers in the Project area, and would meet BLM management goals in Class II areas, that call for retaining the existing character of the landscape and where the level of change to the characteristic landscape should be low.

3. Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the EPL Project.

3.1 Federal

3.1.1 Federal Land Policy and Management Act of 1976

The Federal Land Policy and Management Act of 1976 (FLPMA) (43 United States Code [U.S.C.] 1701) and the U.S. Department of the Interior's (DOI) BLM Land Use Planning Handbook (BLM 2005) both emphasize the importance of protecting the quality of scenic resources on public lands. FLPMA sections relevant to the EPL Project are:

- Section 102(a): "The public lands [shall] be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values."
- Section 103(c): Identifies "scenic values" as resources for public management. Section 201(a): "The Secretary shall prepare and maintain on a continuing basis and inventory of all public lands and their resources and other values (including...scenic values)."
- Section 505(a): "Each right-of-way shall contain terms and conditions which will...minimize damage to the scenic and esthetic values."

FLPMA's legal mandate to protect the quality of scenic resources on public lands is carried out by BLM and detailed in BLM's Visual Resource Management (VRM) system, described below.

3.1.2 US Department of Interior, Bureau of Land Management (BLM)

The Federal Land Policy and Management Act of 1976 requires BLM to protect the quality of scenic values on public lands (43 U.S.C. 1701). To this end, BLM has developed the Visual Resource Management (VRM) system to identify and maintain scenic values and visual quality. Under this system, BLM-administered lands are inventoried, analyzed, and assigned visual ratings or Management Classes. Class designations are derived from an analysis of scenic quality (rated by landform, vegetation, water, color, influence of adjacent scenery, scarcity, and cultural modification), a determination of viewer sensitivity levels (sensitivity of people to changes in the landscape), and distance zones. Management Classes describe the different degrees of modification allowed to the basic elements of the landscape (form, line, color, texture). Management classes and their corresponding goals are defined in Table 4 and discussed below.

Table 4: BLM Visual Management Classes and Goals

Management Class	Goals
Class I	To preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.
Class II	To retain the existing character of the landscape. The level of change to the characteristic landscape should be low.
Class III	To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.
Class IV	To provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high.

Source: BLM

As indicated on the Figure 4 map showing the Project alignment with VRM classifications on BLM-administered land and summarized on Table 5 below, approximately two thirds of the Project alignment cross BLM-administered land. Slightly more than half this land is designated as VRM Class III and Class IV. The BLM management goals in Class III areas call for partially retaining the existing landscape character and allow for a moderate level of change to existing landscape character. In these areas management activity may attract attention, but should not dominate the view of the casual observer. Management goals in Class IV areas allow for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. In these areas management activity may dominate the view, and may be a major focus of viewer attention. The remainder of the BLM-administered land crossed by the Project is designated as VRM Class II, which allows low levels of change in the characteristic landscape. The most visible component of the EPL Project crossing BLM administered land would consist of new interset H-frame structures, and the location of these new structures will be limited to areas designated as VRM Class IV. Of the portions crossed by the Project on land designated as VRM Class II and III, the Project modifications would be limited to selected replacement of conductors and insulators, and these changes would not be noticeable to most viewers.

Table 5: BLM Land Crossed by the EPL Project

Project Segment	Number of Miles Crossed by EPL Project Alignment				
	Total	VRM Class I	VRM Class II	VRM Class III	VRM Class IV
1	34.0	0	0.1	15.9	18.0
2	18.9	0	0	3.2	15.6
3	24.9	0	16.0	8.8	0
4	25.1	0	16.0	9.1	0
5	20.5	0	18.5	2.0	0
6	20.5	0	18.5	2.0	0
Total	143.9	0	69.1	41.0	33.6

3.1.3 BLM Desert Renewable Energy Conservation Plan (DRECP) Record of Decision

Covering more than 20 million acres in seven California counties including Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego County, the DRECP was developed as an interagency plan by the BLM, the U.S. Fish and Wildlife Service (USFWS), the California Energy Commission (CEC), and the California Department of Fish and Wildlife. The BLM manages approximately 10 million acres of the 22.5 million acres covered in the overall Plan area.

The DRECP landscape-scale planning effort was undertaken to achieve two sets of overarching goals. The first is Renewable Energy. To address these goals, the plan identifies specific development focus areas with high- quality renewable energy potential and access to transmission in areas where environmental impacts can be managed and mitigated. The second overarching goal concerns Conservation. The plan specifies species, ecosystem and climate adaptation requirements for desert wildlife, as well as the protection of recreation, cultural, visual, and other desert resources. Through the DRECP Record of Decision (ROD) an approved Land Use Plan Amendment (LUPA) establishes a policy framework for BLM-managed land, including management and conservation of visual resources. All BLM-administered land in California crossed by the EPL Project is within the area governed by the DRECP ROD. A map showing the EPL Project Alignment with VRM classes on BLM-administered is included as Figure 4.

3.1.4 BLM - Best Management Practice for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands

Bureau of Land Management guidance is provided in this document in the form of 122 best management practices (BMPs) to avoid or reduce potential visual impacts associated with the siting, design, construction, operation, and decommissioning of utility-scale renewable energy generation facilities, including wind, solar, and geothermal facilities as well as ancillary components, such as electric transmission structures and access. (BLM 2015). Selection of

structure types and selection of appropriate materials surface treatments are among the pertinent BMPs outlined in this document to minimize potential visual effects and contrast associated with transmission facilities.

3.1.5 BLM - Mojave Trails National Monument

The Mojave Trails National Monument is a national monument located between Joshua Tree National Park and the Mojave National Preserve along Route 66 in San Bernardino County. The Mojave Trails National Monument is managed by the BLM and covers approximately 965,000 acres. A portion of Segments 3 and 4 span the Mojave Trails National Monument.

3.1.6 U.S. Department of the Interior. National Park Service. National Scenic and Historic Trails

In 1968, Congress established the National Trails System. National Historic Trails closely follow an historic trail or nationally significant travel route. This national designation ensures that historic routes, historic remnants, and artifacts are identified and protected for public use and recreation (*NPS 2017a*).

The United States Congress added the Old Spanish National Historic Trail to the National Trails System on December 4, 2002. The legislation authorizing the Old Spanish National Historic Trail identified four major routes (Armijo Route, Northern Route, North Branch, and Mojave Road) that cover approximately 2,850 miles of trail, extending from Santa Fe and Albuquerque, New Mexico, to Los Angeles, California. On June 5, 2003, the Secretary of the Interior assigned joint administrative responsibility for the Old Spanish National Historic Trail to the Bureau of Land Management and the National Park Service.

The Project alignment crosses the Mojave Road portion of the Old Spanish National Historic Trail in a relatively remote location near Old Dad Mountain and the Jackass Canyon OHV route, approximately 4.75 miles northeast of Kelbaker Road, within the Mojave National Preserve. The trail corridor is informally considered by the National Park Service to lie five miles on either side of the centerline of the trail alignment to include the nearest elements of the viewshed, parts of the cultural landscapes, landmarks, and traditional cultural properties near the trail.

3.1.7 U.S. Department of the Interior. National Park Service. Mojave National Preserve General Management Plan.

The central and eastern portions of Segments 3 and 4 are located within the Mojave National Preserve. The California Desert Protection Act of 1994 established the Mojave National Preserve. Section 511, Utility Rights of Way, of the Act states, in part:

(a)(1) Nothing in this title shall have the effect of terminating any validly issued right-of-way or customary operation, maintenance, repair, and replacement activities in such right-of-way, issued, granted, or permitted to Southern California Edison Company, its successors or assigns, which is located on lands included in the Mojave National Preserve, but outside lands designated as wilderness under section 601(a)(3). Such activities shall be conducted in a manner which will minimize the impact on preserve resources.

(2) Nothing in this title shall have the effect of prohibiting the upgrading of an existing electrical transmission line for the purpose of increasing the capacity of such transmission line in the

Southern California Edison Company validly issued Eldorado-Lugo Transmission Line right-of-way and Mojave-Lugo Transmission Line right-of-way...”

Management Objectives:
Perpetuate scenic and cultural landscapes. Landscapes should be free from activities and facilities that distract from the scenic beauty or the historic condition of the landscape. (p. 5)

Mojave National Preserve is a large expanse of natural Mojave Desert ecosystem. Managing the area to preserve this system as a self-sustaining environment where native species thrive is the overall management goal. Some existing land uses (pipelines, electric transmission lines, telephone relay sites, antennas, billboards, etc.) do not conform well with our preservation mission and management goals, but are authorized pre-existing uses. These are identified here to recognize their existence as non-conforming uses that dissect the park and at times may interfere with the visitor experience. (p. 72)

The management philosophy towards these developments is to minimize their intrusion and manage towards their eventual elimination, either through technological improvements or acquisition. (p. 75).

3.1.8 U.S. Department of the Interior. National Park Service. Enjoy the View – Visual Resources Inventory Report. Mojave National Preserve.

The National Park Service completed a visual resources inventory report for Mojave National Preserve according to the NPS inventory and evaluation methodology. Six views were included in the inventory, including Morning Star Mine, Ten Mile Tank, Eagle Well, Ivanpah Road, Keystone, and Connie’s Place. The EPL Project is not located in close proximity to any of the viewpoints and no Project elements are included within the evaluated views.

3.1.9 U.S. Department of Transportation. National Scenic Byways Program.

National Scenic Byways are designated for one or more of six "intrinsic qualities": archeological, cultural, historic, natural, recreational, and scenic. The program was established by Congress in 1991 to preserve and protect the nation's scenic but often less-traveled roads and promote tourism and economic development. The National Scenic Byways Program (NSBP) is administered by the Federal Highway Administration (FHWA).

Route 66 from Needles to Barstow, California was designated as a National Scenic Byway with the *Reviving America’s Scenic Byways Act of 2019*. In Landscape Unit 3 the EPL Project crosses the historic Route 66/National Trails Highway where it parallels I-40.

3.1.10 U.S. Department of Transportation. Federal Aviation Administration

Generally, marking or lighting is recommended by the FAA for those spans or structures that exceed 200 feet in height above ground level (AGL); however, marking or lighting may be recommended for spans and structures that are less than 200 feet AGL, but located within close proximity to an airport or other high-density aviation environment.

The FAA has not made a determination regarding the lighting or marking of any component of the EPL Project.

3.2 State

3.2.1 California Department of Transportation: Scenic Highway Program

The State Scenic Highway Program—a provision of Sections 260 through 263 of the Streets and Highways Code—was established by the Legislature in 1963 to preserve and enhance the natural beauty of California. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a State Scenic Highway changes from "eligible" to "officially designated" when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (Caltrans) for scenic highway approval, and receives the designation from Caltrans. A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways. However, State legislation is required.

State Scenic Highways are listed on Table 1 and shown on Figure 1.

3.2.2 California State Parks Office of Historic Preservation (OHP) California Landmarks and Points of Historic Interest

The OHP is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration, and protection of California's historic resources including California Historic Landmarks and Points of Historic Interest. These resources are buildings, sites, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific, or technical, religious, experimental, or other historical value. The following points of historic interest are found near the Project:

> Chimney Rock in the Granite Mountains, approximately 0.27 mile from Project, accessed via SR-18 and OHV route adjacent to shooting range.
> [Not in view of Project, but accessed via roads that are crossed by Project:
>
> Mojave Road Historical Marker, Kelso-Cima Road, (5.8 miles from Project crossing at Cima Road) and Cedar Canyon Road, leads to Camp Rock Springs Historical Landmark
>
> Kelso Depot and Kelso Depot Restaurant and Employee Hotel Historical Marker (Kelbaker Road and Kelso Cima Road Junction) 11.3 miles south of Project crossing at Kelbaker Road.]

3.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order 131-D (G.O. 131-D), Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

3.3.1 San Bernardino County General Plan

The majority of the project route lies within unincorporated areas of San Bernardino County. The San Bernardino County General Plan Conservation Element and Open Space Element contain the following:

> GOAL D/CO 1. Preserve the unique environmental features and natural resources of the Desert Region, including native wildlife, vegetation, water and scenic vistas.
>
> GOAL OS 5. The County will maintain and enhance the visual character of scenic routes in the County.

The Open Space Element of the General Plan indicates that county scenic routes in the Project area include SR-247, I-40, Historic Route 66, and SR-18, as well as Cima Road, Ivanpah Road, and Kelbaker Road. Information regarding these designated scenic routes is included on Table 1 and on Figure 1.

3.3.2 City of Hesperia, City of Hesperia General Plan 2010

The easternmost portion of the project route near Lugo Substation traverses the city of Hesperia. The *City of Hesperia General Plan (*2010) contains general policies regarding aesthetics in order to provide attractive residential area, roadways, and open spaces. Scenic resources listed in the plan include Mojave River, San Gabriel and San Bernardino Mountains, the Mojave Desert, and other surrounding mountains and valleys, and the plan states that vistas toward these resources are valuable.

Additionally, an established equestrian trail is located within the Southern California Edison power line easement from the Burlington, Northern, and Santa Fe Railroad and Ranchero Road to the Mojave River, established by the Park District and dedicated in 1990.

Circulation Element**:**

> Implementation Policy CI-1.14: Coordinate with San Bernardino County Flood Control District and Southern California Edison Company to promote utilization of easements for the trail system.

3.3.3. City of Boulder City, Nevada, Boulder City Master Plan

The Boulder City Master Plan (2015) identifies utility corridors in the Eldorado Valley area.

Public Facilities:

PF 6: ABOVEGROUND UTILITY PLAN

> As required by NRS 278.0103 and 278.165, the city shall plan for the location of transmission lines designed and/or designated to operate at 200 kilovolts or greater to be consistent with any Bureau of Land Management resource management plan, any transmission plan adopted by the Nevada Office of Energy, and coordinated with the similar plans of adjacent jurisdictions. Utility providers shall locate transmission lines within established corridors as depicted on the Aboveground Utility Corridor Map, and in compliance with all zoning and permitting requirements. (p. 5-2).

Special Planning Area Policies – Eldorado Valley:

EV 3: VIEWS: The visual impacts of future development in the Eldorado Valley should be a strong consideration when reviewing future proposals for energy production facilities or other uses. Future development should be designed so as to minimize negative impacts to views of the Eldorado Valley from the urbanized areas of the city.

3.3.4. Clark County, Nevada - Clark County Comprehensive Plan

Approximately 27 miles of the Project route travels through Clark County in Nevada. The Public Facilities and Services Element of the *Clark County Comprehensive Plan* (2014) contains policies regarding the aesthetics of utilities.

Policy UT 1-8 Support the reduction of visual impacts by newly constructed utility poles, towers, substations, and equipment buildings. Use methods for reducing the effect through actions such as:

--Disguising and co-locating antennas for cell towers
--Hiding equipment buildings with screening and solid fencing

--Use architecture design on major utility projects to complement the character of a community
--Place high-capacity electrical transmission lines underground to lessen visual impacts in large multi-use Projects

4. CEQA Impact Questions

4.1 CEQA Checklist for Aesthetics

The significant criteria for assessing the impacts to aesthetics come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources within a state scenic highway, including, but not limited to trees, rock outcroppings, and historic buildings;
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality;
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

4.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5. Impact Analysis

5.1 Physical Characteristics of the Project

The Project would address existing GO 95 discrepancies by selectively replacing existing infrastructure along five of the six Project segments. This would include, along a portion of Segments 1 and 2 and a majority of Segments 3 and 4, replacing existing conductor and overhead ground wire with new, smaller diameter conductor and ground wire. At selected existing transmission structures (LSTs) along these segments, and including a small portion of Segment 6, existing ceramic insulators and associated hardware would be replaced with new shorter polymer or glass insulators. Additionally, new galvanized steel pole H-frame interset structures would be introduced at several locations along Segments 1 and 2. No new substations or major modifications to existing substations are proposed to be constructed. Required work at existing substations would be limited in scope and performed within existing substation facilities.

Table 6 provides a summary description of the Project elements. Appendix B includes an elevation drawing of a typical interset H-frame structure.

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Table 6: Summary of Proposed Project Elements

Category	Number of New Structures	Approximate Height (feet)	Structures to be Modified	Conductor and OHGW to be Replaced (linear miles-approx.)
Segment 1				
Interset steel pole H-frame tangent structure	3	60-85		
Conductor and OHGW				6.9
Insulators & associated hardware	-	-	30	-
Segment 2				
Interset steel pole H-frame tangent structure	9	60-115	-	-
Conductor and OHGW	-	-	-	7.4
Insulators & associated hardware	-	-	43	-
Segment 3				
Conductor and OHGW	-	-	-	42.3
Insulators & associated	-	-	2	-

hardware				
Segment 4				
Conductor and OHGW	-	-	-	64.1
Insulators & associated hardware	-	-	2	-
Segment 5				
No Project components will be installed	-	-	-	-
Segment 6				
Conductor and OHGW	-	-	-	0.5
Insulators & associated hardware	-	-	2	-

Conductor

Conductor span lengths would vary depending upon topography, engineering, and site considerations and location of interset structures within segments 1 and 2. Span lengths, with the exception of those locations where new interset structures would be installed, will not change. Replacement ACCC conductor would be installed in portions of Segments 1, 2, 3, 4, and 6. The conductor would be non-specular and would have a diameter of approximately 0.88 inches.

Lighting

No permanent lighting is proposed as part of the Project.

Marker Balls

The FAA has not made a determination regarding the lighting or marking of any component of the EPL Project. SCE would consult with the FAA and implement recommendations for the installation of marker balls to the extent feasible.

5.1.1 Temporary Construction Areas and Post-Construction Restoration

Staging Yards/Construction Laydown Areas

Construction of the Project would require the establishment of temporary staging yards. Staging yards would be used as a reporting location for workers, vehicle and equipment parking, material storage, and may also be used to support helicopter operations. The yard may also have construction trailers for supervisory and clerical personnel. Staging yards would include the installation of temporary perimeter fencing and may be lit for staging and security. One or more staging areas, ranging in size between approximately 3.5 and 10 acres, located between Lugo Substation and Nipton Yard, are anticipated to be used during construction of the Project. Four of 10 sites under consideration are previously disturbed sites; the remaining 6 sites are located in the vicinity of Cima Substation within the Mojave National Preserve and are not previously disturbed. Preparation of the staging yard may require, depending on existing ground conditions at the site, minor grading and the application of gravel or crushed rock. If temporary lighting is

needed at staging areas, portable light standards would be placed at point(s) along the outside of the staging area as necessary and this lighting would be directed internally and on-site. The sources of illumination on the light standards would be shielded, resulting in light being directed downward and inward (toward the staging area). To the extent feasible, light standards would be positioned so that illumination is directed away from any nearby residence(s).

In addition, temporary construction work areas for crews and where project related equipment and/or materials are placed will be located at selected locations along the Project alignment as the work progresses, ranging in size from approximately 0.13 acres to1.4 acres. At the completion of construction activities, construction laydown and construction areas would be restored to preconstruction conditions.

Access Roads and/or Spur Roads

Access roads are through roads that run between tower sites along a ROW and serve as the main transportation route along line ROWs. Spur roads are roads that lead from access roads and terminate at one or more structure sites. Construction crews would employ existing SCE-maintained dirt access and spur roads along the Project alignment during the construction of the EPL Project. The network of existing dirt access and spur roads would be accessed from paved and unpaved public roads. Some existing access and spur roads are expected to require rehabilitation work, such as regrading and repair of the existing roadbed, similar to the routine maintenance work that is performed along the access road network. No new access roads will be developed as part of the Project. New permanent spur roads will be constructed for permanent access to 4 of the 12 new interset structures. Where road access is limited or environmental constraints prevent accessing the project area with standard construction vehicles, primarily along Segment 3, construction activities will be supported by the use of helicopters, based at one or more staging areas along the alignment.

Cleanup and Post Construction Restoration

SCE would clean up all areas that would be temporarily disturbed by construction of the Project (which may include the staging yards, construction work areas, and stringing sites, among others) to as close to pre-construction conditions as feasible, or to the conditions agreed upon between the landowner or agency and SCE following the completion of construction of the Project. If restoration and/or revegetation occurs within sensitive habitats, a habitat restoration and/or revegetation plan(s) would be developed by SCE with the appropriate resource agencies and implemented after construction is complete.

5.2 CPUC Draft Environmental Measure

The project will, at the direction of the CPUC, the following Draft Environmental Measure during construction of the EPL Project:

Aesthetics Impact Reduction During Construction

All project sites will be maintained in a clean and orderly state. Construction staging areas will be sited away from public view where possible. Nighttime lighting will be directed away from residential areas and have shields to prevent light spillover effects. Upon completion of project construction, project staging and temporary work areas will be returned to pre-project conditions, including re-grading of the site and re-vegetation or re-paving of disturbed areas to match pre-existing contours and conditions.

5.3 Visual Impact Analysis

5.3.1 Question 4.4a- Scenic Vista Effects - Less-Than-Significant Impact

Construction – Less-Than-Significant Impact
For the purpose of this evaluation, a scenic vista is defined as a distant public view along or through an opening or corridor that is recognized and valued for its scenic quality.

There are no established scenic overlooks along roadways within the Project area. Teutonia Peak, located in the Mojave National Preserve, approximately 4 miles north of the Project alignment, affords hikers a panoramic view of Ivanpah Valley and surrounding mountains. A maintained trail provides access to the peak via an established trailhead and parking lot along Cima Road. Although the Project alignment is somewhat discernible from the summit in clear weather, for the most part the Project is barely perceptible to the naked eye from this location due to distance and the presence of atmospheric haze, a common occurrence in the area. Modifications to the portion of the Project segment visible from this viewpoint are limited to reconductoring and selective hardware replacement and Project related visual change would not be noticeable.

Operation – No Impact
Operation and Maintenance (O&M) activities required for the Project will not change from those currently required for the existing system; thus, no operation-related impacts to a scenic vista would occur.

5.3.2 Question 4.4b– Scenic Resource Damage within a State Scenic Highway- Less than Significant Impact

Construction – Less than Significant Impact
There are no designated state scenic highways within or within a view of the EPL Project area. The nearest Eligible State Scenic Highway is a portion of SR-38 located in the San Bernardino Mountains and designated as part of the Rim of the World Scenic Byway (a National Forest Scenic Byway). The Project comes within 17 miles of this section of highway and is not visible from this roadway. Eligible State Scenic Highways crossed by the Project include 1-40 near Pisgah Switchyard, and SR-247, north of Lucerne Valley. Proposed Project activity in the vicinity of the I-40 crossing would consist of reconductoring and affiliated modifications to existing structures. Due to distance (approximately 0.5 mile) the anticipated visual changes would not be discernible from the highway. No Project related visual impacts would occur at the SR-247 crossing because Project activities are not anticipated in the vicinity of this highway crossing.

The Project route also crosses and parallels several San Bernardino County designated scenic routes. Among them is historic U.S. Route 66 (National Trails Highway), which parallels I-40 at the Project crossing and, as outlined above travelers would not perceive EPL Project visual changes. The Project crosses SR-18 near the southern flank of the Granite Mountains, approximately 6 miles northeast of the city of Hesperia. Photograph 4 (Figure 3b) shows a

portion of the Project alignment near the highway crossing. EPL Project activity in the vicinity of this highway crossing would include the introduction of a steel interset H-frame structure along the alignment approximately 650 feet east of the view shown in Figure 3b. The contrasting form of the new structure compared with the existing lattice structures shown in the photograph could be noticed by passing motorists. However, because the change would be seen within an existing landscape context of numerous contrasting unrelated transmission structures that are visible near the Project from this highway location, the appearance of the new Project structure would represent an incremental change that would not substantially affect views of the surrounding landscape.

Other county designated scenic routes include Kelbaker and Cima Roads, crossed by Project Segments 3 and 4 within the Mojave National Preserve (Figures 3f and 3g). Planned Project activity in the vicinity of these highway crossings would be limited to replacing existing conductor with new, slightly smaller diameter conductor, resulting in only a minor incremental change. As demonstrated by the Figure 8b simulation and discussed in Section 5.5.3, when seen at close range by motorists, the visual effect of this change would be largely imperceptible.

Taken together, the incremental visual effects described above would not result in damage to existing scenic resources along scenic routes within the Project area, including a State Scenic Highway. Therefore, the impact is less than significant.

Operations – No Impact

Operation and Maintenance (O&M) activities required for the Project will not change from those currently required for the existing system; thus, no operation-related impacts to existing scenic resources within a State Scenic Highway corridor would occur.

5.2.3 Question 4.4c– Visual Character Degradation - Less than Significant Impact

Construction – Less-than-Significant Impact

Construction-related short-term visual impacts resulting from the temporary presence of equipment, materials, and work crews along the EPL Project alignment, staging and work areas, and stringing sites would not substantially degrade the existing visual character of the landscape. Given the widely dispersed and sparse permanent population within the majority of the Project work areas, close-range visibility of temporary construction activities by the public, outside of a few locations within and adjacent to the city of Hesperia, would be limited to short-term recreational OHV users and some motorists along area highways crossed by the Project.

Construction activities will take place over an approximately 23-month period, but this will be considerably shorter in duration at any one location. Because construction activities are anticipated to occur concurrently in some locations, duration at any given location would vary to some extent. Temporary construction areas along with staging areas, conductor stringing sites, and guard structures would generally be located within the existing EPL Project ROWs or easements, with the majority of temporary construction areas to be located near existing structures. Minor, temporary disturbance of land within and along the EPL Project alignment will occur at some staging and work areas during installation of interset structures and reconductoring activities, and in some cases will be located on previously disturbed land. With the exception of a small number of new spur roads that would be established for permanent access to new interset structures, existing access and spur roads would be used for construction of the EPL Project. Some would require rehabilitation similar to typical maintenance routinely

performed along the access road network, including grading, minor vegetation removal and compaction of roadbeds. New spur roads would be 14-feet wide and adjacent ground disturbance would be minimized and rehabilitated as needed. In areas where access via established roads is limited or impractical, overland travel or use of helicopters may be used.

Construction work areas have been selected to minimize the trimming or removal of vegetation. Additionally, as a result of implementation of SCE's Wildfire Mitigation Plan, vegetation trimming or removal activities are anticipated to be limited in scope. In general, the visual effects of vegetation removal will be minor, and in the context of the characteristic low growing and generally sparse vegetation found in much of the Project's desert environment, not particularly noticeable to the public. SCE would restore all areas that would be temporarily disturbed by construction, including staging yards, construction work areas and stringing sites, to as close to pre-construction conditions as feasible, and in so doing reduce any visual contrast within the landscape in areas where Project activities have taken place. As a result, any visual degradation of the landscape character resulting from temporary construction activity would be less than significant.

The EPL Project would result in incremental permanent visual change that would not substantially alter or degrade the existing visual character in the Project area. As outlined in Table 6, the EPL Project includes introducing 12 steel pole H-frame interset structures at various locations within the transmission alignment along EPL Project Segments 1 and 2. In addition, existing conductor and overhead ground wire would be replaced with new slightly smaller diameter non-specular conductor and new ground wire, and some existing ceramic insulators would be replaced with new glass (or polymer)insulators along portions of five EPL Project segments that are primarily located in sparsely populated areas of the Mojave Desert within California's San Bernardino and Nevada's Clark counties.

To varying degrees, the EPL Project will be seen from a limited number of residences in the city of Hesperia. Project modifications could also be potentially visible to motorists from a number of public roadways crossed by the Project, and to recreational users of publicly accessible unpaved off-road tracks located in proximity to the Project ROW.

In Landscape Unit 1, close- range views of the EPL Project would be available to both residents and motorists along a limited section of Ranchero Road, an arterial roadway in the city of Hesperia. As documented in the Figure 5a and 5b before and after comparative views showing the Project near the alignment's roadway crossing, the new interset H-frame structure will be seen within an urban landscape that includes existing utility infrastructure such as adjacent and distant power and distribution lines, as well as noticeably larger, more visually complex transmission towers nearby. The Figure 5b simulation demonstrates that given the presence of established utility infrastructure in the vicinity, the introduction of the interset structure represents an incremental change that would not substantially alter or degrade existing landscape or visual character along this urban corridor.

In Landscape Units 2 and 3, the EPL Project alignment crosses largely uninhabited portions of BLM and NPS administered land where public access is mainly restricted to recreational OHV users in sanctioned locations. In some instances, the introduction of the new steel pole H-frame interset structures within the existing EPL Project alignment will be seen within the context of numerous larger existing transmission structures along a non-EPL alignment that shares the Project ROW for much of its length, as illustrated in Photographs 5 and 8 (Figure 3c and Figure

3d). Existing and post-project views from KOP locations within BLM administered OHV areas in Figures 6a through 7b demonstrate that intervening landforms, backdrop conditions and viewing distance diminish the visibility of new Project interset structures. This combination of visual conditions results in minimizing the potential degree of visual contrast of the EPL Project in the landscape.

Although introduction of new interset structures represents the most noticeable element of the EPL Project, they constitute a relatively small part of the EPL Project alignment subject to modification because of the small number of new structures and their limited distribution along the Project alignment (mainly concentrated along the eastern portion of Project Segment 2). As outlined in Table 7, EPL Project activity will primarily involve reconductoring and limited replacement of insulators, where visual impacts would be largely unnoticed by potential viewers. Most of the reconductoring would take place within Landscape Unit 3 north of Pisgah Switchyard and within Landscape Unit 4, along approximately 106 miles of Project Segments 3 and 4, encompassing Mojave Trails National Monument and the Mojave National Preserve. The alignment primarily crosses unoccupied, desert terrain where public access in much of the area is constrained by topography. Views of the EPL Project in this area would potentially be available to OHV users along ROW access roads, where conductors and insulators would be seen at close-range. Other views of the EPL Project at close-range would be available to motorists along a small number of paved roadways crossed by the alignment within the eastern portion of the Mojave National Monument in Landscape Unit 4, where the reconductoring and insulator replacement would be largely imperceptible. Figure 8a and 8b is a pair of existing and post-project views from a KOP location along one of the main access routes into the Mojave National Monument crossed by the Project, and demonstrates that from a motorist's perspective, even when seen at close range, the difference in appearance of the existing and new conductor and OHGW would likely be imperceptible to motorists.

In light of the changes outlined above and summarized in Table 7 as well as demonstrated by the set of visual simulations from the four KOPs presented on Figures 5a through 8b, the EPL Project overall would result in incremental visual change that will not substantially alter or degrade existing visual character or quality in the area. Therefore, the impact would be less than significant.

Operations – No Impact

Operation and Maintenance (O&M) activities required for the project will not change from those currently required for the existing system; thus, no operation-related impacts to existing visual character would occur.

5.3.4 Question 4.4d New Light or Glare - Less-than-Significant Impact

Construction – Less-than-Significant Impact

Most construction will take place during daylight hours; however, at limited times some construction along the EPL Project alignment may be required or finished at night, and these activities will require lighting for safety. Any required lighting would be limited to an individual work area and would be temporary in nature. Staging yards may be lit for staging work and security; and lighting would be directed on site and away from potentially sensitive receptors. Non-specular conductors and non reflective insulators will replace existing components, and new galvanized steel interset structures would have dulled surfaces, thus reducing potential glare.

Therefore, the EPL Project will not result in a substantial light or glare effect and the impact would be less than significant.

Operations – No Impact

Operation and Maintenance (O&M) activities required for the EPL Project will not change from those currently required for the existing system; thus, no operation-related impacts to existing visual character would occur.

5.4 Visual Simulations

The set of visual simulations presented on Figures 5 through 8 documents the project-related visual changes that would occur at four KOPs and provides the basis for evaluating potential visual effects associated with the project from these key public views. The methodology employed for preparing the simulations includes the use of systematic site photography, computer modeling, and digital rendering techniques.

Photographs were taken using a full-frame digital camera with standard 50-millimeter lens or equivalent, which represents an approximately 40-degree horizontal view angle. Photography viewpoint locations were documented in the field using photo log sheet notation, GPS recording, and basemap annotation. Digital aerial photographs and EPL Project design information supplied by SCE and Arcadis provided the basis for developing three–dimensional computer modeling of the new project components. For each simulation viewpoint, viewer location was input from global positioning system data using 5.5 feet as the assumed eye level. Computer "wireframe" perspective plots were overlaid on the simulation photographs to verify scale and viewpoint location. Digital visual simulation images were then produced based on computer renderings of the three-dimensional modeling combined with selected digital site photographs. The simulations presented on Figures 5 through 8 consist of two full-page images designated "a" and "b," with the existing views shown in the "a" figure and the visual simulations in the "b" figure.

5.5 Analysis of Visual Change

This section includes description of the project-related change and an evaluation of potential visual effects on key public views. The set of visual simulations presented on Figures 5 through 8 documents the EPL Project-related visual change that would occur at four KOPs, and provides the basis for evaluating potential visual effects associated with the EPL Project with respect to these key public views. Key factors in determining the degree of visual change include the extent of change to the visibility of existing power lines, the degree to which the various project elements will contrast with or be integrated into the existing landscape, the extent of change in the landscape's composition and character, and the number and sensitivity of viewers. BLM Visual Contrast Rating forms were completed for the KOPs. Included in Appendix C, the BLM forms provide an evaluation of EPL Project consistency with respective BLM visual management goals as outlined in Section 3.1.4 and Table 4.

Table 7: Summary of Visual Change at KOPs presents an overview including viewpoint location with corresponding visual sensitivity factor(s); approximate viewing distance; and summary of visible change and potential effect that would occur each KOP location. As summarized in Table 7 and detailed under discussion of the four landscape units, the visual change associated with EPL Project modifications would not substantially alter existing visual conditions in the project area.

Table 7: Summary of Visual Change at KOPs

Photograph number and Location *(Figure number)*	Visual Sensitivity Factor(s)	Viewing Distance	Visual Change and Effect
LANDSCAPE UNIT 1			
2. Ranchero Road near Via Quintana looking east ***(Figure 5)***	• Proximity to nearby residences; • Proximity to major roadway corridor	840 feet (0.16 mile)	• Introduction of new interset structure between existing transmission towers.. • Minor increase in visual contrast against landscape backdrop results from introduction of new interest structures near roadway intersection. • New structure is visible within an urban landscape context that includes many nearby utility poles with vertical, cylindrical form and horizontal cross arms that are related in form to the new interset structure. • Surrounding vegetation partially screens residential views of new interset structure. • Overall change would not substantially affect existing view from roadway and landscape character.
LANDSCAPE UNIT 2			
6. Red Cedar Ave near Squaw Bush Rd looking east ***(Figure 6)***	• BLM VRM Class IV rating • Proximity to largely unoccupied desert subdivision	1,425 feet (0.27 mile)	• Introduction of two new interset structures between existing lattice transmission towers. • Incremental increase in visual contrast as a result of new structures seen at close range against landscape backdrop. • New structures are shorter and appear simpler in form compared with existing transmission structures. • Overall change would not substantially alter existing view and landscape character.
7. Johnson Valley OHV Area near Power Line Road looking east ***(Figure 7)***	• BLM VRM Class IV rating • Proximity to recreational area	980 feet (0.19 mile)	• Introduction of two new interset structures between existing transmission towers. • New structures are lower and appear simpler in form compared with taller, more visually complex existing transmission structures. • Visibility of new structures is reduced from this KOP due to topographic screening and minimal contrast with landscape backdrop. • Overall change would not substantially affect existing landscape character.

Photograph number and Location *(Figure number)*	Visual Sensitivity Factor(s)	Viewing Distance	Visual Change and Effect
LANDSCAPE UNIT 4			
14. Cima Road looking northwest ***(Figure 8)***	• Within Mojave National Preserve • San Bernardino County Scenic Route crossing • Popular weekend route for regional motorists	600 feet (0.11 mile)	• New smaller diameter conductor replaces existing conductor on Project LST structure visible from roadway. • Replacement conductor and OHGW would likely not be noticeable to passing motorists. • Overall change would not substantially affect existing motorist views or existing landscape character.

5.5.1 Landscape Unit 1

In Landscape Unit 1, close-range views of the EPL Project are available to motorists and residents within a limited portion of the City of Hesperia, suburban residents at the city's outskirts, and inhabitants of scattered rural residences located northeast of Hesperia, as well as to motorists along SR-18, which the alignment crosses.

Figure 5: Visual Simulation: Ranchero Road (VP 2)
Looking east along Ranchero Road, a major thoroughfare along the southern perimeter of the City of Hesperia, Figure 5 shows a close-range view of the EPL Project from the edge of a residential community. At this location the EPL Project consists of two parallel segments along a dedicated ROW; the alignment crosses the roadway at an intersection approximately 950 feet from this viewpoint, and can be seen by motorists as well as nearby residents. Figure 5a shows existing EPL Project lattice towers on both sides of the roadway against a mountainous backdrop, with the tower in the foreground partially silhouetted against the sky. On the left side of the roadway, towers are seen amidst an array of dark wood utility poles, their visibility decreasing against a backdrop of similar colored mountains. Various isolated wood utility poles are visible to the right of the roadway, and multiple overhead conductors span the intersection in the left-center of the view. Dense stands of trees interspersed with residential driveways line the roadway on the left, and can also be seen adjacent to residences on the right side of the view.

The Figure 5b simulation shows a new galvanized steel H-frame interset structure near the southwest corner of the intersection. The new structure is lower in height and simpler in form compared with the taller, more visually complex the existing LST tower visible in the immediate foreground. While somewhat dissimilar to the taller visually complex existing transmission structures, the scale of the new interset H-frame structure as well as its vertical and horizontal components are more consistent with the scale and form of nearby existing utility poles. A comparison of Figures 5a and 5b demonstrates that the overall appearance of the new interset structure, seen within the context of this urbanized landscape intersection does not fundamentally alter the view that includes transmission towers and numerous existing wood utility poles. The introduction of the new interset structure therefore represents an incremental effect that would not result in a substantial change in the existing landscape character at this location.

5.5.2 Landscape Unit 2

After crossing the Granite Mountains northeast of Hesperia, the EPL Project's Lugo-Pisgah parallel alignments (EPL Segments 1 and 2) enter the Lucerne Dry Lake basin, occupied by widely scattered residences and an area of farmland, where the alignments diverge before crossing SR-247. The sparsely vegetated, open desert landscape east of the highway is largely uninhabited. Vehicular access in this is largely restricted to unpaved power line maintenance roads as well as off-road vehicle tracks, concentrated in proximity to the BLM administered Johnson Valley and ORD Mountains OHV Recreation areas and the Rodman Mountains Wilderness Area. Throughout Landscape Unit 2, the EPL Segment 1 and 2 alignments remain separated by up to approximately 4.75 miles.

Figure 6: Visual Simulation: Red Cedar Avenue (VP6)
Figure 6 shows the EPL Segment 2 alignment where it approaches the southwestern flank of the Ord Mountains, seen on the left. Looking east from upper Johnson Valley, this viewpoint is in an area under BLM jurisdiction with a Class IV designation. In the foreground left are remnants of a partially abandoned agricultural operation located within a largely uninhabited subdivision. To the left and not seen in the Figure 6a view a small number of scattered residential structures are located between approximately 0.75 mile and one mile from the viewpoint. In the immediate foreground near an unpaved powerline access road, an existing EPL Project tower is prominent against the sky, and more distant towers along the alignment are visible but less distinct when seen against backdrop of the textured, dark colored Fry Mountains.

The Figure 6b simulation shows two new EPL Project interset structures beyond the foreground lattice tower seen at distances of 0.27 mile and 0.43 mile respectively. The new structures are noticeably shorter in relation to the existing transmission towers, and only a small upper portion of the closest new inset structure is visible against the sky. The new structures' H-frame configuration appears more transparent than the existing towers with their more intricate latticework. Seen against a partial sky backdrop, the closest new interset structure with its double vertical pole framework and internal transparency displays less visual contrast compared to the complex lattice framework of the existing EPL Project tower in the immediate foreground. The simulation also demonstrates that with increasing distance, the difference between the existing and new structures' visibility is diminished due to weaker contrast with the texture and color of the landscape backdrop. Comparison of the Figure 5a and 5b existing and simulation views indicates that differences in the overall form and texture between the existing transmission structures and new interset structures is incremental, and does not represent a significant change in the level of contrast and intactness within the landscape. Therefore, the introduction of the new interset structures would not be a substantial change in the existing landscape character at this location, and falls well within the level of change allowed in the BLM Class IV designation.

Figure 7: Visual Simulation: Johnson Valley OHV Area (KOP 7)
North of the Ord Mountains, the EPL Segment 2 EPL Project alignment is shown in Figure 7a, a view looking east toward the junction of upper Johnson Valley and the Fry Mountains. This BLM VRM Class IV area is a popular destination for recreational motorists due to the abundant hilly terrain within BLM administered sanctioned OHV areas. In this area an unpaved access road can be seen skirting an alluvial wash; the numerous vehicle tracks in the immediate foreground are an indication of the area's considerable OHV activity. To the right a spur road leads to a nearby EPL Project lattice structure, situated on a low hill and prominent against a sky

backdrop. Additional lattice towers are less noticeable as they recede toward the horizon, becoming indistinct where seen against the backdrop of mottled, multicolored terrain, or in some cases are partially screened by hilly topography.

The Figure 7b simulation shows two new EPL Project interset structures positioned midway between existing lattice towers near the center left of this view. Intervening topography screens more than half of the interset structure situated closest to the viewpoint, seen from a distance of approximately 1,020 feet, and only a portion of the crossbar and the tops of the vertical supports, which extend above the horizon line are visible. Intervening topography also screens the lower portion of the more distant interset structure, with the upper portion barely visible against the heavily textured hillside backdrop seen in the distance. Although the simplified form of the H-frame structure of the new interset structures contrasts with the more numerous, uniform set of lattice towers along the alignment, this contrast is not pronounced and barely perceptible with increasing distance from the viewpoint. As a result, the introduction of the new structures represents an incremental change that would not substantially alter the landscape character in this location.

5.5.3 Landscape Units 3 and 4

In Landscape Units 3 and 4, the EPL Project alignment crosses largely uninhabited portions of BLM and NPS administered land where public access is mainly restricted to recreational OHV users in sanctioned locations. As outlined in Table 7, EPL Project activity will primarily involve reconductoring and limited replacement of insulators, where visual impacts would be largely unnoticeable to potential viewers. Most of the reconductoring would take place within Landscape Unit 3 north of Pisgah Switchyard and within Landscape Unit 4, along approximately 106 miles of Project Segments 3 and 4, within Mojave Trails National Monument and the Mojave National Preserve. The alignment crosses mostly unoccupied, desert terrain where public access in much of the area is constrained by topography. In this area close range views of the EPL Project would potentially be available to OHV users along ROW access roads. In addition, close range motorists views of the EPL Project would be available along a small number of paved roadways crossed by the alignment within the eastern portion of the Mojave National Monument in Landscape Unit 4, and the reconductoring and insulator replacement would be largely imperceptible from these locations.

Figure 8: Visual Simulation: Cima Road (KOP 14)
Figure 8 is a view looking north along Cima Road, one of four paved roadways crossed by the EPL Project within the Mojave National Preserve. This close-range motorist's view of the Project crossing shows a dense stand of Joshua Trees in the immediate foreground. The trees partially screen the lower portion of a pair of EPL Project structures and a non-EPL lattice tower sharing the Project ROW. The upper portion of the towers, along with numerous overhead conductors, are noticeable elements in the landscape, due to the contrast of their darker color against the uniform light sky backdrop.

The Figure 8b visual simulation, depicts replacement of existing conductor on the EPL Project tower at the left side of this view with new, slightly smaller diameter conductor, along with OHGW at the top of the structure. The new, lighter weight, conductor has slightly less sag than the existing conductor. A comparison of the 8a photograph and the 8b simulation demonstrates that the EPL Project modifications would be largely imperceptible to motorists. The

reconductoring of this portion of EPL Project Segment 3 represents a minor incremental change that would have little or no perceivable effect on the existing landscape character at this location.

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Death Valley
National Monument

INYO COUNTY
SAN BERNARDINO COUNTY

Fort Irwin
U.S. Army
Training Center

Mojave
Trails National
Monument

Twentynine Palms
US Marine Corps AGCC

Mojave
National
Preserve

Mccullough
Range

Ivanpah
Valley

TEUTONIA PEAK

OLD DAD
MOUNTAIN

JACKASS
CANYON

Barstow

Hesperia

Lucerne Valley

Eldorado
Substation

Cima
Substation

Pisgah
Switchyard

Lugo
Substation

Nipton Road

Cima Road

Ivanpah Road

Kelbaker Road

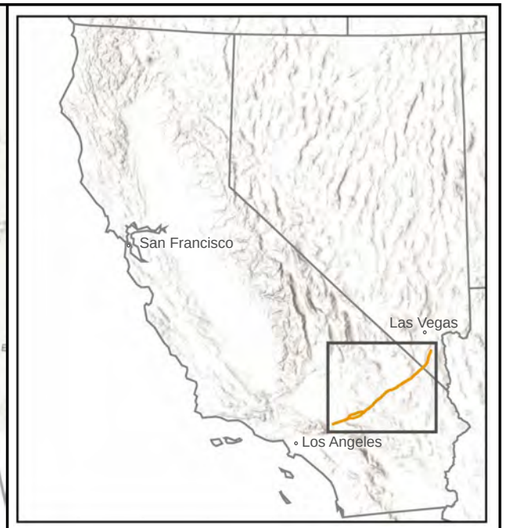
Kelso-Cima Road

Crucero Road

NEVADA
CALIFORNIA

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Landscape Unit 1 | Landscape Unit 2 | Landscape Unit 3 | Landscape Unit 4



Legend

- EPL Project Alignment
- Existing Transmission Lines
- Reconductor Portion
- Substation
- Roads and Highways
- National Scenic Byway
- Eligible State Scenic Highway
- K San Bernardino County Scenic Routes
- Landscape Unit
- Key Observation Point Location and Direction
- Photograph Viewpoint Location and Direction

N

0 10 20
Miles

ENVIRONMENTAL VISION

IMAGERY SOURCE: ESRI 2022

ELDORADO-PISGAH-LUGO 220 kV PROJECT

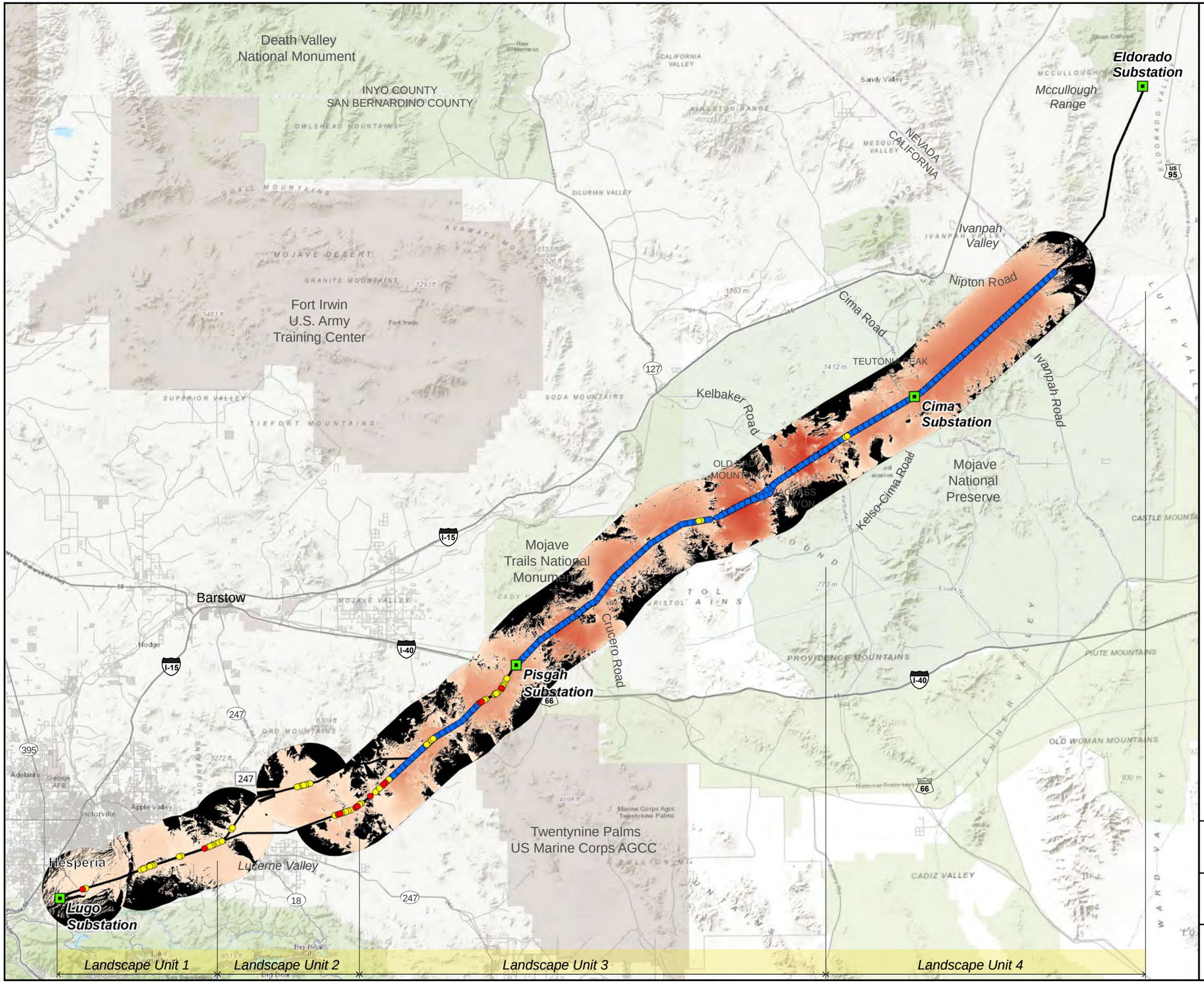
PHOTOGRAPH VIEWPOINT LOCATIONS

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE
1

072522



ELDORADO-PISGAH-LUGO 220 kV PROJECT

VIEWSHED ANALYSIS

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE 2

081222

1. Cottonwood Avenue looking southwest towards Lugo Substation

*2. Ranchero Road near Via Quintana looking east

* KOP; see Figure 5 for visual simulation
Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

REPRESENTATIVE PHOTOGRAPHS

ARCADIS EDISON

FIGURE: 3a

ENVIRONMENTAL VISION

072022

3. Roundup Way at Wikiup Way looking northeast

4. SR-18 looking north

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

REPRESENTATIVE PHOTOGRAPHS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE: 3b

ENVIRONMENTAL VISION

072022

5. Harrod Road in Ord Mountain OHV area looking northeast

*6. Red Cedar Ave. near Squaw Bush Rd. looking east

* KOP; see Figure 6 for visual simulation
Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

REPRESENTATIVE PHOTOGRAPHS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE: 3c

ENVIRONMENTAL VISION

072022

*7. Johnson Valley OHV Area near Power Line Road looking east

8. Powerline Road near Rodman Mountains Wilderness Area looking northeast

* KOP; see Figure 7 for visual simulation
Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

REPRESENTATIVE PHOTOGRAPHS

ARCADIS | SOUTHERN CALIFORNIA EDISON

FIGURE: 3d

ENVIRONMENTAL VISION

072022

9. I-40/National Trails Highway looking northeast towards Pisgah Switchyard

10. Crucero Road in Mojave Trails National Monument looking northeast

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

REPRESENTATIVE PHOTOGRAPHS

ARCADIS SOUTHERN CALIFORNIA EDISON

FIGURE: 3e

ENVIRONMENTAL VISION

072022

11. Jackass Canyon OHV route southwest of Old Dad Mountain looking southwest

12. Kelbaker Road looking west

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

REPRESENTATIVE PHOTOGRAPHS

ARCADIS | SOUTHERN CALIFORNIA EDISON

FIGURE: 3f

ENVIRONMENTAL VISION

072022

13. Mojave Road OHV route looking southeast

*14. Cima Road looking north

* KOP; see Figure 8 for visual simulation
Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

REPRESENTATIVE PHOTOGRAPHS

ARCADIS | SOUTHERN CALIFORNIA EDISON

FIGURE: 3g

ENVIRONMENTAL VISION

072022

15. Morningstar Mine Road looking north

16. Ivanpah Road looking north

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

REPRESENTATIVE PHOTOGRAPHS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE: 3h

ENVIRONMENTAL VISION

072022

17. Nipton Road/SR-164 looking southwest

18. US-95 looking northwest towards Eldorado Substation

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

REPRESENTATIVE PHOTOGRAPHS

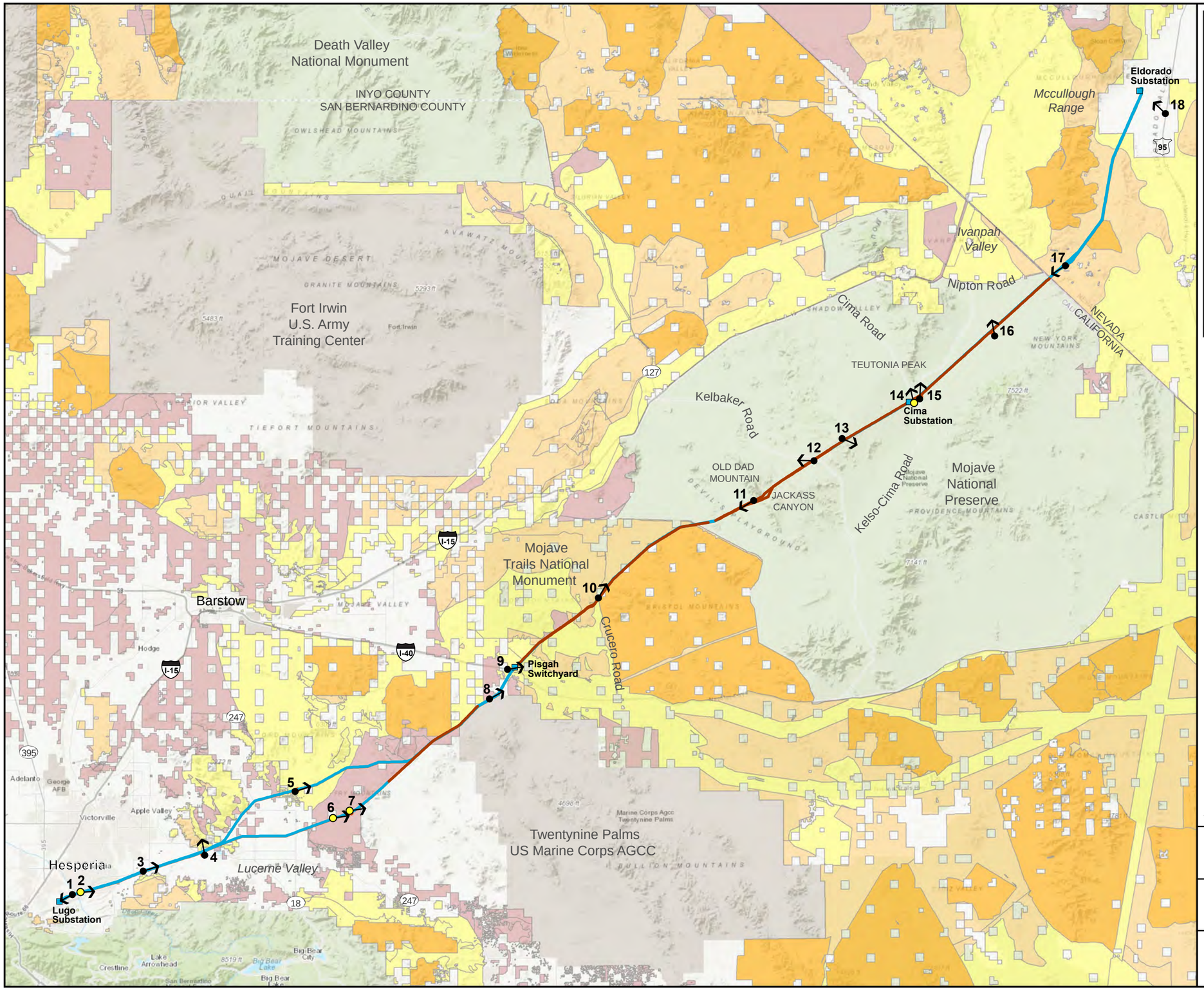
ARCADIS

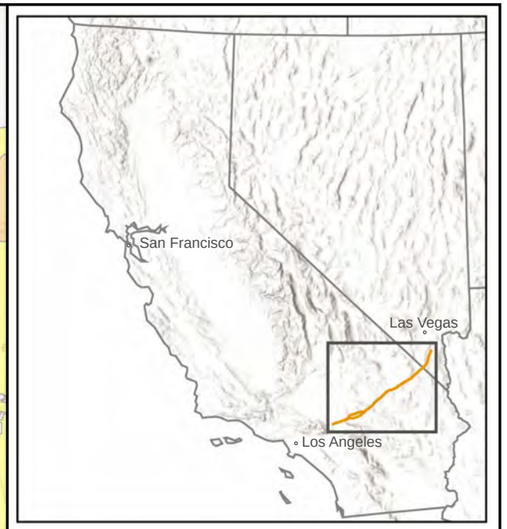
SOUTHERN CALIFORNIA EDISON

FIGURE: 3i

ENVIRONMENTAL VISION

072022





Legend

- EPL Project Alignment
- Existing Transmission Lines
- Reconductor Portion
- Substation
- Key Observation Point Location and Direction
- Photograph Viewpoint Location and Direction

BLM VRM Classifications

- Class I
- Class II
- Class III
- Class IV

N

0 10 20
Miles

ENVIRONMENTAL VISION

IMAGERY SOURCE: ESRI 2022

ELDORADO-PISGAH-LUGO 220 kV PROJECT

BLM VRM CLASSIFICATIONS

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4

072522

Existing View from Ranchero Road near Via Quintana looking east (KOP 2)

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

EXISTING VIEW -- RANCHERO ROAD

ARCADIS

EDISON

FIGURE: 5a

ENVIRONMENTAL VISION

072022

Visual Simulation of Proposed Project (KOP 2)

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

VISUAL SIMULATION -- RANCHERO ROAD

ARCADIS EDISON

FIGURE: 5b

ENVIRONMENTAL VISION

072022

Existing View from Red Cedar Ave. near Squaw Bush Rd. looking east (KOP 6)

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

EXISTING VIEW -- RED CEDAR AVENUE

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE: 6a

ENVIRONMENTAL VISION

072022

Visual Simulation of Proposed Project (KOP 6)

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

VISUAL SIMULATION -- RED CEDAR AVENUE

ARCADIS

EDISON

FIGURE: 6b

ENVIRONMENTAL VISION

072022

Existing View from Johnson Valley OHV Area near Power Line Road looking east (KOP 7)

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

EXISTING VIEW -- JOHNSON VALLEY

ARCADIS

EDISON

FIGURE: 7a

ENVIRONMENTAL VISION

072022

Visual Simulation of Proposed Project (KOP 7)

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

VISUAL SIMULATION -- JOHNSON VALLEY

ARCADIS EDISON

FIGURE: 7b

ENVIRONMENTAL VISION

072022

Existing View from Cima Road looking north (KOP 14)

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

EXISTING VIEW -- CIMA ROAD

ARCADIS

EDISON

FIGURE: 8a

ENVIRONMENTAL VISION

072022

Visual Simulation of Proposed Project (KOP 14)

Refer to Figure 1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220kV PROJECT

VISUAL SIMULATION -- CIMA ROAD

ARCADIS

EDISON

FIGURE: 8b

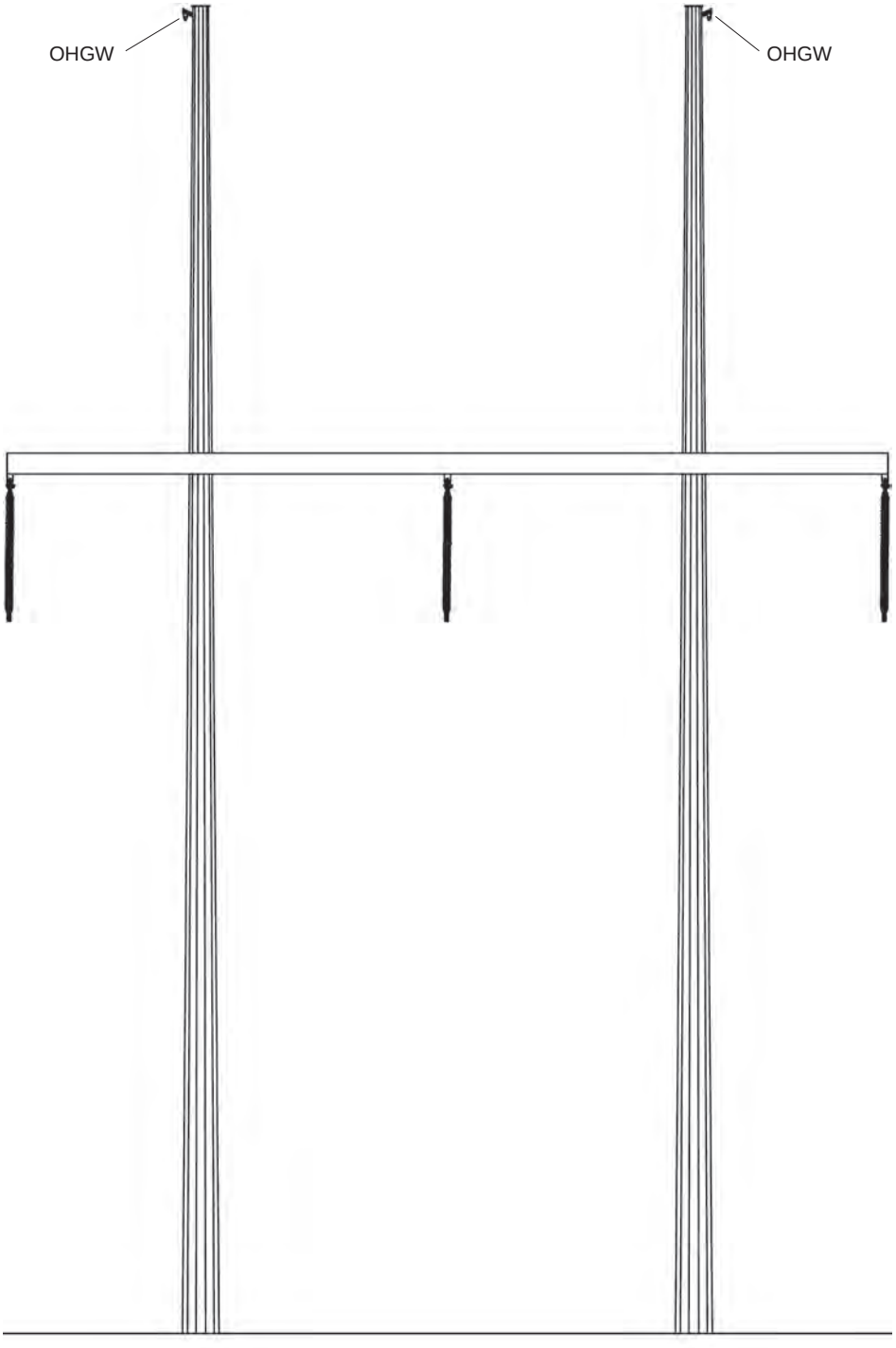
ENVIRONMENTAL VISION

072022

Appendix A: Representative Photographs Details
Eldorado-Pisgah-Lugo 220 kV Project

Photograph Number and Location *** denotes KOP**	**Viewing Direction**	**Photograph Capture Date and Time**	**Photograph Location Coordinates (Lat/Lon)**	**Elevation (feet) (Camera Height 5.5 feet)**
1. Cottonwood Avenue	Southwest	9/19/2017 12:47 PM	34.378914°N, 117.338040°W	3540
***2.** Ranchero Road near Via Quintana	East	4/29/2022 10:04 AM	34.383426°N, 117.322743°W	3446
3. Roundup Way at Wikiup Way	Northeast	4/29/2022 10:49 AM	34.420760°N, 117.187845°W	3166
4. SR-18	North	4/29/2022 11:33 AM	34.451714°N, 117.057854°W	3011
5. Harrod Road in Ord Mountain OHV area	Northeast	4/29/2022 12:17 PM	34.567050°N, 116.853877°W	3310
***6.** Red Cedar Avenue near Squaw Bush Road	East	4/29/2022 1:38 PM	34.515981°N, 116.774902°W	3298
***7.** Johnson Valley OHV Area	East	4/29/2022 2:44 PM	34.525818°N, 116.738777°W	3379
8. Powerline Road near Rodman Mountains Wilderness Area	Northeast	9/20/2017 1:00 PM	34.726703°N, 116.438191°W	2172
9. . I-40/National Trails Highway	Northeast	4/30/2022 12:50 PM	34.779694°N, 116.399832°W	2071
10. Crucero Road in Mojave Trails National Monument	Northeast	9/20/2017 3:22 PM	34.905757°N, 116.201161°W	1390
11. Jackass Canyon OHV route southwest of Old Dad Mountain	Southwest	9/21/2017 12:54 PM	35.076582°N, 115.862147°W	2034
12. Kelbaker Road	West	4/30/2022 2:18 PM	35.146359°N, 115.732684°W	3714
13. Mojave Road OHV route	Southeast	9/21/2017 11:56 AM	35.185264°N, 115.669740°W	4554
***14.** Cima Road	North	4/30/2022 3:18 PM	35.252513°N, 115.511709°W	4371
15. Morningstar Mine Road	North	4/30/2022 3:30 PM	35.258537°N, 115.498681°W	4242
16. Ivanpah Road	North	4/30/2022 4:13 PM	35.370296°N, 115.340923°W	3016
17. Nipton Road/SR-164	Southwest	9/22/2017 1:44 PM	35.487784°N, 115.175669°W	4308
18. US-95	Northwest	49/22/2017 2:37 PM	35.753555°N, -114.953163°W	2221

Note: Photographs (2,3,4,5,6,7,9,12,14,15,16) were taken with Nikon Z-5 full-frame digital camera with 50mm lens. Photographs (1,8,10,11,13,17,18) were taken with Canon EOS 40D digital camera with 50mm equivalent lens.



Typical Interset Structure

Not to Scale

ELDORADO-PISGAH-LUGO 220kV PROJECT

TYPICAL STRUCTURE DESIGN

ARCADIS

SOUTHERN CALIFORNIA EDISON

APPENDIX B

ENVIRONMENTAL VISION

071522

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: July 28, 2022

District/ Field Office: Barstow

Resource Area:

Activity (program): Energy Transmission

SECTION A. PROJECT INFORMATION

1. Project Name: EPL 220 kV Project	**4. Location:** **Township** 4N	**5. Location Sketch:** **Lat, Lon:** 34.383426°N, 117.322743°W
2. Key Observation Point: KOP 2 (View from Ranchero Road near Via Quintana looking east)	**Range** 4W	**View looking:** east
3. VRM Class: N/A	**Section** 32	**Photograph date:** 4/29/2022

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Wide, linear asphalt roadway; earthen road shoulder extending to flat alluvial plain with abrupt transition to tall mountain backdrop with undulating irregular skyline.	Random, diverse trees and large shrubs lining roadway and surrounding residences in foreground; patches of indistinct vegetation in middleground;.	Tall, prominent, complex, angular, partially transparent lattice structures horizontal and diagonal internal components supporting multiple narrow, somewhat indistinct overhead conductors. Multiple narrow, cylindrical wood poles lining roadway and scattered in background. Height of Project structure in foreground approximately 87 feet. Numerous residential buildings, enclosed by low masonry wall in foreground, and extending toward distant mountain front.
LINE	Bold diagonal roadway with converging edges, horizontal plain in foreground; diagonal slope in middleground. Near horizontal to undulating mountain backdrop.	Irregular, broken in foreground to continuous in middleground; indistinct in background.	Complex, geometric lattice structure with bold horizontal and diagonal outline with weaker internal structure. Bold utility poles with vertical and horizontal components.
COLOR	Light gray in foreground transitioning to pastel purple gray and blue gray mountains in backdrop	Deep green-black with random yellow-green highlights	Gray-black lattice structures; dark brown utility poles; light buff walkway and masonry wall; light gray roof tops.
TEX-TURE	Granular-smooth road with rough shoulder; smooth mountain backdrop	Coarse and contrasting in foreground extending to indistinct in middleground.	Matte lattice structure with subtle internal contrast.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change	No change	Galvanized steel H-frame interset structures with narrow, simple cylindrical components inserted between existing Project lattice towers, near roadway intersection. Height of new structure approximately 70 feet.
LINE	No change	No change	Parallel vertical support poles, with weak horizontal cross arm and vertical insulators.
COLOR	No change	No change	Soft, light gray

TEX-TURE	No change	No change	Sparse and smooth

SECTION D. CONTRAST RATING __SHORT TERM X_LONG TERM

1. DEGREE OF CONTRAST		FEATURES											
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X			X	
	LINE				X				X			X	
	COLOR				X				X			X	
	TEXTURE				X				X			X	

2. Does project design meet visual resource management objectives? _X_Yes ___No (Explain below)

3. Additional mitigating measures recommended
___Yes _X_No (Explain below)

Evaluator's Names **Date** 7/28/22

Chuck Cornwall/Environmental Vision
Ted Vorster/Environmental Vision

SECTION D. (Continued)

Comments from item 2.

A new H-frame interset structure is seen between two taller existing EPL Project LST transmission towers near the roadway intersection. Although the light gray color of the new structure contrasts somewhat with the mountain and sky backdrop, and its overall shape differs noticeably from that of the lattice towers within the alignment, a comparison of the Figure 5a photograph and the Figure 5b simulation indicates that this is an incremental effect and that the new interset structure, when seen in the context of this urban streetscape, does not significantly alter the overall level of visual contrast. The new interset structure is shorter than the existing lattice towers within the alignment, and its simple H-frame construction affords a reduced visual footprint compared with that of the complex structural components of the existing lattice tower visible in the immediate foreground, which is prominently visible against the sky backdrop. Moreover, the vertical and horizontal structural elements of the new interset tower reflect those of the numerous existing wood utility poles visible in this view. The introduction of the new interset structure therefore represents an incremental effect that would not result in a substantial change in the existing landscape character at this location.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: July 28, 2022

District/ Field Office: Barstow

Resource Area:

Activity (program): Energy Transmission

SECTION A. PROJECT INFORMATION

1. Project Name: EPL 220 kV Project	**4. Location:** **Township** 5N	**5. Location Sketch:** **Lat, Lon:** 34.515981°, -116.774902°
2. Key Observation Point: KOP 6 (Red Cedar Ave near Squaw Bush Rd looking east)	**Range** 2E	**View looking:** east
3. VRM Class: Class IV	**Section** 16	**Photograph date:** 4/29/2022

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Predominantly flat plain with sloping flank of mountain in foreground; distant mountain backdrop with flat to irregular skyline	Sparse, random, small to medium domed and jagged shrubs in foreground; solid, linear patch of indistinct vegetation in middleground; sparse and indistinct in background.	Multiple rectangular, partially transparent lattice structures with angular internal components. Height of Project structures in foreground approximately 87 feet. Numerous steel and wood, largely, transparent half-cylindrical growing frames.
LINE	Weakly undulating horizontal plain in foreground; diagonal slope in middleground. Near horizontal to undulating mountain backdrop.	Irregular and broken in foreground to near continuous in middleground; indistinct in background.	Bold, complex and hard lattice structure outline; semi-circular, convex growing frames displaying weak internal lines and bold, flowing partial covers.
COLOR	Light tan in foreground transitioning to slightly mottled light to darker gray-brown mountains in backdrop	Medium brown with gray elements in foreground	indistinct to medium gray to near black lattice structures; indistinct and brown steel frames with white partial covers.
TEX-TURE	Fine, granular foreground to generally smooth mountain backdrop interspersed with sparse contrasting patchy granular areas	Coarse and contrasting in foreground extending to medium fine, clumped and uniform in background	Striated, matte lattice structures with subtle internal contrast.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change	No change	One partially visible and one largely imperceptible simple galvanized steel H-frame structure with narrow cylindrical components inserted between existing Project lattice towers. Height of new structures approximately 65 feet and 70 feet.
LINE	No change	No change	Foreground structure with distinct vertical support poles, weak horizontal cross arm; more distant structure with weak vertical and horizontal components.
COLOR	No change	No change	Light gray

TEX-TURE	No change	No change	Sparse and smooth

SECTION D. CONTRAST RATING __SHORT TERM X_LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? _X_Yes ___No (Explain below) 3. Additional mitigating measures recommended ___Yes _X_No (Explain below) Evaluator's Names / Date 7/28/22 Chuck Cornwall/Environmental Vision Ted Vorster/Environmental Vision
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	
ELEMENTS	FORM				X				X			X		
	LINE				X				X			X		
	COLOR				X				X			X		
	TEXTURE				X				X			X		

SECTION D. (Continued)

Comments from item 2.

Two new H-frame interset structures are seen between two taller existing EPL Project LST transmission structures visible in the foreground. A comparison of the figure 6a photograph and the figure 6b simulation indicates that the new interset structures do not significantly alter the alter degree of visual contrast in the landscape. Although the light gray color of the new structure contrasts more readily with the mountain backdrop in the foreground view, this is an incremental effect that will diminish with time as the galvanized surface weathers. At the same time, the vertical and horizontal structural elements of the new interset towers reflect the external shape of the existing transmission structures, and the cylindrical components afford a reduced visual footprint compared with the existing towers, particularly noticeable where the upper portions of the taller existing towers with their complex internal structural elements are visible against the sky backdrop. Notably, the with increasing distance from the viewpoint, the visual difference between the new and existing structures become less apparent where they are seen entirely against the distant mountain backdrop, and where the visibility of the Project in the landscape is diminished.

The EPL Project in this KOP location is consistent with the VRM Class IV objective, which allows major modifications of the existing character of the landscape and where the level of change can be high.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: July 28, 2022

District/ Field Office: Barstow

Resource Area:

Activity (program): Energy Transmission

SECTION A. PROJECT INFORMATION

1. Project Name: EPL 220 kV Project	**4. Location:** **Township** 5N	**5. Location Sketch:** **Lat, Lon:** 34.525818°, -116.738777°
2. Key Observation Point: KOP 7 (View from Johnson Valley OHV Area near Power Line Road looking east)	**Range** 2E	**View looking:** East
3. VRM Class: Class IV	**Section** S14	**Photograph date:** 4/29/2022

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Predominantly flat foreground plain with moderate, somewhat jagged undulating terrain in the near backdrop. Rolling, partially domed distant mountain backdrop. Visible road scars in foreground and middleground.	Sparse, irregular, small to medium domed and jagged shrubs in immediate foreground, appearing more dense and uniform with distance. Sparse and indistinct in backdrop	Multiple rectangular, partially transparent lattice structures with angular internal components. Height of structures in foreground between approximately 75 and 100 feet.
LINE	Horizontal plain with weak transition to diagonal to irregular foreground hills; diagonal to irregular distant mountain backdrop with irregular peaks.	Irregular and broken, extending to near continuous horizontal line in foreground; indistinct in background.	Bold and complex extending to indistinct and weak lattice structures;
COLOR	Light tan in foreground transitioning to mottled slightly darker reddish hills and gray to near black mountains in backdrop. Light gray to light tan spur roads	Medium to dark brown with black elements in foreground.	Slightly luminescent gray in foreground to dull medium gray to indistinct with distance.
TEX-TURE	Fine, granular foreground to medium coarse hills and patchy, indistinct mountain backdrop. Contrasting, near smooth spur roads	Coarse and contrasting in foreground extending stippled, clumped and indistinct in background	Striated, matte lattice structures with subtle internal contrast

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change	No change	Galvanized steel H-frame interset structures with narrow, simple cylindrical components inserted between three existing lattice towers in middle distance. Height of new structures approximately 65 feet and 70 feet.
LINE	No change	No change	Foreground structure with weak vertical support poles, weak horizontal cross arm; more distant structure weak to indistinct vertical and horizontal components
COLOR	No change	No change	Light gray
TEX-TURE	No change	No change	Sparse and smooth

SECTION D. CONTRAST RATING __SHORT TERM X LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? _X_Yes ___No (Explain below) 3. Additional mitigating measures recommended ___Yes _X_No (Explain below)
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	
ELEMENTS	FORM				X				X			X		Evaluator's Names / Date: 7/28/22 Chuck Cornwall/Environmental Vision Ted Vorster/Environmental Vision
	LINE				X				X			X		
	COLOR				X				X			X		
	TEXTURE				X				X			X		

SECTION D. (Continued)

Comments from item 2.

Two new H-frame interset structures are interspersed between three taller existing Project LST transmission structures. The vertical and horizontal structural elements of the new interset towers reflect the outer form of the existing transmission structures. The interset structure nearest the viewpoint is extends slightly above the undulating terrain and is the most visible component of the two new structures within this KOP. The simulation demonstrates, however, that when compared with the existing lattice structures, the interset towers, with their simple form and lacking the complex internal structural components, are incrementally less noticeable in the landscape. Viewed in the context of the undulating topography that characterizes this KOP location, moreover, the new shorter towers, seen predominantly against a backdrop of mottled terrain are largely imperceptible in relation to the existing lattice towers, the tops of which are more readily seen against a sky backdrop.

The EPL Project in this KOP location is consistent with the VRM Class IV objective, which allows major modifications of the existing character of the landscape and where the level of change can be high.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: July 28, 2022

District/ Field Office: Needles

Resource Area:

Activity (program): Energy Transmission

SECTION A. PROJECT INFORMATION

1. Project Name: EPL 220 kV Project	**4. Location:** **Township** 14N	**5. Location Sketch:** **Lat, Lon:** 35.252513°, -115.511709°
2. Key Observation Point: KOP 14 (Existing View from Cima Road looking north)	**Range** 14E	**View looking:** North
3. VRM Class: N/A within Mojave N.P.	**Section** 32	**Photograph date:** 4/30/2022

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Gently sloping plain with shallow linear gully and diagonal edge of asphalt roadway pavement in immediate foreground. Angular mountains partially visible in the backdrop..	Irregular and clumped to sparse and random in immediate foreground, transitioning to jagged, dense and prominent in middle distance.	Multiple complex, angular, partially transparent lattice structures with horizontal and diagonal internal components. Multiple narrow, somewhat indistinct overhead conductors. Diameter of existing Project conductor approximately 0.99 inch
LINE	Near horizontal plain; irregular mountain backdrop.	Linear to broken, extending to near continuous horizontal band with jagged, angular edge	Bold, broken and angular lattice structures, weak, near horizontal to diagonal and curving overhead conductors
COLOR	Light tan plain; gray mountains with subtle beige highlights. Gray asphalt road with white stripe.	Bright to light green in foreground with dark green and black with lighter green highlights in middle distance	Dull, dark gray to black lattice towers, and conductors
TEX-TURE	Fine granular slightly undulating foreground. smooth mountains with coarse patches in background. Stippled roadway with smooth painted stripe.	Clumped, dense and directional to random and stippled in foreground; coarse and contrasting in middle distance	Matte lattice structures with dense striated internal contrast

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change	No change	New narrower conductor would replace existing conductor, and new narrower OHGW would replace existing OHGW on Project lattice structure shown in the simulation on the left. New conductor diameter approximately 0.88 inch; new OHGW approximately 0.433 inch.
LINE	No change	No change	No change
COLOR	No change	No change	No change
TEX-TURE	No change	No change	No change

SECTION D. CONTRAST RATING __SHORT TERM X_LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? N/A __Yes ___No (Explain below) 3. Additional mitigating measures recommended ___Yes _X_No (Explain below) Evaluator's Names Date 7/28/22 Chuck Cornwall/Environmental Vision Ted Vorster/Environmental Vision
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	
ELEMENTS	FORM				X				X				X	
	LINE				X				X				X	
	COLOR				X				X				X	
	TEXTURE				X				X				X	

SECTION D. (Continued)

Comments from item 2.

New smaller diameter conductor and smaller diameter overhead ground wire (OHGW) replace existing conductor and OHGW on existing lattice structure along northern portion of dual parallel EPL Project transmission circuits (structure appearing on the left in the simulation. Difference in dimension of both conductor (approximately 0.1 inch) and OHGW (0.06 inch) would be largely imperceptible to viewers at this highway crossing. As a result there would be no change in visual contrast resulting from the EPL Project and thus no change to the visual character of the landscape at this location.

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APPENDIX J

Paleontological Resources Technical Report

Paleontological Resources Technical Report provided under separate confidential cover.

APPENDIX K

Vehicle Miles Traveled Calculations

SUMMARY FUEL USE AND VEHICLE MILES TRAVELED

Primary Equipment Description	Diesel (gallons)	Gasoline (gallons)	Jet A (gallons)	VMT (miles)
Worker Vehicles				
Passenger Vehicles	48	20,595	-	613,200
Construction Vehicles				
1-Ton Truck, 4x4	11,059	-	-	96,840
3/4-Ton Truck, 4x4	-	1,996	-	10,020
Auger Truck	79	-	-	480
Boom/Crane Truck	6,071	-	-	37,110
Concrete Mixer Truck	46	-	-	280
Dump Truck	1,448	-	-	8,850
Extendable Flat Bed Pole Truck	10	-	-	60
Flat Bed Pole Truck	137	-	-	840
Lowboy Truck/Trailer	4,868	-	-	29,760
Manlift/Bucket Truck	3,578	-	-	21,870
Static Truck/Tensioner	1,978	-	-	12,090
Truck, Semi-Tractor	6,900	-	-	42,180
Water Truck	3,100	-	-	18,950
Wire Truck/Trailer	66	-	-	406
Construction Equipment				
Backhoe/Front Loader	5,205	-	-	
Bull Wheel Puller	15,405	-	-	
Compressor Trailer	3,279	-	-	
Conductor Splicing Rig	7,816	-	-	
Drum Type Compactor	1,707	-	-	
Excavator	118	-	-	
Fiber Splicing Lab	6,700	-	-	
Generator	11,467	-	-	
Hydraulic Rewind Puller	30,583	-	-	
Motor Grader	6,159	-	-	
R/T Crane	1,027	-	-	
R/T Forklift	10,841	-	-	
Sock Line Puller	6,700	-	-	
Track Type Dozer	401	-	-	
Helicopter and Support				
Light Helicopter	-	-	47,936	-
Medium-duty Helicopter	-	-	2,944	-
Helicopter Support Truck	363	-	-	2,220
Jet A Fuel Truck	363	-	-	2,220

APPENIDX K - VEHICLE AND EQUIPMENT INFORMATION

Primary Equipment Description	CalEEMod Classification	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Quantity	Total Schedule (Days)	Total Duration (Days)	Utilization (Hrs./Day)	Horse-Power	Load Factor	Project total Hrs	Project total Hrs	Project total VMT mi/ day/eq	Project total VMT miles	Worker Vehicles Gasoline Fuel Efficiency	Gasoline % Vehicles	Gasoline Fuel Use	Diesel Fuel Efficiency	Diesel % Vehicles
Survey				**4**	**8**	**600**	**600**						**25**	**120000**	**27.92**	**0.94**	**4030**	**38.75**	**0.30%**
1-Ton Truck, 4x4	Onroad MD	Diesel	2		2	600	600	10				0	**30**	36000					
Material Yards				**5**	**10**	**600**	**600**						**25**	**150000**	**27.92**	**0.94**	**5038**	**38.75**	**0.30%**
R/T Forklift	Forklifts	Diesel	1		1	600	600	5	350	0.2	3000	3000							
Generator	Generator	Diesel	1		1	600	600	10	45	0.74	6000	6000							
1-Ton Truck, 4x4	Onroad MD	Diesel	1		1	600	600	4					**30**	18000					
Boom/Crane Truck	Onroad HHD	Diesel	1		1	600	600	5					**30**	18000					
Water Truck	Onroad HHD	Diesel	2		2	600	600	10					**10**	12000					
Truck, Semi-Tractor	Onroad HHD	Diesel	1		1	600	600	6					**30**	18000					
Spur Road Construction				**6**	**12**	**6**	**6**						**25**	**1800**	**27.92**	**0.94**	**60**	**38.75**	**0.30%**
Excavator	Excavators	Diesel	1		1	2	2	10	300	0.38	20	20							
Backhoe/Front Loader	Tractors/Loaders/B	Diesel	1		1	6	6	10	350	0.37	60	60							
Track Type Dozer	Tractors/Loaders/B	Diesel	1		1	6	6	10	350	0.37	60	60							
Motor Grader	Graders	Diesel	1		1	6	6	10	350	0.41	60	60							
Drum Type Compactor	Rollers	Diesel	1		1	6	6	10	250	0.38	60	60							
1-Ton Truck, 4x4	Onroad MD	Diesel	2		2	6	6	10					**30**	360					
Water Truck	Onroad HHD	Diesel	2		2	6	6	10					**10**	120					
Lowboy Truck/Trailer	Onroad HHD	Diesel	1		1	6	6	10					**30**	180					
Install TSP H-frame Foundations				**5**	**0**	14	**14**						**25**	**0**	**27.92**	**0.94**	**0**	**38.75**	**0.30%**
Auger Truck	Onroad HHD	Diesel	1		1	14	14	10					**30**	420					
Concrete Mixer Truck	Onroad HHD	Diesel	2		2	14	14	6					**10**	280					
Install TSP H-frame Foundations				**5**	**10**	28	**28**						**25**	**7000**	**27.92**	**0.94**	**235**	**38.75**	**0.30%**
Backhoe/Front Loader	Tractors/Loaders/B	Diesel	1		1	28	28	10	200	0.37	280	280							
3/4-Ton Truck, 4x4	Onroad MD	Gas	2		2	28	28	5					**30**	1680					
Boom/Crane Truck	Onroad HHD	Diesel	1		1	28	28	7					**30**	840					
Water Truck	Onroad HHD	Diesel	1		1	28	28	10					**10**	280					
Dump Truck	Onroad HHD	Diesel	1		1	28	28	10					**30**	840					
TSP H-Frame Haul				**5**	**10**	14	**14**						**25**	**3500**	**27.92**	**0.94**	**118**	**38.75**	**0.30%**
3/4-Ton Truck, 4x4	Onroad MD	Gas	2		2	14	14	8					**30**	840					
Boom/Crane Truck	Onroad HHD	Diesel	1		1	14	14	8					**30**	420					
Flat Bed Pole Truck	Onroad HHD	Diesel	2		2	14	14	10					**30**	840					
Water Truck	Onroad HHD	Diesel	1		1	14	14	10					**10**	140					
TSP H-frame Assembly				**5**	**10**	28	**28**						**25**	**7000**	**27.92**	**0.94**	**235**	**38.75**	**0.30%**
Compressor Trailer	Air Compressors	Diesel	1		1	28	28	6	60	0.48	168	168							
3/4-Ton Truck, 4x4	Onroad MD	Gas	2		2	28	28	6					**30**	1680					
1-Ton Truck, 4x4	Onroad MD	Diesel	2		2	28	28	6					**30**	1680					
Boom/Crane Truck	Onroad HHD	Diesel	1		1	28	28	7					**30**	840					
Water Truck	Onroad HHD	Diesel	1		1	28	28	10					**10**	280					
TSP H-frame Erection				**5**	**0**	8	8						**25**	**0**	**27.92**	**0.94**	**0**	**38.75**	**0.30%**
Jet A Fuel Truck	Onroad HHD	Diesel	1		1	8	8	6					**10**	80					
Helicopter Support Truck	Onroad HHD	Diesel	1		1	8	8	6					**10**	80					
Medium-duty Helicopter	Helicopter	Jet A	1		1	8	8	4		#N/A	32	32							
TSP H-frame Erection				**5**	**10**	28	28						**25**	**7000**	**27.92**	**0.94**	**235**	**38.75**	**0.30%**
Compressor Trailer	Air Compressors	Diesel	1		1	28	28	6	60	0.48	168	168							
R/T Crane	Cranes	Diesel	1		1	28	28	7	350	0.29	196	196							
3/4-Ton Truck, 4x4	Onroad MD	Gas	1		1	28	28	6					**30**	840					
1-Ton Truck, 4x4	Onroad MD	Diesel	1		1	28	28	6					**30**	840					
Water Truck	Onroad HHD	Diesel	1		1	28	28	10					**10**	280					
Install/Remove Conductor and Install OPGW				**20**	**0**	103	52						**25**	**0**	**27.92**	**0.94**	**0**	**38.75**	**0.30%**
Backhoe/Front Loader	Tractors/Loaders/B	Diesel	1		2	103	52	8	125	0.37	824	824							
Sock Line Puller	Other Construction	Diesel	1		2	103	52	10	300	0.42	1030	1030							
Conductor Splicing Rig	Other Construction	Diesel	1		2	103	52	10	350	0.42	1030	1030							
Fiber Splicing Lab	Other Construction	Diesel	1		2	103	52	10	300	0.42	1030	1030							
Install/Remove Conductor and Install OPGW				**20**	**0**	203	102						**25**	**0**	**27.92**	**0.94**	**0**	**38.75**	**0.30%**
Bull Wheel Puller	Other Construction	Diesel	1		2	203	102	10	350	0.42	2030	2030							
Wire Truck/Trailer	Onroad HHD	Diesel	2		4	203	102	10					**1**	406					
Jet A Fuel Truck	Onroad HHD	Diesel	1		2	203	102	4					**10**	2030					
Helicopter Support Truck	Onroad HHD	Diesel	1		2	203	102	7					**10**	2030					
Light Helicopter	Helicopter	Jet A	1		2	203	102	7		#N/A	1421	1421							

Primary Equipment Description	CalEEMod Classification	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Quantity	Total Schedule (Days)	Total Duration (Days)	Utilization (Hrs./Day)	Horse-Power	Load Factor	Project total Hrs	Project total Hrs	Project total VMT mi/ day/eq	Project total VMT miles	Worker Vehicles Gasoline Fuel Efficiency	Gasoline % Vehicles	Gasoline Fuel Use	Diesel Fuel Efficiency	Diesel % Vehicles
Install/Remove Conductor and Install OPGW				**20**	**0**	267	134						**25**	**0**	**27.92**	**0.94**	**0**	**38.75**	**0.30%**
Dump Truck	Onroad HHD	Diesel	1		2	267	134	10					**30**	8010					
Install/Remove Conductor and Install OPGW				**20**	**40**	403	202						**25**	**201500**	**27.92**	**0.94**	**6768**	**38.75**	**0.30%**
Hydraulic Rewind Puller	Other Construction	Diesel	1		2	403	202	10	350	0.42	4,030	4030							
¾-Ton Truck, 4x4	Onroad MD	Gas	1		2	403	202	10					**30**	12090					
1-Ton Truck, 4x4	Onroad MD	Diesel	2		4	403	202	10					**30**	24180					
Static Truck/Tensioner	Onroad HHD	Diesel	1		2	403	202	10					**30**	12090					
Manlift/Bucket Truck	Onroad HHD	Diesel	1		2	403	202	10					**30**	12090					
Boom/Crane Truck	Onroad HHD	Diesel	1		2	403	202	10					**30**	12090					
Truck, Semi-Tractor	Onroad HHD	Diesel	2		4	403	202	10					**30**	24180					
Lowboy Truck/Trailer	Onroad HHD	Diesel	2		4	403	202	10					**30**	24180					
Water Truck	Onroad HHD	Diesel	1		2	403	202	10					**10**	4030					
Install/Remove Guard Structures				**5**	**10**	2	2						**25**	**500**	**27.92**	**0.94**	**17**	**38.75**	**0.30%**
Compressor Trailer	Air Compressors	Diesel	2		2	2	2	7	60	0.48	28	28							
Backhoe/Front Loader	Tractors/Loaders/B	Diesel	1		1	2	2	10	125	0.37	20	20							
3/4-Ton Truck, 4x4	Onroad MD	Gas	2		2	2	2	8					**30**	120					
1-Ton Truck, 4x4	Onroad MD	Diesel	2		2	2	2	8					**30**	120					
Manlift/Bucket Truck	Onroad HHD	Diesel	1		1	2	2	8					**30**	60					
Boom/Crane Truck	Onroad HHD	Diesel	1		1	2	2	10					**30**	60					
Auger Truck	Onroad HHD	Diesel	1		1	2	2	8					**30**	60					
Water Truck	Onroad HHD	Diesel	1		1	2	2	5					**10**	20					
Extendable Flat Bed Pole Truck	Onroad HHD	Diesel	1		1	2	2	8					**30**	60					
Modify Existing Structures				**6**	**12**	11	11						**25**	**3300**	**27.92**	**0.94**	**111**	**38.75**	**0.30%**
Jet A Fuel Truck	Onroad HHD	Diesel	1		1	11	11	7					**10**	110					
Helicopter Support Truck	Onroad HHD	Diesel	1		1	11	11	7					**10**	110					
Light Helicopter	Helicopter	Jet A	1		1	11	11	7		#N/A	77	77							
Modify Existing Structures				**6**	**12**	162	162						**25**	**48600**	**27.92**	**0.94**	**1632**	**38.75**	**0.30%**
Compressor Trailer	Air Compressors	Diesel	1		1	162	162	10	60	0.48	1620	1620							
3/4-Ton Truck, 4x4	Onroad MD	Gas	1		1	162	162	10					**30**	4860					
1-Ton Truck, 4x4	Onroad MD	Diesel	1		1	162	162	10					**30**	4860					
Manlift/Bucket Truck	Onroad HHD	Diesel	2		2	162	162	10					**30**	9720					
Boom/Crane Truck	Onroad HHD	Diesel	1		1	162	162	10					**30**	4860					
Restoration				**7**	**14**	180	180						**25**	**63000**	**27.92**	**0.94**	**2116**	**38.75**	**0.30%**
Backhoe/Front Loader	Tractors/Loaders/B	Diesel	1		1	180	180	4	125	0.37	720	720							
Motor Grader	Graders	Diesel	1		1	180	180	6	250	0.41	1,080	1080							
Drum Type Compactor	Rollers	Diesel	1		1	180	180	4	100	0.38	720	720							
1-Ton Truck, 4x4	Onroad MD	Diesel	2		2	180	180	4					**30**	10800					
Water Truck	Onroad HHD	Diesel	1		1	180	180	8					**10**	1800					
Lowboy Truck/Trailer	Onroad HHD	Diesel	1		1	180	180	4					**30**	5400					

APPENIDX K - VEHICLE AND EQUIPMENT INFORMATIO

Primary Equipment Description		Equipment			Trucks			Helicoper		FUEL USE (GAL)		
	Fuel Use	BSFC	Gasoline Fuel Use	Diesel Fuel Use	Fuel Efficiency (mi/gal)	Fuel Use Gasoline	Fuel Use Diesel	Burn Rate (gal/hr)	Fuel Use Jet A	DIESEL	GASOLINE	JET A
Survey	**9**									9	4,030	-
1-Ton Truck, 4x4					8.8		4111			4,111	-	
Material Yards	**12**									12	5,038	-
R/T Forklift		0.367		10841						10,841	-	
Generator		0.408		11467						11,467	-	
1-Ton Truck, 4x4					8.8		2056			2,056	-	
Boom/Crane Truck					6.1		2945			2,945	-	
Water Truck					6.1		1963			1,963	-	
Truck, Semi-Tractor					6.1		2945			2,945	-	
Spur Road Construction	**0**									0	60	-
Excavator		0.367		118						118	-	
Backhoe/Front Loader		0.367		401						401	-	
Track Type Dozer		0.367		401						401	-	
Motor Grader		0.367		444						444	-	
Drum Type Compactor		0.367		294						294	-	
1-Ton Truck, 4x4					8.8		41			41	-	
Water Truck					6.1		20			20	-	
Lowboy Truck/Trailer					6.1		29			29	-	
Install TSP H-frame Foundations	**0**									-	-	-
Auger Truck					6.1		69			69	-	
Concrete Mixer Truck					6.1		46			46	-	
Install TSP H-frame Foundations	**1**									1	235	-
Backhoe/Front Loader		0.367		1070						1,070	-	
3/4-Ton Truck, 4x4					5.0	335				-	335	
Boom/Crane Truck					6.1		137			137	-	
Water Truck					6.1		46			46	-	
Dump Truck					6.1		137			137	-	
TSP H-Frame Haul	**0**									0	118	-
3/4-Ton Truck, 4x4					5.0	167				-	167	
Boom/Crane Truck					6.1		69			69	-	
Flat Bed Pole Truck					6.1		137			137	-	
Water Truck					6.1		23			23	-	
TSP H-frame Assembly	**1**									1	235	-
Compressor Trailer		0.408		278						278	-	
3/4-Ton Truck, 4x4					5.0	335				-	335	
1-Ton Truck, 4x4					8.8		192			192	-	
Boom/Crane Truck					6.1		137			137	-	
Water Truck					6.1		46			46	-	
TSP H-frame Erection	**0**									-	-	-
Jet A Fuel Truck					6.1		13			13	-	
Helicopter Support Truck					6.1		13			13	-	
Medium-duty Helicopter								92	2,944	-	-	2,944
TSP H-frame Erection	**1**									1	235	-
Compressor Trailer		0.408		278						278	-	
R/T Crane		0.367		1027						1,027	-	
3/4-Ton Truck, 4x4					5.0	167				-	167	
1-Ton Truck, 4x4					8.8		96			96	-	
Water Truck					6.1		46			46	-	
Install/Remove Conductor and Install OPGW	**0**									-	-	-
Backhoe/Front Loader		0.367		1967						1,967	-	
Sock Line Puller		0.367		6700						6,700	-	
Conductor Splicing Rig		0.367		7816						7,816	-	
Fiber Splicing Lab		0.367		6700						6,700	-	
Install/Remove Conductor and Install OPGW	**0**									-	-	-
Bull Wheel Puller		0.367		15405						15,405	-	
Wire Truck/Trailer					6.1		66			66	-	
Jet A Fuel Truck					6.1		332			332	-	
Helicopter Support Truck					6.1		332			332	-	
Light Helicopter								32	45,472	-	-	45,472

Primary Equipment Description		Equipment			Trucks			Helicoper		FUEL USE (GAL)		
	Fuel Use	BSFC	Gasoline Fuel Use	Diesel Fuel Use	Fuel Efficiency (mi/gal)	Fuel Use Gasoline	Fuel Use Diesel	Burn Rate (gal/hr)	Fuel Use Jet A	DIESEL	GASOLINE	JET A
Install/Remove Conductor and Install OPGW	**0**									-	-	-
Dump Truck					6.1		1310			1,310	-	
Install/Remove Conductor and Install OPGW	**16**									16	6,768	-
Hydraulic Rewind Puller		0.367		30583						30,583	-	
¾-Ton Truck, 4x4					5.0	2409				-	2,409	
1-Ton Truck, 4x4					8.8		2761			2,761	-	
Static Truck/Tensioner					6.1		1978			1,978	-	
Manlift/Bucket Truck					6.1		1978			1,978	-	
Boom/Crane Truck					6.1		1978			1,978	-	
Truck, Semi-Tractor					6.1		3956			3,956	-	
Lowboy Truck/Trailer					6.1		3956			3,956	-	
Water Truck					6.1		659			659	-	
Install/Remove Guard Structures	**0**									0	17	-
Compressor Trailer		0.408		46						46	-	
Backhoe/Front Loader		0.367		48						48	-	
3/4-Ton Truck, 4x4					5.0	24				-	24	
1-Ton Truck, 4x4					8.8		14			14	-	
Manlift/Bucket Truck					6.1		10			10	-	
Boom/Crane Truck					6.1		10			10	-	
Auger Truck					6.1		10			10	-	
Water Truck					6.1		3			3	-	
Extendable Flat Bed Pole Truck					6.1		10			10	-	
Modify Existing Structures	**0**									0	111	-
Jet A Fuel Truck					6.1		18			18	-	
Helicopter Support Truck					6.1		18			18	-	
Light Helicopter								32	2,464	-	-	2,464
Modify Existing Structures	**4**									4	1,632	-
Compressor Trailer		0.408		2678						2,678	-	
3/4-Ton Truck, 4x4					5.0	968				-	968	
1-Ton Truck, 4x4					8.8		555			555	-	
Manlift/Bucket Truck					6.1		1590			1,590	-	
Boom/Crane Truck					6.1		795			795	-	
Restoration	**5**									5	2,116	-
Backhoe/Front Loader		0.367		1719						1,719	-	
Motor Grader		0.367		5715						5,715	-	
Drum Type Compactor		0.367		1412						1,412	-	
1-Ton Truck, 4x4					8.8		1233			1,233	-	
Water Truck					6.1		294			294	-	
Lowboy Truck/Trailer					6.1		883			883	-	

Description	CalEEMod	Onroad Engine	Distance
¾-Ton Truck, 4x4	Onroad MD	MD	30
1-Ton Truck	Onroad MD	MD	30
1-Ton Truck, 4x4	Onroad MD	MD	30
22-Ton Manitex	Cranes		
3/4-Ton Truck, 4x4	Onroad MD	MD	30
Auger Truck	Onroad HHD	HHD	30
Backhoe/Front Loader	Tractors/Loaders/Backhoes		
Blackhawk Helicopter	Helicopter		
Boom/Crane Truck	Onroad HHD	HHD	30
Bull Wheel Puller	Other Construction Equipment		
Chipper	NA		
Compressor Trailer	Air Compressors		
Concrete Mixer Truck	Onroad HHD	HHD	10
Concrete Truck	Onroad HHD	HHD	10
Conductor Splicing Rig	Other Construction Equipment		
Crew Bus	Onroad MD	MD	100
D8 Cat	Tractors/Loaders/Backhoes		
Drilling Rig	Bore/Drill Rigs		
Drum Type Compactor	Rollers		
Dump Truck	Onroad HHD	HHD	30
Dump Truck, 4x4	Onroad HHD	MD	30
Excavator	Excavators		
Extendable Flat Bed Pole Truc	Onroad HHD	HHD	30
Fiber Splicing Lab	Other Construction Equipment		
Flat Bed Pole Truck	Onroad HHD	HHD	30
Flatbed Trailer	NA		
Generator	Generator		
Helicopter Support Truck	Onroad HHD	HHD	10
Hughes 500 E Helicopter	Helicopter		
Hydraulic Rewind Puller	Other Construction Equipment		
Hydraulic Rewind Puller	Other Construction Equipment		
Jet A Fuel Truck	Onroad HHD	HHD	10
Light Helicopter	Helicopter		
Lowboy Truck/Trailer	Onroad HHD	HHD	30
Manlift/Bucket Truck	Onroad HHD	HHD	30
Medium/Heavy-duty Helicopte	Helicopter		
Medium-duty Helicopter	Helicopter		
Motor Grader	Graders		
Pipe Truck/Trailer	Onroad HHD	HHD	30
R/T Crane	Cranes		
R/T Crane (L)	Cranes		
R/T Crane (M)	Cranes		
R/T Forklift	Forklifts		
Rubber Tire Backhoe	Rough Terrain Forklifts		
Sag Cat w./ 2 winches	Tractors/Loaders/Backhoes		
Sag D8 Cat w/2 winches	Tractors/Loaders/Backhoes		
Sock Line Puller	Other Construction Equipment		
Static Truck/Tensioner	Onroad HHD	HHD	30
Stump Grinder	NA		
Track Type Dozer	Tractors/Loaders/Backhoes		
Tracked Excavator	Excavators		
Truck, Semi-Tractor	Onroad HHD	HHD	30

V-Groove Puller	Other Construction Equipment		
Water Truck	Onroad HHD	HHD	10
Wheel Loader	Tractors/Loaders/Backhoes		
Wire Truck/Trailer	Onroad HHD	HHD	1

Paved road		Fuel use
0.99	onroad	
0.99	onroad	
0.99	onroad	
	offroad	
0.99	onroad	
0.9	onroad	
	offroad	
	offroad	
0.9	onroad	
	offroad	
	offroad	
	offroad	
0.99	onroad	
0.99	onroad	
	offroad	
0.99	onroad	
	offroad	
	offroad	
	offroad	
0.9	onroad	
0.9	onroad	
	offroad	
0.99	onroad	
	offroad	
0.99	onroad	
	offroad	
	offroad	
0.9	onroad	
	offroad	
	offroad	
	offroad	
0.99	onroad	
	Heli	32
0.99	onroad	
0.9	onroad	
	offroad	
	Heli	92
	offroad	
0.99	onroad	
	offroad	
	offroad	
	offroad	
	offroad	
	offroad	
	offroad	
	offroad	
	offroad	
0.9	onroad	
	offroad	
	offroad	
	offroad	
1	onroad	

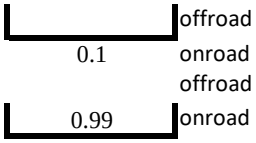
offroad
0.1
onroad
offroad
0.99
onroad

Table 3.3 OFFROAD Default Horsepower and Load Factors

OFFROAD Equipment Type	Horsepower	Load Factor
Aerial Lifts	63	0.31
Air Compressors	78	0.48
Bore/Drill Rigs	221	0.50
Cement and Mortar Mixers	9	0.56
Concrete/Industrial Saws	81	0.73
Cranes	231	0.29
Crawler Tractors	212	0.43
Crushing/Proc. Equipment	85	0.78
Dumpers/Tenders	16	0.38
Excavators	158	0.38
Forklifts	89	0.20
Generator	84	0.74
Graders	187	0.41
Off-Highway Tractors	124	0.44
Off-Highway Trucks	402	0.38
Other Construction Equipment	172	0.42
Other General Industrial Equipment	88	0.34
Other Material Handling Equipment	168	0.40
Pavers	130	0.42
Paving Equipment	132	0.36
Plate Compactors	8	0.43
Pressure Washers	13	0.30
Pumps	84	0.74
Rollers	80	0.38
Rough Terrain Forklifts	100	0.40
Rubber Tired Dozers	247	0.40
Rubber Tired Loaders	203	0.36
Scrapers	367	0.48
Signal Boards	6	0.82
Skid Steer Loaders	65	0.37
Surfacing Equipment	263	0.30
Sweepers/Scrubbers	64	0.46
Tractors/Loaders/Backhoes	97	0.37
Trenchers	78	0.50
Welders	46	0.45

Notes:
1. Based on the weighted average horsepower (by equipment population) and load factors for the mode of the engine groupings in 2011 OFFROAD

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Statewide
Region: California
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Type	Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population	Total VMT
Haul	Statewide	2025	HHDT	Aggregate	Aggregate	Gasoline	126.660382	8734.328
Haul	Statewide	2025	HHDT	Aggregate	Aggregate	Diesel	315961.642	43487031
Haul	Statewide	2025	HHDT	Aggregate	Aggregate	Electricity	2016.60204	241557.2
Haul	Statewide	2025	HHDT	Aggregate	Aggregate	Natural Ga	18819.8409	1219354
Worker	Statewide	2025	LDA	Aggregate	Aggregate	Gasoline	12837662.6	5.04E+08
Worker	Statewide	2025	LDA	Aggregate	Aggregate	Diesel	42627.7455	1266876
Worker	Statewide	2025	LDA	Aggregate	Aggregate	Electricity	792351.253	38110990
Worker	Statewide	2025	LDA	Aggregate	Aggregate	Plug-in Hyl	383663.149	17814254
Worker	Statewide	2025	LDT1	Aggregate	Aggregate	Gasoline	1284221.59	43707489
Worker	Statewide	2025	LDT1	Aggregate	Aggregate	Diesel	610.942938	8457.803
Worker	Statewide	2025	LDT1	Aggregate	Aggregate	Electricity	3472.82831	154253.7
Worker	Statewide	2025	LDT1	Aggregate	Aggregate	Plug-in Hyl	2255.84273	114380.2
Worker	Statewide	2025	LDT2	Aggregate	Aggregate	Gasoline	6307223.66	2.51E+08
Worker	Statewide	2025	LDT2	Aggregate	Aggregate	Diesel	22395.2074	926401.2
Worker	Statewide	2025	LDT2	Aggregate	Aggregate	Electricity	47977.6938	1724694
Worker	Statewide	2025	LDT2	Aggregate	Aggregate	Plug-in Hyl	57212.9571	2772425
Vendor	Statewide	2025	MHDT	Aggregate	Aggregate	Gasoline	47979.4804	2589381
Vendor	Statewide	2025	MHDT	Aggregate	Aggregate	Diesel	283391.92	12272300
Vendor	Statewide	2025	MHDT	Aggregate	Aggregate	Electricity	2457.80505	136285.2
Vendor	Statewide	2025	MHDT	Aggregate	Aggregate	Natural Ga	3268.7421	154575.6

CVMT	EVMT	Trips	Energy Con	Fuel Consu	Miles/gal	Fraction of Vehicles	
8734.328	0	2534.221	0	2.236963	3.904548		
43487031	0	5139397	0	7114.081	6.112811		Gasoline
0	241557.2	29746.78	439847	0	#DIV/0!		Diesel
1219354	0	135122.5	0	218.423	5.582533		
5.04E+08	0	59480990	0	16815.89	29.9605	58.9%	
1266876	0	178260.3	0	30.03177	42.18454	0.2%	
0	38110990	3931211	14713988	0	#DIV/0!	3.6%	
8595793	9218461	1586447	2784250	298.6882	59.64165	1.8%	
43707489	0	5587632	0	1765.785	24.75244	5.9%	
8457.803	0	1710.135	0	0.355927	23.76275	0.003%	
0	154253.7	16713.3	59554.66	0	#DIV/0!	0.016%	
49613.65	64766.53	9327.91	19561.42	1.736343	65.87417	0.010%	
2.51E+08	0	29454216	0	10286.47	24.42779	29.0%	
926401.2	0	106650.1	0	28.4092	32.6092	0.1%	
0	1724694	244230.9	665874.1	0	#DIV/0!	0.2%	
1261716	1510709	236575.6	456279.2	44.25104	62.6522	0.3%	
2589381	0	959973.4	0	515.8919	5.019233		
12272300	0	3387538	0	1401.451	8.756851		
0	136285.2	31554.2	146451.6	0	#DIV/0!		
154575.6	0	28802.85	0	20.09809	7.691056		

Worker		HHDT	MHDT
27.92496	0.937903417	3.904547717	5.019232614
38.74582	0.003013262	6.112810875	8.756850982

APPENDIX L

Weather Data

Weather data submitted under separate electronic cover.

APPENDIX M

Hazardous Materials
and Waste Management Plan

TLRR: Eldorado-Pisgah-Lugo Project

Hazardous Materials and Waste Management Plan

Prepared for
Southern California Edison

December 2022

Prepared by
Arcadis U.S., Inc.

Applicable Agencies

Bureau of Land Management	☒
National Park Service	☒
California Public Utilities Commission	☒

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Contents

Table

Appendices

Acronyms and Abbreviations

BLM	Bureau of Land Management
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHSC	California Health and Safety Code
CPUC	California Public Utilities Commission
CUPA	Certified Unified Program Agency
EPA	Environmental Protection Agency
EPL	Eldorado-Pisgah-Lugo
FRED	Field Reporting Environmental Database
HMBP	Hazardous Materials Business Plan
NEPA	National Environmental Protection Act
NPS	National Park Service
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyl
PEA	Proponent's Environmental Assessment
PPE	Personal protective equipment
RCRA	Resource Conservation and Recovery Act
SCE	Southern California Edison
SDS	Safety Data Sheet
SVOC	semi-volatile organic compound
SWPPP	stormwater pollution prevention plan
UHWM	Uniform Hazardous Waste Manifest
USDOT	United States Department of Transportation
VOC	volatile organic compound

1.0 Introduction

This Hazardous Materials and Waste Management Plan (Plan) for Southern California Edison's (SCE) Eldorado-Pisgah-Lugo Project (EPL Project or Project) presents the activities to be conducted to reduce potential impacts from hazardous materials used and hazardous waste generated during construction of the EPL Project. This Plan provides instructions for the safe handling, storing, shipping, and containment of hazardous materials and waste; identification of owner/operator contact information; and an emergency response/contingency plan.

This Plan is based on information in the EPL Project Proponent's Environmental Assessment (PEA). In the event revisions are made to the Plan, based on final engineering or receipt of final environmental clearance document(s), the revised Plan will be provided to the California Public Utilities Commission (CPUC), Bureau of Land Management (BLM), and National Park Service (NPS).

1.1 Project Overview

Through the EPL Project, SCE proposes to remediate physical clearance discrepancies on four existing transmission circuits. The EPL Project includes the following components to remediate the identified discrepancies.

1.1.1 Transmission

The EPL Project would install new, and replace existing infrastructure along portions of existing 220 kilovolt transmission lines by:

- Installing new inter-set transmission structures and replacing or modifying the existing hardware on adjacent structures.
- Replacing the insulator assemblies on some existing structures that are not adjacent to new inter-set transmission structures.
- Removing existing conductor and installing new 609.5 Irving Aluminum Conductor Composite Core Ultra-Low Sag transmission conductor on existing structures.
- Removing existing overhead groundwire and installing 7#7 Alumoweld overhead groundwire on existing structures for system protection.

1.1.2 Substations

The EPL Project would include the following substation-related work:

- Disconnect existing conductor from existing positions at the existing Pisgah Switchyard and Cima Substation and connect newly installed conductors to existing substation positions.
- Remove existing overhead groundwire and install new overhead groundwire at the existing Pisgah Switchyard and Cima Substation. Make minor modifications to the existing terminal racks to accommodate the new overhead groundwire.
- Update, as necessary, relay settings at the existing Lugo, Cima, and Eldorado substations and at the existing Pisgah Switchyard.

1.2 Project Location

The EPL Project is located in unincorporated San Bernardino County and in the City of Hesperia in California, and in unincorporated Clark County and the City of Boulder City in Nevada. The EPL Project is located on federal lands managed by the BLM, NPS, on State lands, and on private property.

1.3 Lead, Cooperating, and Consulting Agencies

Lead agencies have discretionary approval over the EPL Project and are responsible for reviewing aspects of the measures documented in this Plan. The CPUC is the state lead agency responsible for compliance with the California Environmental Quality Act (CEQA) for Project areas on non-federal lands. The BLM is the federal lead agency responsible for compliance with National Environmental Policy Act (NEPA) for the Project areas on federal lands. Identified materials or documentation will be provided to the CPUC and the BLM.

Because the Project also crosses lands managed by the NPS, this agency as well as the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and U.S. Environmental Protection Agency are anticipated to participate as a Cooperating Agency for the environmental review of the Project.

Consulting agencies are public agencies, other than the lead agencies, that may provide guidance or information needed to satisfy the requirements of the measures contained in this Plan. Consulting agencies have not been identified.

1.4 Applicable Activities and Project Areas

The activities addressed in this Plan include the proper use, handling, storage, and disposal of hazardous materials and waste; emergency response procedures in the event of a hazardous material release; and guidelines for identifying, assessing, excavating, storing, sampling, and disposing of impacted soil or water.

This Plan is applicable to all SCE components of the construction activities on the EPL Project.

1.5 Timing

The measures described in this Plan are applicable during the preconstruction (mobilization), active construction, and postconstruction (restoration) periods of the Project.

2.0 Methods

This section includes a detailed description of the hazardous materials-related actions that would be performed under the EPL Project. Unexpected contaminations may be encountered during construction, and the use and storage of hazardous materials on site could result in accidental spills or releases that could threaten soil or groundwater if preventive measures are not established. Examples of hazardous materials that may be present on site, and their respective uses, are listed in Table 1. The following sections of this Plan include descriptions of hazardous materials management activities and the responsibilities and coordination required between SCE and the construction contractor to implement such activities.

Table 1 List of Proposed Hazardous Materials

Hazardous Material	Purpose
Diesel Fuel	For construction equipment and vehicles
Gasoline	For construction equipment and vehicles
Motor Oil	For construction equipment and vehicles
Hydraulic Fluids and Lubricating Oils	For construction equipment and vehicles
Compressed Gas	For construction welding
Welding Rods	For construction welding
Soil Stabilizers	For best management practice (BMP) installations during and after construction (restoration)
Paint, Thinners, and Cleaning Solvents	Miscellaneous construction activities

2.1 Hazardous Materials Management

The construction contractor will be responsible for complying with federal, state, and local requirements for the handling, storage, transport, and disposal of hazardous materials and hazardous waste, as well as nonhazardous construction waste. The construction contractor will be responsible for implementing the performance requirements identified in this Plan.

Construction contractor personnel responsible for handling hazardous materials and waste for the EPL Project will be trained in accordance with the requirements set forth in California Code of Regulations (CCR) Title 22, Division 4.5 (Environmental Health Standards for the Management of Hazardous Waste) regarding the proper use and management of these materials, and will be familiar with applicable laws, policies, procedures, and BMPs. Spill response personnel will be trained to work with hazardous materials and will be familiar with the construction contractor's emergency response procedures. SCE personnel that visit or work on the construction site will also be familiar with and follow these applicable requirements. All construction personnel will be responsible for complying with federal, state, and local requirements, including applicable permits, laws, and ordinances related to hazardous materials and hazardous waste management.

This Plan identifies hazardous materials to be transported, used, and stored on site for the proposed construction activities, as well as hazardous wastes generated onsite as a result of the proposed construction activities, and appropriate management procedures.

This Plan include hazardous materials and waste handling, transport procedures, fueling and maintenance procedures for construction equipment, fueling and maintenance procedures for helicopters, and emergency release response procedures.

This Plan covers the following topics:

- Hazardous materials handling is presented in Section 2.1.
- Hazardous waste handling is presented in Section 2.2.
- Transportation of hazardous materials procedures are presented in Section 2.3.
- Fueling and maintenance procedures for construction equipment are presented in Section 2.4.
- Fueling and maintenance procedures for helicopters are presented in Section 2.5.
- Emergency release response procedures are presented in Section 2.6.
- Management of unanticipated contamination discovered on site is presented in Section 2.7.
- Hazardous materials business plan is presented in Section 2.8.
- Environmental Protection Agency identification number is presented in Section 2.9.

2.1.1 Definition of Hazardous Material

Hazardous material is defined as any material that, due to its quantity, concentration, or physical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or environment. Generally, the term "hazardous material" refers to materials brought on site for use during construction either as part of the construction process (for example, diesel fuel used by construction equipment).

2.1.2 Minimization of Hazardous Materials

To the extent possible, the construction contractor will minimize the use of hazardous materials. The construction contractor will make every effort to use chemicals presenting the least environmental hazard wherever possible. During construction activities, hazardous materials will be properly used, stored, and disposed of in accordance with manufacturer recommendations and local, state, and federal regulations.

All project personnel will be provided with project-specific training to ensure that all hazardous materials and wastes associated with the project are handled in a safe and environmentally sound manner and disposed of according to applicable rules and regulations. Specifically, employees handling wastes will have or receive hazardous materials training and will be trained in hazardous waste procedures, spill contingencies, waste minimization procedures and training in accordance with current Occupational Safety and Health Administration (OSHA) Hazard Communication Standard and Title 22 CCR.

2.1.3 Hazardous Material Inventory

Hazardous materials stored on site and used during construction will be documented in the Hazardous Materials Inventory. The Hazardous Materials Inventory will also be submitted to the local Certified Unified Program Agency (CUPA) as part of an HMBP. A Hazardous Materials Inventory Form is included in Appendix A. The Hazardous Materials Inventory Form will be completed by the construction contractor for new material brought on site or if the amount to be stored on site changes significantly.

The hazardous materials inventory will be maintained by the construction contractor and be used by SCE to file or modify the HMBP if added for the new or existing SCE facilities as required by CCR Title 22, Division 4.5; and California Health and Safety Code (CHSC) Chapter 6.95 and applicable local regulations.

For existing SCE facilities, the Hazardous Materials Inventory Form will not be submitted to the CUPA in lieu of completing and submitting the required forms. The construction contractor will maintain a current inventory of hazardous materials, provide Safety Data Sheets (SDS), and will communicate changes in the hazardous materials inventory to SCE.

2.1.4 Storage and Transport

Hazardous materials will be stored in accordance with Code of Federal Regulations (CFR) Titles 40 and 49; and in accordance with CCR Title 22, Division 4.5. Where possible, hazardous materials will be kept in their original containers and the containers will be clearly marked and periodically inspected. Procedures will be implemented by the construction contractor to prevent leaks and spills during storage and transport, such as:

- Ensuring materials are stored in designated areas.
- Materials will be stored on impervious surfaces or within secondary containment to prevent spills or leaks from infiltrating the ground.
- Only necessary quantities of materials will be stored.
- Only containers designated for storing hazardous materials will be used.
- Incompatible materials will be stored in segregated areas and will not be placed in the same containers.
- Hazardous waste containers will remain closed during transfer and storage, except when it is necessary to add or remove waste.
- Only personnel trained to accept, unload, package, label, load, prepare shipping papers, and transport hazardous materials will be allowed to perform these tasks.
- No hazardous materials will be stored in wetlands, waterways, and waterbodies.
- Hazardous material stored in suitable habitat for special-status species will be limited to designated areas within approved work areas.

Transportation procedures will include weekly inspections of storage and containment areas, inspection of containers prior to transport, and documentation of corrective actions taken to prevent leaks and spills.

Qualified personnel will properly label hazardous materials containers, keep containers in good condition, follow written procedures for the transport of hazardous materials, and transport hazardous materials in accordance with all federal, state, and local requirements.

The written procedures and potential routes for the transport of hazardous materials are provided in Section 2.3.

2.1.5 Inspections and Records

The construction contractor will regularly inspect hazardous materials storage areas for spills or leaks from containers. Regular inspections are BMPs that will be performed during construction to reasonably prevent spills or leaks. These inspections will be completed weekly. If a spill or leak is detected, immediate action will be taken to clean up and implement the necessary corrective actions. The inspections and corrective actions will be documented, and records maintained on site. A Spill Log/Report Form is included in Appendix B. A Spill Log/Report Form will be completed by the construction contractor in the event a leak or spill is discovered. Reports will be uploaded into SCE's Field Reporting Environmental Database (FRED) and the contractor's project management database.

Spill response procedures for larger spills will follow the corrective actions and notification protocols in Section 2.6.

2.1.6 Performance Requirements

The following performance requirements related to hazardous materials management will be adhered to by the construction contractor at a minimum:

- Minimize the use of hazardous materials to the extent possible. Use non-hazardous or less hazardous alternatives when possible.
- When feasible, limit the storage and transfer of hazardous materials to within construction yards or staging areas.
- Take preventative measures to avoid hazardous material spills or leaks.
- Promptly clean up spills or leaks and document the corrective action.
- Make proper notifications to the appropriate parties and agencies (see Section 2.6).
- Have hazardous materials SDSs readily available on site.
- Properly label all containers indicating the contents and keep containers closed when not in use.
- Store incompatible materials in separate areas.
- Maintain a visible first aid station on material laydown sites.

2.2 Hazardous Waste Management

The construction contractor is fully responsible for identifying, handling, storing, and transporting hazardous wastes in accordance with CFR Titles 40 and 49, and CCR Title 22, Division 4.5. The construction contractor will be responsible for implementing the hazardous waste management procedures in this Plan.

2.2.1 Hazardous Waste Generation

All wastes must be characterized to determine whether the waste meets the criteria to be classified as a hazardous waste. The different waste characterizations that may apply to the EPL Project include:

- Resource Conservation and Recovery Act (RCRA) hazardous waste
- Toxic Substances Control Act-regulated polychlorinated biphenyl (PCB) hazardous waste
- California non-RCRA hazardous waste
- Universal waste

The construction contractor will provide waste determination records and analysis to SCE for review. Once the waste characterization is confirmed, the waste will be directed to the appropriate waste stream. Typical wastes that may be generated during construction activities are paints, spent solvents, waste lubricants and the containers thereof; spent oil-absorbent materials; and impacted soil.

Equipment that is decommissioned as part of the substation-related scope of the EPL Project will be disposed of or recycled in accordance with CFR Title 40 and CCR Title 22, Division 4.5. Utility wood pole waste will be disposed of in accordance with CHSC 25143.1.5. A list of approved disposal facilities that accept treated wood waste in California is provided in Appendix D.

2.2.2 Storage, Containerization, and Labeling

Hazardous waste will be accumulated and stored on site during construction. Hazardous waste will be managed by the construction contractor in accordance with local, state, and federal guidelines. The construction contractor will maintain a readily accessible supply of spill control measures, such as absorbent pads; implement secondary containment measures as warranted; and conduct periodic inspections in accordance with state and federal regulations. Accumulation periods will be monitored, and disposal of hazardous waste will occur in accordance with CCR Title 22 and CFR Title 40.

Hazardous waste must be packaged in containers compatible with the waste and a completed label affixed at the time the waste is first added to the container. The hazardous waste generator who produces the waste must select an appropriate container and waste label. The container may be relabeled when additional characterization information becomes available.

Treated wood pole waste will be stored in accordance with the EPL Project stormwater pollution prevention plans (SWPPPs). Stockpiles of treated wood will be placed on plastic sheeting or comparable material (cribbing). Stockpiles of treated wood will also be covered with plastic sheeting or comparable material and surrounded by a berm, prior to the onset of precipitation.

2.2.3 Transportation and Disposal

All hazardous wastes will be handled in a safe and environmentally sound manner. Hazardous wastes will only be stored at designated hazardous waste storage areas that would be used for hazardous waste collection or consolidation. Hazardous waste may be generated at any of the construction work areas but will be stored at staging areas.

At construction work areas, hazardous waste is generated but the area is not routinely staffed and is not adjacent or connected to a secured project site. Waste from construction work areas will be handled and transported to a staging area in accordance with the applicable sections of CFR Title 40 and CCR Title 22, Division 4.5 and in accordance with the requirements of the U.S. Department of Transportation (USDOT) and California Department of Transportation (Caltrans).

Hazardous waste must only be accumulated for a limited and specific amount of time. The length of time for the accumulation of hazardous waste is based on the waste profile, quantity, and the rate of generation. Hazardous waste has a 90-day limit (180 days for small quantity generators, and 30 days for PCB hazardous waste), and Universal Waste has a 1-year limit.

Only approved hazardous waste transportation vendors and disposal facilities may be used to transport and dispose of hazardous waste. The list of SCE approved hazardous waste transporters and facilities is provided in Appendix E. If a hazardous materials transporter is not on this list, an SCE Hazardous Waste Management Program Manager must approve any vendor that provides hazardous waste management services for SCE or SCE's construction contractors prior to transport. The Hazardous Waste Management Program Manager will also be notified prior to the Hazardous Waste Contractor providing services regarding the management of hazardous waste.

The construction contractor will pack, label, store, handle, transport, and dispose of hazardous wastes in compliance with CCR Title 22 and CFR Titles 40 and 49. The construction contractor will notify SCE and

the appropriate agencies of any hazardous waste dumped by third parties in the work area and document such on FRED as an observation.

Uniform Hazardous Waste Manifest (UHWM) training is required for employees who sign UHWMs. SCE Field and Facility Environmental Specialists are trained to sign SCE UHWMs. The transporter is required to leave the generator copy of the UHWM onsite with SCE or the construction contractor. An electronic copy will be sent to Manifests@sce.com, and the original copy will be kept by the SCE Hazardous Waste Management Program Manager.

2.2.4 Inspections and Records

The construction contractor will regularly inspect hazardous waste storage areas for spills or leaks from containers. Regular inspections are BMPs that will be performed during construction to reasonably prevent spills or leaks. For hazardous waste storage areas, documented weekly inspections are required and records will be maintained on site. If a spill or leak is detected, immediate action will be taken to clean up and implement the necessary corrective actions. The inspections and corrective actions will be documented, and records maintained on site. A Spill Log/Report, provided in Appendix B, will be completed by the construction contractor in the event a leak or spill is discovered. Reports will be uploaded into SCE's FRED and the contractor's project management database.

The construction contractor will notify SCE and the appropriate agencies of any hazardous waste dumped by third parties in the work area and document such on FRED. The construction contractor will document and maintain a record of contact of all agencies to be notified of hazardous waste dumped by third parties in the work area and provide copies of these records to SCE's Site Environmental Safety officer.

2.2.5 Performance Requirements

As a summary, the following performance requirements related to hazardous waste management will be adhered to by the construction contractor:

- Clearly identify and secure hazardous waste storage area.
- Take preventative measures to avoid spills or leaks in hazardous waste storage areas or during handling or transport of wastes.
- Promptly clean up spills or leaks and document the corrective action.
- Limit the storage of hazardous waste to designated storage areas.
- Prohibit overnight storage of hazardous waste in non-secure storage areas.
- When feasible, implement waste recycling programs for all applicable waste streams.
- Properly label all waste containers and keep incompatible wastes segregated.
- Assure that all containers are kept closed when waste is not actively being added or removed.
- Train construction personnel in proper hazardous waste management procedures.

2.2.6 Training

All personnel working on the EPL Project will receive environmental training. This training does not relieve the construction contractors of the responsibility to train employees as required by federal, state, and local regulations. Construction contractor personnel who handle hazardous wastes will have been trained in accordance with OSHA Hazardous Communication Standard; CFR Title 29, Part 1910; and CCR Title 8, Section 5194. Workers responsible for managing generated waste, conducting hazardous waste inspections, or involved in emergency response procedures will be trained on hazardous materials and waste management procedures, emergency and spill response procedures, and waste minimization procedures. Training records will be maintained per the applicable regulations referenced above.

2.3 Transportation of Hazardous Materials

The construction contractor will pack, label, store, handle, transport, and dispose of hazardous material and hazardous waste in compliance with CFR Titles 40 and 49; in compliance with CCR Title 22, Division 4.5; and in accordance with USDOT and Caltrans requirements.

The following hazardous material transport procedures will be met:

- First step, the shipper will provide proper identification and classification of the hazardous material as regulated by the DOT in section 172.101
- Shippers of hazardous materials will require HM registration (and potentially a Hazardous Materials Safety Permit), if the following hazardous material quantities are exceeded:
    - More than 25 kilograms (55 pounds) of a Division 1.1, 1.2, or 1.3 (explosive) material in a motor vehicle, rail car or freight container
    - More than 1 liter per package of a material extremely poisonous by inhalation
    - A hazardous material in a bulk packaging having a capacity of 3,500 gallons for liquids or gases, or more than 468 cubic feet for solids
    - A shipment in other than bulk packaging of 5,000 pounds gross weight or more of one class of hazardous material for which the transport vehicle requires placarding
    - Any quantity of materials requiring placarding.
- Hazardous Material Carriers will be responsible for the following labeling, handling, shipping, and reporting documents:
    - Shipping paper (49 CFR Part 172 Subpart C)
    - Placard and mark vehicle (49 CFR, Part 172, Subparts D, E, & F)
    - Loading and unloading (49 CFR Parts 174-177)
    - Compatibility and Packaging (49 CFR, Part 173, Subpart D & 49 CFR 173.22)
    - Blocking and bracing
    - Incident reporting
    - Security plan (49 CFR, Part 172, Subpart G & I)
    - Employee training
- No person may offer or accept a hazardous material for transportation in commerce unless that person is registered in conformance with subpart G of Part 107 of this chapter, if applicable, and the hazardous material is properly classed, described, packaged, marked, labeled, and in condition for shipment as required or authorized. (49 CFR 171.2(a))

For the project, there are several highways available for transport of hazardous materials; truck routes to be used would be identified by the construction contractor(s) and identified in subsequent versions of this Plan.

2.4 Fueling and Maintenance of Construction Equipment

The construction contractor will be responsible for communicating the fueling and maintenance spill prevention measures to construction personnel to prevent leaks or spills of hazardous materials. The following fueling and maintenance spill prevention measures for construction equipment will be implemented, as applicable, during the construction of the EPL Project:

- Refueling of construction vehicles and equipment will occur within the EPL Project work areas, but not within 200 feet of drains or waterways with flowing water or within 75 feet of drains or waterways that are dry.
- Plastic liners or drip pans will be placed under construction equipment while refueling.

- Plastic liners or other control measures will be used for fuel storage tanks to prevent spills from directly contacting the soil.
- Drip pans or other control measures will be placed under construction equipment when not operating to capture oil leaks.
- Construction equipment will be inspected daily for leaks and failures.

The above spill prevention measures will be implemented during all construction activities. When it is not practicable to use these measures, personnel will use appropriate precautions to prevent spills through safe work procedures and will be efficient in spill response procedures.

2.4.1 Sensitive Habitats

Spill prevention is particularly critical in and around any sensitive areas including habitats for special-status species, and wetlands, waterways, and water bodies. The following preventative measures will be implemented during equipment fueling and maintenance activities, particularly for construction work areas along the transmission line:

- No fueling will occur within 200 feet of drains or waterways with flowing water or within 75 feet of drains or waterways that are dry
- Spills will be immediately cleaned up and reported as described in this plan.
- Applicable secondary containment and SWPPP BMPs will be implemented where hazardous materials must be stored or fueling must occur adjacent to sensitive habitats.

2.5 Fueling and Maintenance of Helicopters

The following helicopter fueling and maintenance spill prevention measures will be implemented by the helicopter contractor during the construction of the transmission line to prevent a release to the environment.

2.5.1 Rapid (Hot) Refueling

Rapid (hot) refueling of helicopters will be conducted in project-approved construction work areas, helicopter landing zones, and staging area located at least 200 feet away from drains and waterways with flowing water or 75 feet away from drains and waterways that are dry. The fuel truck will wait for the helicopter at the designated helicopter refueling area. The fuel truck operator will remain with the fuel truck while it is on the job site. Crew personnel, who are necessary near the fly operation, will maintain a minimum of 100 feet from the heading or hovering area of the helicopter.

Secondary containment will be set up under the fuel truck, if safe to do so. A hose from the stationary fuel truck will be used to fuel the helicopter. The helicopter will be grounded to the fuel truck during fueling operations.

2.5.2 Helicopter Fueling and Maintenance Spill Prevention Measures

At a minimum, the following guidance is to be incorporated in the detailed helicopter fueling and maintenance procedures.

- Helicopters will be refueled only in designated helicopter refueling areas, which will include project-approved construction work areas, helicopter landing zones, staging areas, and local airports located at least 200 feet away from drains and waterways with flowing water or 75 feet away from drains and waterways that are dry. Except in an emergency, helicopters will land only in areas previously approved for landing as identified in the day prior to flight notification, and all dust control and biological and cultural resource protection requirements will be implemented.
- In staging areas, spill prevention measures such as the use of drop cloths made of plastic, drip pans, or trays placed under refilling areas will be used to prevent chemicals from contacting the ground.

- In staging areas and during rapid refueling, safety precautions will be used to prevent fueling and spill prevention equipment from interfering with the operation of the helicopter.
- Absorbent pads will be available in designated staging areas to quickly respond to fuel spills if it is not safe to use spill prevention measures during refueling.

The use of landing zones for refueling will be limited by the accessibility of the site to available helicopter fuel trucks and proximity to jurisdictional water features. Only landing zones in proximity to paved or flat dirt roads can be used for refueling. Refueling on these landing zones will follow the same BMPs and refueling guidelines used at all other helicopter and equipment refueling locations.

Additional draft helicopter use plans and procedures are provided in the draft EPL Project Helicopter Use and Safety Plan.

2.6 Emergency Release Response Procedures

Emergency release response procedures provide guidance for personnel to respond safely and quickly to hazardous materials spills or releases to prevent adverse impact to human health or impact to surrounding environmental media such as streams, lakes, wetlands, or storm water system or sensitive areas including conservatories and wildlife areas. The emergency release response procedures stated in this section will be implemented by the construction contractor for the EPL Project and will include identification of roles, responsibilities, standards for notification and external reporting, and documentation required upon discovery of a release of hazardous material. The construction contractor will follow the emergency release response procedures for the EPL Project. Construction personnel, SCE personnel, construction monitors, and other field personnel will be trained on the emergency release response procedures. The emergency release response procedures will be documented on the Emergency Release Response Form provided in Appendix C.

2.6.1 Site Maps

The construction contractor will provide site maps of the Project work areas that identify hazardous materials and hazardous waste storage areas and applicable BMPs for hazardous materials and hazardous waste. The site maps will include the location of hazardous materials and waste handling and storage areas, spill response materials and equipment, SDSs, storm and sewer drains, adjacent waterways, and emergency evacuation assembly areas. The construction contractor will also provide SCE with the names and telephone numbers of persons responsible for managing the emergency release response procedures. These submittals will be provided to the SCE EPM prior to mobilization, in accordance with the Emergency Release Response Form procedures included in Appendix C. The forms will be uploaded to SCE's FRED.

2.6.2 Training

The construction contractor's personnel will be trained on the safety procedures in handling hazardous materials and the emergency release response procedures. The training will be completed prior to a new employee starting work at the site. Refresher training will be provided to all personnel annually. Training records will be maintained by the construction contractor. Training will be tailored to the construction worker's project role and responsibility during an emergency release response incident and will be site specific.

At a minimum, the construction contractor's training will include:

- Emergency release response procedures;
- Location and use of emergency response equipment, materials, and personal protective equipment (PPE);
- Emergency evacuation procedures;
- Protocol for coordination and communication with local emergency response organizations; and
- Location, handling procedures, and uses of hazardous material.

2.6.3 Emergency Release Response Equipment

The construction contractor will maintain the spill response equipment listed below, in accordance with the Emergency Release Response form submittal included in Appendix C. The location of the spill response equipment will be identified on site maps and communicated to construction personnel during training. The construction contractor will be responsible to maintain a current inventory of spill response equipment and regularly inspect and service equipment per manufacturer's recommendations. Construction vehicles will be equipped with spill response kits.

The following material will be available at designated location(s) across the EPL Project area that are under active construction and easily accessible in the event that a spill may occur:

- Large 55-gallon drum spill kits or "spill attack kits" will include:
  - 3-ply or greater disposable plastic bags,
  - 50 to 100 count 16-inch by 20-inch oil sorbent pads,
  - 10 count 3-inch by 4-inch socks (if needed),
  - Four pairs of Nitrile gloves,
  - Two pairs of splash goggles, and
  - A copy of the spill response procedure sheet.
- Vehicle spill kits will include:
  - 3-ply or greater disposable plastic bags,
  - 16-inch by 20-inch oil sorbent pads,
  - One to two pairs of Nitrile gloves, and
  - A copy of the spill response procedure sheet.

The number of large spill kits will be adjusted to reflect the number of crews along the ROW and the remoteness of the construction activities. Vehicle spill kits will be kept on each site in the off-road equipment or vehicles used by Project personnel.

2.6.4 Evacuation

The construction contractor will identify the emergency evacuation procedures for staging areas and construction work areas. The procedures will identify the methods for communicating the evacuation of onsite personnel and surrounding neighbors in the event of a serious incident. The evacuation areas will be identified onsite maps. The emergency evacuation procedures prepared by the construction contractor will identify nearby hospitals and will provide the route from the site to the nearest hospital. These procedures and evacuation areas will be communicated in training and during onsite safety briefings to all personnel that visit the construction site.

2.6.5 Cleanup Procedures

The construction contractor will document containment and clean-up measures taken in the event of a spill or release of hazardous materials or hazardous waste. The spent spill response material, contaminated media, and spent PPE will be placed into appropriate containers, properly labeled, and placed in an appropriate area until the hazardous waste can be transported and disposed at an appropriate disposal facility. For larger spills or releases, and if needed, SCE and the construction contractor will identify a cleanup contractor to respond.

Spill or release response procedures will depend on the following factors:

- If large quantities of hazardous materials were released;
- If an environmental specialty contractor will be contacted to manage the clean-up;
- If specialized personal protection equipment (PPE) is required for the cleanup;

- If property owners or the community are concerned about the release;
- If there is a threat to the public;
- If there is a threat to surface waters;
- If a sensitive environment is or may be affected; or
- If a highway or roadway is affected;
    - If a traffic lane is closed due to the release;
    - If regulatory agencies or emergency response personnel are on site; or
    - If there is a reasonable belief that the release poses a significant hazard to human health and
    - safety, property, or the environment.

2.6.6 Documentation

The construction contractor will complete required documentation on the Spill Log/Report Form (Appendix B). The documentation will include records of spill or releases, regardless of the quantity or reporting requirements. The Spill Log/Report will be maintained at the construction site. Reports will be uploaded into SCE's FRED. and the contractor's project management database. If the release of hazardous materials enters a jurisdictional waterway or sensitive habitat, the Environmental Monitor will report the spill as an incident on FRED. The construction contractor will provide the CPUC, BLM, and NPS documentation (i.e., Spill Log/Report) of spills and associated cleanup for all incidents within sensitive resource areas and any spill volume greater than 16 ounces. The Spill Log/Report will be submitted within 5 days of the occurrence. Regardless of size, the construction contractor will be responsible for cleaning up a spill. The construction contractor may utilize an approved cleanup contractor as needed.

2.6.7 Reporting

In accordance with these emergency release response procedures, hazardous material spills or releases—including petroleum products such as gasoline, diesel, and hydraulic fluid, regardless of the quantity spilled—will be immediately reported to the Environmental Monitor and SCE by the construction contractor if the spill enters a navigable water, stream lake, wetland, or storm drain; impacts sensitive areas including conservation areas and wildlife preserved; or causes injury to a person or threatens injury to public health.

SCE will notify the CPUC/BLM/NPS Environmental Monitor and other applicable regulatory agencies of all incidents impacting sensitive resource areas, including sensitive habitats, riparian areas, water bodies, and drainages.

The following outlines the construction contractor's notification and reporting procedure for a hazardous material release or threat of a release:

- Discovery
    - The first step in the process is to discover the release or threat of a hazardous material release.
- Initial Actions
    - If the release has a potential to be an immediate danger to life or health, the construction worker will move to a safe location and call 911 for assistance.
    - If the release is incidental to the construction worker's job, SCE will be notified immediately, trained spill response personnel will clean up the spill, and the necessity for agency notification will be evaluated by SCE.
    - The spill response personnel will be trained to work with hazardous materials and be familiar with the construction contractor's emergency release response procedures.
    - If the release is not incidental to the construction worker's job, then the worker will notify their immediate supervisor or the construction contractor, and the latter will determine whether an

emergency response person is capable of cleaning up the spill. If capable, the emergency response person will clean up the spill; but if not, the supervisor or construction contractor will follow the procedure below.

- Evaluation
  - If a spill cannot be cleaned up by an emergency response person, as determined by the supervisor or construction contractor, the latter will notify SCE and construction personnel of the release.
  - Outside professional hazardous waste cleanup services may be used to clean up large spills that cannot be handled by onsite resources, as required.
- Agency Notification
  - After notifying SCE and construction personnel of the release, the construction contractor will notify the applicable regulatory agencies immediately, as required by law. The CPUC/BLM/NPS Environmental Monitor will be notified the same day of spills/releases greater than 1 gallon.
  - The construction contractor will first notify the SCE construction manager. SCE will then notify applicable agencies of the incident in accordance with federal, state, and local spill reporting requirements. When notifying agencies of a release, notification forms will be completed to document the agency contact.
  - Additional notification will be made per the hazardous communication plan provided in the contractor's Construction Site Specific Program for that project location.
  - When contacting 911 or a government agency, the following information will be provided:
    - The exact location of the release or threatened release;
    - The name of the person reporting the release or threatened release;
    - The hazardous materials involved in the release or threatened release;
    - An estimate of the quantity of hazardous materials involved; and
    - The potential hazards presented by the hazardous material involved in the release or threatened release.

2.7 Management of Discovery of Unanticipated Contamination

In the event that contaminated media are encountered during excavation activities, SCE will stop work, contact SCE's SES, request a site assessment, and notify the proper authorities. The discovery will be documented by the Environmental Monitor in FRED as an unanticipated event.

At the direction of the SES, potentially contaminated soil will first be segregated into lined stockpiles, dump trucks, or roll-off containers. Samples will be collected and analyzed to determine the appropriate handling, treatment, and disposal options. If the analytical results indicate that the soils are hazardous, the affected soils will be properly managed on location and transported to a Class I Landfill or other appropriate soil treatment or recycling facility using a UHWM. Work at the affected site would continue at that location only when given clearance by the SES.

The sampling procedures for soils that may be contaminated will follow the direction of the SCE SES.

2.8 Hazardous Materials Business Plan

An HMBP details the handling and release or potential release of hazardous materials. The information provided by an HMBP is necessary to prevent or mitigate the damage to the health and safety of persons and the environment from the release or threatened release of hazardous materials into the workplace and environment. Basic information on the location (GPS coordinates), type, quantity, and the health risks of hazardous materials handled, used, stored, or disposed of in California, which could be accidentally

released into the environment, must be available to firefighters, health officials, planners, public safety officers, health care providers, regulatory agencies, and other interested persons. These regulations are covered under CHSC Chapter 6.95, Article 1 – Hazardous Materials Release Response and Inventory Program (Sections 25500-25520) and Article 2 – Hazardous Materials Management (Sections 25531-25543.3).

An HMBP is needed if a contractor uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to the following (CCR Title 19):

- 500 pounds of a solid substance,
- 55 gallons of a liquid, and
- 200 cubic feet of compressed gas.

The EPL Project may exceed the thresholds described above during construction. If needed, an HMBP will be prepared by the construction contractor in accordance with CHSC Chapter 6.95, and CCR Title 22, Social Security, Division 4.5. The HMBP will include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment. The construction contractor will prepare the HMBP and submit it to the applicable CUPA prior to exceeding the CCR Title 19 thresholds listed above. The HMBP will be a separate document from this plan.

2.9 Environmental Protection Agency Identification Number

RCRA requires individuals who generate or transport hazardous waste, or who operate a facility for recycling, treating, storing, or disposing of hazardous waste, to notify EPA or their authorized State waste management agency of their regulated waste activities and obtain an EPA Identification Number (also known as a RCRA Identification Number). SCE's Hazardous Waste Management Program Manager will obtain the EPA ID or California EPA ID number. Prior to construction, SCE will submit the Notification of Regulated Waste Activity (EPA Form 8700-12) and obtain an EPA identification number. SCE will also obtain a California Waste identification number (Department of Toxic Substances Control Form 1358) as required by the California Department of Toxic Substance Control (DTSC).

2.10 Soil Management Plan

The following information is drawn from the Soil Management Plan developed for the EPL Project; additional information regarding soil management is found in that document.

2.10.1 Clean Soil

Soil is considered clean if it is not impacted with any constituents of potential concern such as petroleum hydrocarbons, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, herbicides, polychlorinated biphenyls (PCBs), or metals above regional background levels.

2.10.1.1 Soil Management Options for Clean Soil

There are various options for the management of clean soil. Clean soil may often be re-used on the project site or near the project site as long as the end use meets with any restrictions imposed by any regulatory agency. If excess soil cannot be managed on the project site, but a viable use option is identified at another location, there are instances in which the soil may be transported and re-used at a location other than the project site. The Project Manager shall contact SCE's Corporate Environment Safety and Health, Water/Waste and Environmental Engineering's Hazardous Waste Section representatives to review soil data for the site, any needed data from the receiving facility as well as the viability of the proposed usage option. Should questions concerning long-term liability arise, SCE's Law Department will also be contacted for concurrence on the proposed use of the soil. Clean soil that will not be re-used at the project site or at an alternative location shall be disposed of at a facility approved by SCE for the recycling or disposal of non-hazardous waste materials. The most recent list containing the

names and addresses of approved recycling and disposal facilities for non-hazardous waste materials is provided in Appendix A.

2.10.2 Non-Hazardous Contaminated Soil

Non-hazardous contaminated soil consists of soil impacted with a constituent of potential concern or multiple constituents of potential concern at concentrations above regional background levels, but not at levels that would result in characterization of the soil as hazardous waste.

2.10.2.1 Soil Management Options for Non-Hazardous Contaminated Soil

For the most part, non-hazardous contaminated soil would be disposed of at a facility approved by SCE for the recycling or disposal of non-hazardous waste materials. The most recent list containing the names and addresses of approved recycling and disposal facilities for non-hazardous waste materials can be found in Appendix A. In some cases, soil with low levels of contamination may be usable at the project site. If on-site usage of contaminated soil is being proposed, the Project Manager shall contact SCE's Corporate Environment Safety and Health, Water/Waste and Environmental Engineering's Hazardous Waste Section representatives to review soil data for the site, and evaluate the proposed end-use of the material. Should questions concerning long-term liability arise, SCE's Law Department will also be contacted for concurrence on the proposed use of the soil.

2.10.3 Hazardous Contaminated Soil

Hazardous contaminated soil consists of soil impacted with a constituent of potential concern or multiple constituents of potential concern at concentrations that would result in the waste being characterized as hazardous waste.

2.10.3.1 Soil Management Options for Soil Meeting Hazardous Waste Criteria

If the determination is made that soil generated at a project site meets the criteria for classification as a hazardous waste, the soil will be properly containerized and marked with required information including the following:

- The date of first accumulation,
- The words "Hazardous Waste",
- Composition and physical state of the waste,
- Statement or statements which call attention to the particular hazardous properties of the waste (e.g., flammable, toxic, etc.), and
- The name and address of the person producing the waste.

In addition, prior to shipping the waste from the site, the following information must also be included on the container:

- Hazardous Waste – State and Federal Law Prohibit Improper Disposal. If found contact the nearest police or public safety authority, the U.S. EPA or the California Department of Toxic Substances Control,
- Generator's EPA Identification Number name and address of the generator/generating location, and
- The Manifest Tracking Number.

Hazardous contaminated soil will be disposed of at a facility approved by SCE for the recycling or disposal of hazardous waste materials. The most recent list containing the names and addresses of approved hazardous waste disposal facilities can be found in Appendix B. Under no conditions shall hazardous waste be disposed of at a facility not on this list unless approval has been received in writing from SCE's Corporate Environment Safety and Health, Water/Waste and Environmental Engineering's Hazardous Waste Section.

2.11 Asbestos

Existing concrete foundations may contain asbestos; no work under the EPL Project would disturb the existing concrete foundations, and therefore there are no asbestos-related concerns for the EPL Project.

Existing concrete foundations and mastic on the foundations or tower hardware (e.g., bolts) may contain asbestos. Existing concrete foundations identified for demolition or removal would be sampled for the presence of asbestos prior to the start of removal activities. Sampling would be performed in accordance with American Society for Testing Methods (ASTM) standard E2356-09, Standard Practice for Comprehensive Building Surveys. If asbestos-containing materials are identified, response actions will be performed in compliance with 8 CCR 1529, and overseen and monitored per ASTM standard E1368-05, Standard Practice for Visual Inspection of Asbestos Abatement Projects and ASTM standard D7201-06, Standard Practice for Sampling and Counting Airborne Fibers, Including Asbestos Fibers, in the Workplace, by Phase Contrast Microscopy (with an Option of Transmission Electron Microscopy).

If a foundation or mastic on the foundation are found to be asbestos-containing materials (ACM), they will be properly abated by California licensed abatement contractors. Contractor notification to the local air quality management district having jurisdiction over the particular location will be made at least 10 business days (14 calendar days) prior to any demolition activities and notification to Cal/OSHA. If no asbestos is present, the demolition contractor will make the notification; if asbestos is present, the abatement contractor will make the notification. Proper abatement may include breaking the foundations into movable pieces and wrapping the waste in two layers of 6-mil poly prior to moving to a lockable bin for transportation. Large wrapped waste items can be moved to the waste container using mechanical means. Any debris remaining after the foundations are moved will be manually shoveled into 6-mil transparent poly bags (double bagged) and closed using a goose-neck technique. Any ACM mastic will be manually removed using scrapers and placed in 6-mil transparent poly bags (double bagged) and closed using a goose-neck technique. The waste will be disposed of in a DTSC-approved landfill that accepts asbestos-containing wastes. Only SCE-approved hazardous waste transportation vendors and disposal facilities may be used to transport and dispose of hazardous waste.

2.12 Lead-Based Paint

The California Department of Public Health (CDPH), the United States Department of Housing and Urban Development (HUD), and USEPA define lead-based paint (LBP) as paint or other surface coating with lead content equal to or greater than 1.0 milligrams per square centimeter (mg/cm^2) of surface area or ≥5,000 parts per million (ppm) or ≥0.5 percent (%) by weight.

If paint is identified on the concrete foundations or on lattice steel structures on which work under the EPL Project would occur, the paint will need to be sampled by a CDPH Lead Sampling Technician or Lead Inspector/Assessor prior to disturbance.

SCE or its construction contractor will send notification to the California Occupational Safety and Health Administration (Cal/OSHA) prior to the start of any activity that would disturb lead unless the lead content of the material disturbed is less than 0.5 percent by weight, 5,000 parts per million or 1.0 mg/cm2; the amount of lead-containing material is less than 100 square feet or 100 linear feet; or the only task is torch cutting or welding for no longer than one hour per shift.

Painted surfaces listed as Fair or Poor will be stabilized prior to work being performed on that structure. Properly protected workers will remove loose and flaky paint and containerize the waste for disposal. Typically, lead-trained workers wearing protective suits and respirators will scrape away delaminated paints using wet methods to control dusts. The paint chips will be collected using HEPA-vacuums or will be contained on polyethylene tarps until collection and disposal.

Appropriate engineering controls, personal protective equipment, training, specific work practices, and representative air sampling are required by both Cal/OSHA and the federal OSHA whenever workers will disturb lead in any concentration (including less than 600 ppm) as this disturbance may result in airborne exposures over the Action Limit (AL) or Permissible Exposure Limit (PEL).

Contractors performing any disturbance (including drilling, cutting, scraping, sanding, hot work), of lead paint surface coatings and other lead materials are required to complete a Negative Exposure Assessment (NEA), or a lead safety compliance plan in place if an NEA has not been generated.

Waste characterization sampling and analysis will be performed for each representative waste stream. Waste stream analyses will include the total threshold limit concentration (TTLC), and if necessary, soluble threshold limit concentration (STLC), and toxicity characteristic leaching procedure (TCLP) analysis, as required.

Lead-coated materials will be disposed in accordance with CCR Title 22, Division 4.5. Materials to be disposed in a demolition landfill must be sampled and the sample results must meet California DTSC criteria. Only SCE-approved hazardous waste transportation vendors and disposal facilities may be used to transport and dispose of hazardous waste. Lead-coated materials (i.e., scrap steel) must be recycled at a facility capable of recycling lead-coated wastes in accordance with applicable regulations.

3.0 Plan Approval

This Plan has been prepared per the EPL Project's Project Description. SCE is not presently requesting review or approval of this Plan. This Plan will be amended to incorporate and reflect any mitigation measures imposed on the EPL Project by the CPUC or BLM during each agency's respective project approval process. Following such revisions, and as required in any mitigation measure imposed on the EPL Project, SCE will request approval of this Plan by either or both the CPUC and BLM.

4.0 Revisions

Date	Description of Revision	Contact

Appendix A
Hazardous Materials Inventory Form

HAZARDOUS MATERIAL INVENTORY FORM

1. Project:	
2. Site Name:	
3. Site Address / Location:	
4. Hazardous Material Information (Complete this form for each hazardous material used or stored on site)	
Hazardous Material Name:	
Hazardous Material Intended Use:	
Is a SDS Available Onsite? Yes / No: (attach SDS)	
New Hazardous Material or Quantity Change?	
Quantity Stored Onsite:	
Type of Container:	
Size of Largest Container:	
Location of Hazardous Material on Site (attach Map):	
6. Inventory Prepared By	
Requestor's Name:	Date:
Signature	
Supervisor's Name:	Date:
Signature:	
8. Emergency Notification:	
a. The Contractor is required to comply with State and federal law and the project Hazardous Materials Management Plan when reporting releases or threats of releases of hazardous materials. Describe the internal emergency notification procedure for the site.	
b. In case of emergency, the Contractor will dial 911 immediately.	
c. The Contractor will contact SCE and the CPUC or BLM Environmental Monitor after emergency service personnel are notified.	
d. Contact the local CUPA, California Emergency Management Agency, and National Response Center as required by State and federal law and the project Hazardous Materials Management Plan.	
9. Emergency Medical Facility	
Facility Name:	Phone:
Address:	
City:	Zip Code:

10. Documentation: The Contractor will complete the Spill Log/Report Form when a release or threat of release of a hazardous material or waste occurs. The Contractor will comply with State and federal law and the project Hazardous Materials Management Plan when documenting releases or threats of releases.	
11. Cleanup and Disposal Contractor:	
Name:	Phone:
Address:	
City:	Zip Code:
12. Emergency Equipment: The Contractor will provide a list of emergency equipment stored at all sites and attach to the Emergency Release Response form.	
13. Site Map/ Storage Map: The Contractor will attach a detailed site plan to the Emergency Release Response form that designates hazardous material and waste storage, use, dispensing, or handling areas; storm drain and sewer inlets; access points; and names and locations of adjacent streets.	

Appendix B
Spill Log/Report

SPILL LOG REPORT

Contract #:		Project #:
Please circle the appropriate information: INITIAL / FINAL REPORT REPORTABLE / NON-REPORTABLE QUANTITY SPILL		
1. Log Prepared by:		
Name:	Date:	
Email:	Phone:	
2. Location of the Spill		
Address/Tower/GPS:		
City:	State:	Zip Code:
County:	Nearest Road:	
Latitude:	Longitude:	
3. Specific Spill Information:		
Date of Spill:	Time of Spill:	
Material Spilled:		
Quantity Spilled:		
Media Affected (Circle one): Concrete / Asphalt / Water / Vegetation / Soil / Other If other, please specify:		
Source of Spill Info (Equip ID):		
Additional Comments:		
Cause of Spill:		
5. Extent of Spill:		
6. Potential Threat to Surface and/or Groundwater, Human Health (Affect Groundwater/ residential areas, etc.):		
7. Response and Cleanup Action Taken:		
8. Regulatory Notification:		
Date:	Time:	

Individual (First, Last):	Agency:
Phone #:	Purpose/ Comments:
Date:	Time:
Individual (First, Last):	Agency:
Phone #:	Purpose/ Comments:
9. Additional Information:	

Appendix C
Emergency Release Response Form

EMERGENCY RELEASE RESPONSE FORM

1. Project:	
2. Site Name:	
3. Site Address / Location:	
4. Prepared By:	
Name:	Date:
Title:	Role:
Email:	Phone:
5. Primary Emergency Contact	
Name:	Title:
Role	Phone:
Responsibilities:	Cellular Phone (24 Hr Contact):
Email address (if applicable):	
6. Secondary Emergency Contact	
Name:	Title:
Role	Phone:
Responsibilities:	Cellular Phone (24 Hr Contact):
Email address (if applicable):	
7. The Contractor will provide a list of emergency response personnel for the site, in addition to those in the Emergency Contact sections above and attach to the Emergency Release Response form. Include the name, title, role, responsibility, telephone, and email address for each person listed.	
8. Emergency Notification:	
a. The Contractor is required to comply with State and federal law and the project Hazardous Materials Management Plan when reporting releases or threats of releases of hazardous materials. Describe the internal emergency notification procedure for the site.	
b. In case of emergency, the Contractor will dial 911 immediately.	
c. The Contractor will contact SCE and the CPUC or BLM Environmental Monitor after emergency service personnel are notified.	
d. Contact the local CUPA, California Emergency Management Agency, and National Response Center as required by State and federal law and the project Hazardous Materials Management Plan.	
9. Emergency Medical Facility	
Facility Name:	Phone:
Address:	
City:	Zip Code:

9. Documentation: The Contractor will complete the Spill Log/Report Form when a release or threat of release of a hazardous material or waste occurs. The Contractor will comply with State and federal law and the project Hazardous Materials Management Plan when documenting releases or threats of releases.	
10. Cleanup and Disposal Contractor:	
Name:	Phone:
Address:	
City:	Zip Code:
11. Emergency Equipment: The Contractor will provide a list of emergency equipment stored at the site and attach to the Emergency Release Response form.	
12. Site Map/Storage Map: The Contractor will attach a detailed site plan to the Emergency Release Response form that designates hazardous material and waste storage, use, dispensing, or handling areas; storm drain and sewer inlets; access points; and names and locations of adjacent streets.	

Appendix D
List of Regional Water Quality Control Board-certified Treated Wood Waste Landfills

FACILITY NAME	COUNTY	FACILITY'S SITE ADDRESS	CITY	ZIP CODE	FACILITY'S CONTACT NUMBER
Altamont Landfill and Resource Recovery Facility	Alameda	10840 Altamont Pass Road	Livermore	94551	(800)449-6349
Rock Creek Solid Waste Facility	Calaveras	12021 Hunt Road	Milton	95230	(209)754-6402
Keller Canyon Landfill	Contra Costa	901 Bailey Road	Pittsburg	94565	(925)625-4711
American Avenue Disposal Site	Fresno	18950 W American Avenue	Kerman	93630	(559)846-6138
Allied Imperial Landfill	Imperial	104 East Robinson Road	Imperial	92251	(760)355-0004
Clean Harbors, Buttonwillow, LLC	Kern	2500 West Lokern Road	Buttonwillow	93206	(805)208-8518
Metropolitan Bakersfield (Bena) Sanitary Landfill	Kern	2951 Neumarkel Road	Caliente	93518	(661)862-8900
Waste Management Inc. McKittrick Site	Kern	56533 Highway 58 West	McKittrick	93251	(661)762-7366
CWMI Kettleman Hills Facility	Kings	35251 Old Skyline Road	Kettleman City	93239	(559)386-9711
Eastlake Sanitary Landfill	Lake	16015 Davis Ave	Clearlake	95422	(707)994-5888
Burbank Landfill (Stough Park)	Los Angeles	1600 North Bel Aire Drive	Burbank	91504	(818)238-3915
Puente Hills Landfill #6	Los Angeles	13130 Crossroads Parkway South	Industry	91746	(562)699-7411
Sunshine Canyon Sanitary Landfill County Extension	Los Angeles	14747 San Fernando Road	Sylmar	91342	(818-833-6513
Chiquita Canyon Landfill	Los Angeles	29201 Henry Mayo Drive	Valencia (In Santa Clarita)	91355	(661)257-3655
Calabasas Sanitary Landfill	Los Angeles	2800 S. Workman Mill Road	Whittier	90601	(562)699-6028 x6005
Savage Canyon Landfill	Los Angeles	13919 East Penn Street	Whittier	90602	(562)907-7750
Johnson Canyon Sanitary Landfill	Monterey	31400 Johnson Canyon Road	Gonzales	93926	(831)675-2165

Appendix E
List of SCE-Approved Hazardous Waste Facilities and Transporters

SCE-Approved Hazardous Waste Facilities

Location	Address
Azusa Land Reclamation	1211 West Gladstone Azusa, CA 91702
Clean Harbors Aragonite, LLC	11600 North Aptus Road, Exit 56 Aragonite, UT 84029
Clean Harbors, Buttonwillow, LLC	2500 West Lokern Road Buttonwillow, CA 93206
Clean Harbors Coffeyville	2474 North US Highway 169 Coffeyville, KS 67337
Clean Harbors Deerpark Tx	2027 Independence Parkway South La Porte, TX 77571
Clean Harbors Grassy Mountain	3 Miles East, 7 Miles North of Knolls, Exit 41 off I-80 Grantsville, UT 84029
Clean Harbors Los Angeles, LLC	5756 Alba Street Los Angeles, CA 90058
Crosby & Overton	1610 West 17th Street Long Beach, CA, 90813
Demenno Kerdoon (Compton Facility Only)	2000 North Alameda Street Compton, CA 90222
E-Recycling	7230 Petterson Lane Paramount, CA 90723-2022
eWaste Center Inc.	5788 Smithway Street Commerce, CA 90040
IMS Electronics Recycling	12455 Kerran Street, Suite 300 Poway, CA 92064
Kettleman Hills	35251 Old Skyline Road Kettleman City, CA 93239
Kinsbursky Brothers	125 East Commercial Street #A Anaheim, Ca 92801-1214
US Ecology	Nevada Highway 95, 12 Miles South of Beatty, NV
Veolia ES Technical Solutions, LLC	1704 West First Street Azusa, CA 91702
Clean Harbors El Dorado, LLC	309 American Circle El Dorado, AR 71730
Clean Harbors Kimbell, Inc.	2247 South Highway 71 Kimball, NE 69145
Clean Harbors Deer Trail, LLC	108555 East Highway 36 Deer Trail, CO 80105
Clean Harbors Arizona, LLC	1340 West Lincoln Street Phoenix, AZ 85007
Clean Harbors of San Jose, LLC	1040 Commercial Street San Jose, CA 95112
Clean Harbors Wilmington, LLC	1737 East Denni Street Wilmington, CA 90744
Clean Harbors Colfax, LLC	3763 Highway 471 Colfax, LA 71417
Clean Harbors LaPorte, LLC	500 Battleground Road La Porte, TX 77571
Transformer Technologies	4709 Turner Road SE Salem, OR 97317

Location	Address
A-line Environmental Decommission Service	808 Dearborn Avenue Waterloo, IA 50703
Apex Drum	6228 Ferguson Drive Commerce, CA
Bethlehem Apparatus	890 Front Street Hellertown, PA
Bethlehem Apparatus	Bethlehem, PA
Cylinder Depot, Inc (Formerly Universal Cylinder Exchange)	692 North Cypress Street
Demeno Kerdoon (NOTE: DK SISTER SITE VERNON, CA IS NOT APPROVED FOR	2000 North Alameda Street Compton, CA
Electronic Recyclers International, LLC	2860 South East Avenue Fresno, CA
Energy Solutions of Utah; formerly ENVIROCARE OF UTAH (Only Approved)	423 West 300 South Salt Lake City, UT
E-Recycling of California	7230 Petterson Lane Paramount, CA
E-World Recyclers	2480 Ash Street Vista, CA
Filter Recycling	180 West Monte Avenue Rialto, CA
Industrial Container Services	1540 South Greenwood Avenue Montebello, CA
Kinsbursky Brothers Inc.	125 East Commercial Street #A Anaheim, CA
Siemens Industry, Inc	5375 S. Boyle Avenue Los Angeles, CA
Soil Safe of California, Inc (Previously TPS)	12328 Hibiscus Road Adelanto, CA
Ted Levine Drum Co	1817 Chico Avenue So. El Monte, CA
Thermal Remediation Solutions, LLC	1211 West Gladstone Street Azusa, CA
THOMAS GRAY & ASSOCIATES INC. (Only Approved for use via an Approved Road)	1205 West Barkley Avenue Orange, CA
US Ecology Idaho, Inc.	10.5 miles NW on HWY 78, Lemley Road Grand View, ID
WM Mercury Waste Inc (Mercury Waste Solutions)	21211 Durand Avenue Union Grove, WI
Waste Management Asset Recovery Group, Southeast Center (Lamp Tracker)	221 North 48th Avenue Phoenix, AZ

Approved Hazardous Waste Transporter List Updated June 23, 2016

Hazardous Waste Transporter Name	Address (if available)	Notification of PCB Activity	Notes
American Integrated Services, Inc.	1502 East Opp Street Wilmington, CA 90744	Yes	
Asbury Environmental Services		Yes	
Avalon Freight Line			New transporter approved May 2016. HW Transporter Registration 6465; EPA ID CAR000262600
C&H Veteran Enterprises Inc.	3208 West Capitol Ave, West Sacramento, CA 95691		US DOT#1702380; EPA IDCAR000153395. Patricio Romero reviewed and approved use 6/22/16. PSC subcontracted C&H for heavy haul project under Transformer Technologies.
Clean Harbors Environmental Services Inc.		Yes	
Clean Tech Environmental		Yes	
Cummings Transportation	19609 Broken Ct Shafter, CA, 93263	Yes	
Denbeste Transportation Inc.		Yes	
Double Barrel Environmental		Yes	
Ecology Control Industries (ECI)		Yes	
Environmental Logistics Inc.		Yes	
Emerald Transformer	5756 Alba Street Los Angeles, CA, 90058		
Haz Mat Trans Inc.		Yes	
Karcher Environmental Inc.		Yes	
K-Vac	8910 Rochester Avenue Rancho Cucamonga, CA 91730		
Lee's Trucking		No	
Lutrel Trucking, Inc.		Yes	
MP Vacuum Services/MP Environmental Services	3400 Manor Street Bakersfield, CA, 93308	Yes	
Nieto and Sons Trucking, Inc.		Yes	
OC Vacuum		Yes	
Patriot Environmental Services	Long Beach, CA 90802	Yes	
PFR Environmental	14266 Dalewood St #A, Baldwin Park, CA 91706	N/A	Approved by Patricio Romero 5/12/15- Motor Carrier Permit #CA0000572
PSC		Yes	
Remedial Transportation Services (RTS)		Yes	Patrico Romero reviewed in 11/2014 they were approved. Patricio reviewed 4/6/16 and RTS was approved (satisfactory) and remains under 50% below the National Safety Rating. EPA ID: CAR000181560 / Federal Motor Carrier Number 1089698.
Thomas Gray & Associates		Yes	
United Pumping Services	14016 East Valley Blvd	Yes	

APPENDIX N

Soil Management Plan

TLRR: Eldorado-Pisgah-Lugo Project

Soil Management Plan

Prepared for
Southern California Edison

December 2022

Prepared by
Arcadis U.S., Inc.

Applicable Agencies

Bureau of Land Management	☒
California Public Utilities Commission	☒
National Park Service	☒

Conservation and Management Actions Addressed:

DRECP LUPA CMAs LUPA-SW-6 through LUPA-SW-11

Contents

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Acronyms and Abbreviations

BLM	Bureau of Land Management
CEQA	California Environmental Quality Act
CPUC	California Public Utilities Commission
EPA	Environmental Protection Agency
EPL	Eldorado-Pisgah-Lugo
NEPA	National Environmental Protection Act
NPS	National Park Service
PCB	polychlorinated biphenyl
PEA	Proponent's Environmental Assessment
SCE	Southern California Edison
SVOC	semi-volatile organic compound
VOC	volatile organic compound

1.0 Introduction

This Soil Management Plan (Plan) for Southern California Edison's (SCE) Eldorado-Pisgah-Lugo (EPL Project or Project) presents activities including identifying, assessing, excavating, storing, sampling, and disposing of soil.[1] The Soil Management Plan provides guidance for identifying the proper handling, onsite management, and disposal of soil that may be encountered during construction activities.

This Plan is based on information in the EPL Project Proponent's Environmental Assessment (PEA). In the event revisions are made to the Plan, based on final engineering or receipt of final environmental clearance document(s), the revised Plan will be provided to the California Public Utilities Commission (CPUC), Bureau of Land Management (BLM), and National Park Service (NPS).

1.1.1 Project Overview

Through the EPL Project, SCE proposes to remediate physical clearance discrepancies on four existing transmission circuits. The EPL Project includes the following components to remediate the identified discrepancies.

1.1.1.1 Transmission

The EPL Project would install new, and replace existing infrastructure along portions of existing 220 kV transmission lines by:

- Installing new inter-set transmission structures and replacing or modifying the existing hardware on adjacent structures.
- Replacing the insulator assemblies on some existing structures that are not adjacent to new inter-set transmission structures.
- Removing existing conductor and installing new 609.5 Irving Aluminum Conductor Composite Core Ultra-Low Sag transmission conductor on existing structures.
- Removing existing overhead groundwire and installing 7#7 Alumoweld overhead groundwire on existing structures for system protection.

1.1.1.2 Substations

The EPL Project would include the following substation-related work:

- Disconnect existing conductor from existing positions at the existing Pisgah Switchyard and Cima Substation and connect newly installed conductors to existing substation positions.
- Remove existing overhead groundwire and install new overhead groundwire at the existing Pisgah Switchyard and Cima Substation. Make minor modifications to the existing terminal racks to accommodate the new overhead groundwire.
- Update, as necessary, relay settings at the existing Lugo, Cima, and Eldorado substations and at the existing Pisgah Switchyard.

[1] Management of soils to suppress wind erosion of soil (aerosolization and saltation of soil particles) leading to generation of fugitive dust is addressed in the Fugitive Dust Control Plan.

1.2 Project Location

The EPL Project is located in unincorporated San Bernardino County and in the City of Hesperia in California, and in unincorporated Clark County and in the City of Boulder City in Nevada. The EPL Project is located on federal lands managed by the BLM and the NPS, on State lands, and on private property.

1.3 Lead, Cooperating, and Consulting Agencies

Lead agencies have discretionary approval over the EPL Project and are responsible for reviewing aspects of the measures documented in this Plan. The CPUC is the state lead agency responsible for compliance with the California Environmental Quality Act (CEQA) for Project areas on non-federal lands. The BLM is the federal lead agency responsible for compliance with National Environmental Policy Act (NEPA) for the Project areas on federal lands. Identified materials or documentation will be provided to the CPUC, BLM, and NPS.

Because the Project also crosses lands managed by the NPS, this agency as well as the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and U.S. Environmental Protection Agency are participating as a Cooperating Agency for the environmental review of the Project.

Consulting agencies are public agencies, other than the lead agencies, that may provide guidance or information needed to satisfy the requirements of the measures contained in this Plan. Consulting agencies have not been identified.

1.4 Land Management Plan Measures

1.4.1 Desert Renewable Energy Conservation Plan Land Use Plan Amendment Conservation and Management Actions

The BLM has identified the Conservation and Management Actions (CMAs) listed in Table 1 for reference and incorporation in this Plan.

Table 1 Conservation and Management Actions

CMA	Description
LUPA-SW-6	In addition to the applicable required governmental safeguards, third party activities will implement up-to-date standard industry construction practices to prevent toxic substances from leaching into the soil.
LUPA-SW-7	Prepare an emergency response plan, approved by the BLM contaminant remediation specialist, that ensures rapid response in the event of spills of toxic substances over soils.
LUPA-SW-8	As determined necessary on an activity specific basis, prepare a site plan specific to major soil types present (≥5% of footprint or laydown surfaces) in Wind Erodibility Groups 1 and 2 and in Hydrology Soil Class D as defined by the USDA Natural Resource Conservation Service to minimize water and air erosion from disturbed soils on activity sites.
LUPA-SW-9	The extent of desert pavement within the proposed boundary of an activity shall be mapped if it is anticipated that the activity may create erosional or ecologic impacts. Mapping will use the best available data and standards, as determined by BLM. Disturbance of desert pavement within the boundary of an activity shall be limited to the extent possible. If disturbance from an activity is likely to exceed 10% of the desert pavement mapped within the activity boundary, the BLM will determine whether the erosional and ecologic impacts of exceeding the 10% cap by the proposed amount would be insignificant and/or whether the activity should be redesigned to minimize desert pavement disturbance.
LUPA-SW-10	The extent of additional sensitive soil areas (cryptobiotic soil crusts, hydric soils, highly corrosive soils, expansive soils, and soils at severe risk of erosion) shall be mapped if it is anticipated that an

CMA	Description
	activity will impact these resources. To the extent possible, avoid disturbance of desert biologically intact soil crusts, and soils highly susceptible to wind and water erosion.
LUPA-SW-11	Where possible, side casting shall be avoided where road construction requires cut- and-fill procedures.

1.4.2 Mojave National Preserve General Plan

No components of the Mojave National Preserve General Plan are applicable to the activities described in this Plan.

1.5 Applicable Activities and Project Areas

The activities addressed in this Plan are as follows:

- Construction work, including ground-disturbing activities

This Plan is applicable to all components of the Project, including transmission, substation, civil engineering, and pre-construction and post-construction restoration work that involve ground-disturbing activities.

1.6 Timing

The measures described in this Plan are applicable during the construction and postconstruction periods of the Project.

2.0 Methods

The EPL Project PEA document determined that pre-existing soil or groundwater contamination could be encountered during excavation and other surface disturbance associated with the EPL Project, and identified that implementation of a Soil Management Plan would reduce potential impacts to a less than significant level. The following sections include descriptions of soil management actions and the responsibilities and coordination between the construction contractor and SCE and between SCE and the CPUC, BLM and/or NPS.

2.1 Soil Management Plan

2.1.1 Clean Soil

Soil is considered clean if it is not impacted with any constituents of potential concern such as dioxins, furans, polyaromatic hydrocarbons, total petroleum hydrocarbons, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, herbicides, polychlorinated biphenyls (PCBs), asbestos, metals, and radioactive materials above regional background levels.

2.1.1.1 Soil Management Options for Clean Soil

There are various options for the management of clean soil. Clean soil may often be re-used on the project site or near the project site as long as the end use meets with any restrictions imposed by any regulatory agency. If excess soil cannot be managed on the project site, but a viable use option is identified at another location, there are instances in which the soil may be transported and re-used at a location other than the project site. The Project Manager shall contact SCE's Corporate Environment Safety and Health, Water/Waste and Environmental

Engineering's Hazardous Waste Section representatives to review soil data for the site, any needed data from the receiving facility as well as the viability of the proposed usage option. Should questions concerning long-term liability arise, SCE's Law Department will also be contacted for concurrence on the proposed use of the soil. Clean soil that will not be re-used at the project site or at an alternative location shall be disposed of at a facility approved by SCE for the recycling or disposal of non-hazardous waste materials. The most recent list containing the names and addresses of approved recycling and disposal facilities for non-hazardous waste materials is provided in Attachment A.

2.1.2 Non-Hazardous Contaminated Soil

Non-hazardous contaminated soil consists of soil impacted with a constituent of potential concern or multiple constituents of potential concern at concentrations above regional background levels, but not at levels that would result in characterization of the soil as hazardous waste. Non-hazardous contaminated soil would be so-determined by SCE subject matter experts utilizing applicable regulations in force at the time of determination.

2.1.2.1 Soil Management Options for Non-Hazardous Contaminated Soil

For the most part, non-hazardous contaminated soil would be disposed of at a facility approved by SCE for the recycling or disposal of non-hazardous waste materials. The most recent list containing the names and addresses of approved recycling and disposal facilities for non-hazardous waste materials can be found in Attachment A. If on-site usage of contaminated soil is being proposed, the Project Manager shall contact SCE's Corporate Environment Safety and Health, Water/Waste and Environmental Engineering's Hazardous Waste Section representatives to review soil data for the site, and evaluate the proposed end-use of the material. Should questions concerning long-term liability arise, SCE's Law Department will also be contacted for concurrence on the proposed use of the soil. The Project Manager will also contact the BLM Project Manager and/or their NPS equivalent regarding the proposed end-use of the material; the BLM Project Manager may engage the DOI Solicitor's Office for concurrence on the proposed use of the soil.

2.1.3 Hazardous Contaminated Soil

Hazardous contaminated soil consists of soil impacted with a constituent of potential concern or multiple constituents of potential concern at concentrations that would result in the waste being characterized as hazardous waste. Hazardous contaminated soil would be so-determined by SCE subject matter experts utilizing applicable regulations in force at the time of determination.

2.1.3.1 Soil Management Options for Soil Meeting Hazardous Waste Criteria

If SCE and BLM or NPS determine that soil excavated at an SCE project site on lands managed by the BLM or NPS meets the criteria for classification as a hazardous waste, the soil will be properly containerized and marked with required information including the following:

- The date of first accumulation,
- The words "Hazardous Waste",
- Composition and physical state of the waste,
- Statement or statements which call attention to the particular hazardous properties of the waste (i.e., ignitable, corrosive, reactive, and/or toxic) per 40 CFR 261.21-261.24, and
- The name and address of the person producing the waste.

In addition, prior to shipping the waste from the site, the following information must also be included on the container:

- Hazardous Waste – State and Federal Law Prohibit Improper Disposal. If found contact the nearest police or public safety authority, the U.S. Environmental Protection Agency (EPA) or the California Department of Toxic Substances Control,
- Generator's EPA Identification Number name and address of the generator/generating location, and
- The Manifest Tracking Number.

Hazardous contaminated soil will be disposed of at a facility approved by SCE or BLM or NPS (depending on jurisdiction) for the recycling or disposal of hazardous waste materials. The most recent list containing the names and addresses of approved hazardous waste disposal facilities can be found in Attachment B. Under no conditions shall hazardous waste be disposed of at a facility not on this list unless approval has been received in writing from SCE's Corporate Environment Safety and Health, Water/Waste and Environmental Engineering's Hazardous Waste Section.

2.1.4 On-Site Soil Management

Soil will be managed on-site during construction through the implementation of best management practices (BMPs) included in the stormwater pollution prevention plan(s) developed for the project. Typical BMPs that may employed to address soil erosion- and runoff-related soil management concerns are presented in the sections below.

2.1.4.1 Erosion

The following BMPs may be implemented to manage erosion:

- EC-1, Scheduling. The construction team shall reduce the discharge of pollutants to storm drain facilities caused by construction activities by scheduling activities in a manner that will limit exposure of disturbed soils to wind, rain, non-storm water run-off and storm water run-on and run-off.
- EC-2, Preservation of Existing Vegetation. The construction team will protect and preserve existing vegetation in work areas as long as practicable before disturbing them. The construction team shall also preserve and protect existing vegetation adjacent to work areas. This protection and preservation of such vegetation will serve to control erosion and filter out sediment.
- EC-3, Hydraulic Mulch. The construction team will implement this BMP, if necessary, to disturbed soil areas requiring temporary protection until permanent stabilization is established, and disturbed areas that will be re-disturbed following an extended period of inactivity.
- EC-4, Hydroseeding. The construction team will implement this BMP, if necessary, to disturbed soil areas requiring temporary protection until permanent stabilization is established, and disturbed areas that will be re-disturbed following an extended period of inactivity.
- EC-5, Soil Binders. The construction team will implement this BMP, if necessary, to disturbed soil areas requiring short term temporary protection. Because soil binders can often be incorporated into the work, they are a good alternative to mulches in areas where grading activities will soon resume. Soil binders are also suitable for use on stockpiles. Non-toxic soil binders, equivalent or better in efficiencies than the CARB-approved soil binders, shall be applied per the manufacturer recommendations to active unpaved roadways, unpaved staging areas, and unpaved parking area(s) throughout

construction to reduce fugitive dust emissions. Soil binders will be non-toxic and MSDS will be present at site.

- EC-6, Straw Mulch. The construction team will implement this BMP, if necessary, to disturbed soil areas requiring temporary protection until permanent stabilization is established, and disturbed areas that will be re-disturbed following an extended period of inactivity. Straw mulch will be certified weed free.
- EC-7, Geotextiles and Mats. The construction team will implement one or more of these measures to stabilize disturbed soil areas (stockpiles, slopes, embankments, conveyances, etc.) and protect these soils from erosion by rain, wind or storm water run-on and run-off where applicable to reduce soil erosion from wind and rain. Plastic micro-filament matting will not be used, only natural fiber mats to prevent trapping of birds and reptiles.
- EC-8, Wood Mulch. The construction team will implement this BMP, if necessary, to disturbed soil areas requiring temporary protection until permanent stabilization is established, and disturbed areas that will be re-disturbed following an extended period of inactivity. Wood mulch shall be untreated.
- EC-15, Soil Preparation and Roughening. The construction team will implement this BMP to assess and prepare surface soils for other BMP installation. This can include soil testing (for seed base, soil characteristics, or nutrients), as well as roughening surface soils by mechanical methods (including sheepsfoot rolling, track walking, scarifying, stair stepping, and imprinting) to prepare soil for additional BMPs, or to break up sheet flow. Soil preparation can also involve tilling topsoil to prepare a seed bed and/or incorporation of soil amendments, to enhance vegetative establishment.
- EC-16, Non-Vegetative Stabilization. The construction team will utilize non-vegetative stabilization methods for temporary or permanent stabilization of areas prone to erosion; this would be used only where vegetative options are not feasible.
- WE-1, Wind Erosion Control. The construction team will apply water or other chemical dust suppressants as necessary to prevent or alleviate dust nuisance generated by construction activities. Covering small stockpiles or areas is an alternative to applying water or other dust palliatives.

2.1.4.2 Runoff

The following BMPs may be implemented to manage storm water runoff and sediment:

- SE-4, Check Dam. The construction team will implement this BMP to reduce scour and channel erosion by reducing flow velocity and increasing residence time within the channel, allowing sediment to settle.
- SE-5, Fiber Rolls. The construction team will implement this BMP to eliminate the erosion of slopes. The rolls are widely used to prevent sediment from running off site.
- SE-6, Gravel Bag Berm. The construction team will implement this BMP to eliminate erosion of slopes. This BMP is particularly useful with steep slopes and a high potential for runoff.
- SE-7, Street Sweeping and Vacuuming. The construction team will implement this BMP when soils and miscellaneous debris are tracked from the construction site to areas outside the site. This measure prevents sediments from reaching the drop inlets and stormwater system, and prevents unsafe driving conditions.
- SE-10, Storm Drain Inlet Protection. The construction team will implement this BMP if any runoff from the construction site drains directly into a drop inlet. The protection will prevent debris and soils from clogging drop inlets and storm drain systems.

- TC-1, Stabilized Construction. The construction team will implement this BMP to remove all construction site soil and miscellaneous debris prior to leaving the site. The BMP will depend on the soil, site, and type of surface outside the yard.
- TC-2, Stabilized Construction Roadway. A stabilized construction roadway is a temporary access road. It is designed for the control of dust and erosion created by vehicular tracking.
- WM-3, Stockpile Management. The construction team will implement this BMP whenever there are stockpiles of asphalt, concrete, wood, or soil. This includes temporary stockpiles and stockpiles existing for periods longer than one working day.

2.1.5 Imported Fill

SCE does not anticipate the need to import fill under the EPL Project. If the importation of fill becomes necessary, SCE will obtain authorization for the importation from the relevant landowner or land management agency. The Invasive Plant Management Plan for the EPL Project includes guidelines for soil, gravel, mulch, or fill material to be imported for the EPL Project, transported from site to site along the EPL Project alignment, or transported from the EPL Project area to an off-site location, to prevent the introduction or spread of invasive plants to or from areas utilized under the EPL Project.

3.0 Plan Approval

This Plan has been prepared as described in the EPL Project Description. SCE is not presently requesting review or approval of this Plan. This Plan will be amended to incorporate and reflect any mitigation measures imposed on the EPL Project by the CPUC, BLM, or NPS during each agency's respective project approval process. Following such revisions, and as required in any mitigation measure imposed on the EPL Project, SCE will request approval of this Plan by the CPUC, BLM and/or NPS.

4.0 Revisions

Date	Description of Revision	Contact

ATTACHMENT A
SCE Approved Non- Hazardous Waste Disposal Facilities

Site Name	County/State	Address & Contact Info	Facility Type		Site Accepts						Total Petroleum Hydrocarbon Limits (ppm)			Site Accepts Non-Haz levels of Arsenic (ppm)	Site Accepts Non-Haz levels of PCBs	Size Restriction for Concrete Waste and/or Debris	Days and Hours of Operation for Waste Disposal	Notes
			Landfill (L) Recycler(R) Other (O)	Class	Soil	Concrete	Asphalt	Treated Wood	Construction Debris	Out of County Waste	Gasoline Range TPH	Diesel Range TPH	Oil Range TPH					
Rice Road Transfer Station	Fresno, CA	10463 N. Rice Road, Fresno, CA 93730 (559) 434-9211 (0#, ask for Roman)	R	NA	Y	Y	Y		Y	Y	N	N	N	No testing required forasphalt	N		M-F 7:00am-4:30pm Sat 8:00am-2:00pm	
Kroeker Recycling	Fresno, CA	4627 South Chestnut Avenue Fresno, CA 93725 (559) 237-3764	R	NA	N	Y	Y		Y	Y	NA	NA	NA		N			Send report to garym@kroekerinc.com for approval prior to shipping. Requires approval of analytical data.
Granite Bishop	Inyo, CA	5 Bridges Rd, Bishop, CA 93514 (661) 331-3215	R	NA	N	Y	Y		Y	Y	110	2,500	2,500		N		M-F 7:00am-3:00pm	
Bishop-Sunland Landfill	Inyo, CA	110 Sunland Res Road, Bishop, CA, 93526 (760) 872-4126	L	III	Y	Y	Y	N	Y	N	Case-by-case	Case-by-case	No		N		M-F 7:30am-3:30pm	Contacts are Jerry Oser (760) 878-8485 [Head of Env. Health Dept.] and Sarah Petersen (760) 878-8489 [Assistant]
Bena Landfill	Kern, CA	2951 Neumarkel Rd, Bakersfield, CA 93307 (661) 862-8900	L/R	III	Y	Y	Y		Y	N	≤500	≤1,000	≤1,000		N	2' x 2'	7 days a week 8:00am-4:00pm	Call Victor Estrada (661) 862-8923 or (661) 699-0895 for profile. Call Terrance Dozier (661) 809-4456 for scheduling.
Bertrand Enterprises	Kern, CA	1210 Graaf Ave., Ridgecrest, CA 93555 (760) 446-6600	R	NA	Y	Y	Y		N	Y	Small Loads	Small Loads	Small Loads		N	2' x 2'	M-F 7:30am-3:30pm	No protruding rebar; Will accept small loads (<20cy) of TPH-impacted soil, but contact Robert in advance (760) 446-6600
Boron Sanitary Landfill	Kern, CA	11400 Boron Ave., Boron, CA 93516 (661) 862-8900	L	III	Y	Y	Y		Y	N	N	N	N		N	2' x 2' x 1'		Call Victor Estrada (661) 862-8923 or (661) 699-0895 for profile. Call Terrance Dozier (661) 809-4456 for scheduling.
Clean Harbors Buttonwillow	Kern, CA	2500 Lokern Rd., Buttonwillow, CA 93206 (661) 762-6200	L	I	Y	Y	Y	N	Y	Y	Any	Any	Any		NA			
Granite Construction	Kern, CA	3005 James Road, Bakersfield, CA 93308 (661) 399-3361	R	NA	N	Y	Y	N	N	Y	110	2,500	2,500		N		M-F 8:00am-5:00pm	No rebar in concrete. No TPH limits but will only accept if it is on a small percentage of the total concrete volume
McKittrick Waste Landfill	Kern, CA	56533 Highway 58, West McKittrick, CA 932501 (661) 762-7366	L	II	Y	Y	Y	Y	Y	Y	<5,900	<20,000	<10,000	<50	N	No restrictions	M-F 8:00am-4:00pm	Accepts liquids
Mojave-Rosamond Sanitary Landfill	Kern, CA	400 Silver Queen Road, Mohave, CA 93501 (661) 862-8976	L	III	Y	Y	Y	Y	Y	N	N	N	N		N	2' x 2' x 1'	Sun, Tues, Thurs: 8:00am-12:00pm Mon, Weds, Fri, Sat:8:00am-4:00pm	
Ridgecrest- Inyokern Sanitary Landfill	Kern, CA	3301 Bowman Road, Ridgecrest, CA 93555 (661) 862-8976	L	III	Y	Y	Y	N	Y	N	N	N	N		N	2' x 2' x 1'	M-F 8:00am-4:00pm	
Shafter-Wasco Landfill	Kern, CA	17621 Scofield Ave., Shafter, CA 93263 (661) 862-8900	L	III	Y	Y	Y	N	Y	N	≤500	≤1,000	≤1,000	<500 if passes TCLP and STLC				
Taft Landfill	Kern, CA	13351 Elk Hills Rd., Taft, CA 93268 (661) 862-8900	L	III	Y	Y	Y	N	Y	N	≤500	≤1,000	≤1,000	<500 if passes TCLP and STLC				
Tehachapi Sanitation Landfill	Kern, CA	12001 Tehachapi Blvd., Tehachapi, CA 93561 (661) 862-8976	L	III	Y	Y	Y	N	Y	N	N	N	N		N	2' x 2' x 1'	M-F 8:00am-4:00pm	Call Victor Estrada (661) 862-8923 or (661) 699-0895 for profile. Call Terrance Dozier (661) 809-4456 for scheduling.
Avenal Regional Landfill	Kings, CA	201 North Hydrill Road, Avenal, CA 93204 (559) 386-5844	L	III	Y	Y	Y	N	Y	Y	1,000	10,000	50,000	<500 ppm in soil if passesSTLC and TCLP	N			Call Matt (805) 720-2753 with questions
Kettleman Hills Hazardous Waste Facility	Kings, CA	35251 Old Skyline Road, Kettleman City, CA93239 (559) 309-7688	L	I	Y	Y	Y	Y	Y	Y	<5,900	<20,000	<10,000		Y			
25th Street Recycling	Los Angeles, CA	2121 East 25th St., Vernon, CA 90058 (323) 583-7913	R	NA	N	Y	Y		N	Y	110	2,500	2,500	No testing required forasphalt	N	2' x 2'	-F 6:30am-11:00pm S 6:00am-6:00pm	
Arrow Transit Mix	Los Angeles, CA	507 E. Avenue L-12, Lancaster, CA 93535 (661) 945-7600	R	NA	N	Y	Y	N	N	Y	N	N	N		N		N/A	
Antelope Valley/Palmdale Landfill	Los Angeles, CA	1200 W. City Ranch, Palmdale, CA 93551 (866) 909-4458	L	III	Y	Y	Y	Y	Y	Y	<14,000	<14,000	<14,000	50	N	N *	M-F 6:00am-4:45pm	Call Lisa Gomez (720) 977-2101 with questions
Long Valley Mineral Material Reclamation Site	Mono, CA	Hot Creek Hatchery Rd. & Airport Rd., Mammoth Lakes, CA 93546 (760) 924-1800	R	NA	N	Y	Y		N	N	110	2,500	2,500		N	2' x 2', larger is charged extra		
Ewles Materials - Irvine Plant	Orange, CA	16081 Construction Cir. W, Irvine, CA 92606 (949) 552-6008	R	NA	N	Y	Y		N	N	110	2,500	2,500		N	3'x3'	M-F 7:00am-4:00pm Sat 7:00am-12:00pm	
Frank Bowerman Landfill	Orange, CA	11002 Bee Canyon Access Road, Irvine, CA 92602 (714) 834-4118	L	III	Y	Y	Y	N*	Y	N	50	100	1,000	8.2	N			
Greenstone Materials	Orange, CA	31507 Ortega Hwy. San Juan Capistrano, CA 92675 (949) 728-0500	R	NA	N	Y	Y		N	Y	110	2,500	2,500		N	2' x 2', larger is charged extra		No rebar in concrete.
Olinda Alpha Sanitary Landfill	Orange, CA	1942 N. Valencia Avenue Brea, CA 92823 (714) 834-4000	L	III	Y	Y	Y	N*	Y	N	50500	1001,000	1,0001,000	4.4	N	N	M-Sat 7:00am-4:00pm	Soil meeting top numbers of TPH and residential RSLs for metals is used as daily cover and is free of charge. Bottom set of TPH is $56.96/ton. Metals in soil must meet residential RSLs in order to avoid charges, industrial RSLs for admittance. Arsenic acceptance is set at 4.4 ppm.
Prima Deschecha Landfill	Orange, CA	32250 La Pata Avenue, San Juan Capistrano, CA 92675 (714) 834-4000	L	III	Y	Y	Y		Y	N	1,000	3,000	3,000	50	N			$56.96/ton, metals must be below TTLC HW criteria, arsenic not accepted over 50 mg/kg.
RJ Noble Company	Orange, CA	15505 E Lincoln Avenue, Orange, CA 92856 (714) 637-1550	R	NA	Y	Y	Y		N	Y	N	N	N	<12	N		M-F 8:00am-5:00pm	For Environmental Questions: (714) 637-1550 x 340
Badlands Sanitary Landfill	Riverside, CA	31125 Ironwood Avenue Moreno Valley, CA 92555 (951) 486-3200	L	III	Y	Y	Y		Y	N	1,000	10,000	75,000		N		M-Sat 6:00am-4:30pm	TPH at conc limits 50, 100, 1000 used as daily cover; Accepts liquid waste
Blythe Sanitary Landfill	Riverside, CA	1000 Midland Road, Blythe, CA 92225 (951) 486-3200	L	III	Y	Y	Y		Y	Y	1,000	10,000	75,000		N			TPH at conc limits 50, 100, 1000 used as daily cover; Accepts liquid waste
Boone Recycled Materials	Riverside, CA	1871 Warren Road, San Jacinto, CA 92582 (877) 516-2322	R	NA	N	Y	Y		N	Y	110	2,500	2,500	No testing required forasphalt	N	2x2		No wire mesh in concrete, rebar must be flush with the concrete ends, no Petromat in asphalt

Site Name	County/State	Address & Contact Info	Facility Type		Site Accepts						Total Petroleum Hydrocarbon Limits (ppm)			Site Accepts Non-Haz levels of Arsenic (ppm)	Site Accepts Non-Haz levels of PCBs	Size Restriction for Concrete Waste and/or Debris	Days and Hours of Operation for Waste Disposal	Notes
			Landfill (L) Recycler(R) Other (O)	Class	Soil	Concrete	Asphalt	Treated Wood	Construction Debris	Out of County Waste	Gasoline Range TPH	Diesel Range TPH	Oil Range TPH					
Chandler Garnet Reclamation	Riverside, CA	5400 North Indian Dr., Palm Springs, CA 92262 (310) 308-8312	R	NA	Y	Y	Y		Y	Y	50	100	500	Soil: 500 No testing required forasphalt	N			Scales: (760) 241-7303 Additional charge for oversize 2' x 2', reinforced concrete, excessive rebar
Desert Recycling Inc.	Riverside, CA	27-105 Sierra Del Sol Thousand Palms, CA 92276 (760) 343-0095	R	NA	Y	Y	Y		Y	Y	N	N	N	N	N	Y		
El Sobrante Landfill	Riverside, CA	10910 Dawson Canyon Road, Corona, CA 92883 (951) 277-5100	L	III	Y	Y	Y	Y	N	Y	500	5,000	50,000	<50	N			Takes awhile to accept out of county waste
Hi Grade Materials	Riverside, CA	38000 Monroe Street, Indio, CA 92203 (760) 244-9325	R	NA	Y	Y	Y	Y	N	Y	110	2,500	2,500	No testing required forasphalt	N			
GreenRock Materials	Riverside, CA	1420 Nandina Ave., Perris, CA 92571 (951) 943-1500	R	NA	N	Y	Y		N	Y	110	2,500	2,500		N	2x2, larger is charged extra		No rebar in concrete.
Lamb Canyon Landfill	Riverside, CA	16411 Lamb Canyon Rd., Beaumont, CA 92223 (951) 486-3200	L	III	Y	Y	Y		Y	N	1,000	10,000	75,000		N			TPH at conc limits 50, 100, 1000 used as daily cover; Accepts liquid waste
Maitri Road Recycling	Riverside, CA	24980 Maitri Rd., Corona, CA 92883 (951) 277-5915	R	NA	Y	Y	Y		N	Y	50	100	500	Soil: 500 No testing required forasphalt	N			Accepts drilling mud. Needs lab data for single jobs >500 CY. Trevor Wood's email: twood@chandlerscorp.com 5/23/2022: Paul Ahn reviewed their Waste Discharge Requirement Notice and approved Maitri Road Recycling to accept mud (hydrovac).
Robertson's Ready Mix	Riverside, CA	13990 Apache Trail, Cabazon, CA 92230 (800) 834-7557	R	NA	N	Y	N		N	Y	110	2,500	2,500	No testing required forasphalt	N			
Vulcan Materials Company - Corona	Riverside, CA	1709 Sherborn St., Corona, CA 92879 (626) 856-6156	R	NA	N	Y	Y		N	Y	110	2,500	2,500		N			
Agua Mansa Landfill	San Bernardino, CA	588 E. Agua Mansa Road Rialto, California 92376 (909) 824-3867	L	III	N	Y	Y		Y	N	110	2,500	2,500		N			WILL NOT ACCEPT MATERIAL FROM SUBSTATIONS. Corporate Office (951) 328-9349. Will accept material from SCE facilites other than Substations but must fill out Form A prior to shipping at http://aguamansaproperties.com
Barstow Sanitary Landfill	San Bernardino, CA	32553 Barstow Road, Barstow, CA 92311 (909) 386-8735	L	III	Y	Y	Y	N	Y	N	1,000	10,000	75,000		N	N	8AM-4:30PM M-Sat	Unrestricted disposal (cheaper) equates to Residential HHRA values, lined cell equates to Industrial HHRA values.
Emery Concrete & Asphalt Recycling	San Bernardino, CA	9689 C Ave., Hesperia, CA 92345 (760) 956-1717	R	NA	Y	Y	Y	N	Y	Y	110	2,500	2,500	No testing required	N			
Hi Grade Materials - Hesperia	San Bernardino, CA	17671 Bear Valley Road, Hesperia, CA 92345 (888) 237-8649	R	NA	N	Y	Y		N	Y	110	2,500	2,500		N			
Hi Grade Materials - Lucerne Valley	San Bernardino, CA	8701 Meridian Rd., Lucerne Valley, CA 92356 (34.4123083, -116.9262306) (888) 237-8649	R	NA	N	Y	Y		N	Y	110	2,500	2,500		N			
Landers Sanitary Landfill	San Bernardino, CA	59200 Winters Road, Landers, CA 92285 (909) 386-8735	L	III	Y	Y	Y	N	Y	N	1,000	10,000	75,000		N	N	8AM-4:30PM M-Sat	Unrestricted disposal (cheaper) equates to Residential HHRA values, lined cell equates to Industrial HHRA values.
MidValley Landfill	San Bernardino, CA	2390 Alder Avenue, Rialto, CA 92376 (909) 386-8701	L	III	Y	Y	Y	Y	Y	N	1,000	10,000	75,000		N	N	7AM-5PM M-F8AM-5PM Sat	Unrestricted disposal (cheaper) equates to Residential HHRA values, lined cell equates to Industrial HHRA values. Needs analytical results for TPH, metals, VOCs, SVOCs, OCPs, PCBs, organophophorus, and herbicides for waste volumes over 20 CY.
One Stop Landscape Supply	San Bernardino, CA	13024 San Timoteo Canyon Road Redlands, CA 92373 (909) 798-1278	R	NA	Y	Y	Y		N	Y	N	N	N	<12	N		730AM-4PM M-Sat	Call to verify they will accept large volumes (greater than one truckload). Pay at time of dumping.
Pangahamo Materials, Inc.	San Bernardino, CA	2300 Texas Street, Redlands, CA 92374 (909) 794-2151	R	NA	Y	Y	Y	N	N	Y	110	2,500	2,500	50	N			
Philadelphia Recycling Mine	San Bernardino, CA	12000 Philadelphia Avenue, Ontario, CA 91752 (951) 685-8343	R	NA	Y	Y	Y		N	Y	N	N	N	50	N			REQUIRES VOCS. Send lab report to vicki@phillyrecmine.com prior to shipping to ensure waste acceptance. No metals exceeding screening levels. Accepts liquid waste. Accepted on case-by-case basis. Will accept drilling mud.
RAMCO - Rialto	San Bernardino, CA	250 East Santa Ana Ave., Rialto, CA 92316 (909) 820-3600 x115	R	NA	N	Y	Y		Y	Y	110	2,500	2,500		N		24/7	Extra cost for concrtee with rebar
San Timoteo Sanitary Landfill	San Bernardino, CA	31 Refuse Road, Redlands, CA 92373 (909) 386-8735	L	III	Y	Y	Y	N	Y	N	1,000	10,000	75,000		N	N	8AM-5PM M-Sat	* Unrestricted disposal (cheaper) equates to Residential HHRA values, lined cell equates to Industrial HHRA values.
Soil Safe	San Bernardino, CA	13238 Hibiscus Road Adelanto, CA 92301 (760) 246-4096	R	NA	Y	N	N		N	Y	Treament available	Treament available	Treament available		N			Thermal treatment of soil containing TPH, more expensive the higher the TPH levels.
Victorville Landfill	San Bernardino, CA	18600 Stoddard Wells Road, Victorville, CA 92395 (909) 386-8701	L	III	Y	Y	Y		Y	N	1,000	10,000	75,000		N	N	8AM-5PM M-Sat	* Unrestricted disposal (cheaper) equates to Residential HHRA values, lined cell equates to Industrial HHRA values.
Vulcan Materials Company - Oro Grande	San Bernardino, CA	20181 National Trails Hwy., Oro Grande, CA 92368 (626) 856-6156	R	NA	N	Y	Y		Y	Y	110	2,500	2,500		N		Mon-Fri 6am-2:30pm Saturday 6am-2:30pm	
Granite Construction - Santa Barbara	Santa Barbara, CA	5335 Debbie Rd., Santa Barbara, CA 93111 (805) 964-9951	R	NA	N	Y	Y	Y	N	Y	110	2,500	2,500		N			
Marborg Industries	Santa Barbara, CA	119 North Quarantina, Santa Barbara, CA 93103 (805) 963-1852	R	NA	Y	Y	Y		Y	Y	N	N	N		N	2x2	Mon-Fri 7am-5pm Saturday 7am-4pm	
South Coast Recycling and Transfer Station	Santa Barbara, CA	4430 Calle Real, Santa Barbara, CA 93110 (805) 681-4345	R	NA	N	Y	Y		Y	N	110	2,500	2,500		N		7AM-5PM M-Sat	
Tajiguas Sanitary Landfill	Santa Barbara, CA	14470 Calle Real, Goleta, CA 93117 (805) 696-1170	L	III	N	Y	Y	Y	Y	N	50	100	1,000		N			PCB dection limit is 0.23 ppm total.
Porterville Rock and Recycle	Tulare, CA	14200 Rd. 284, Porterville, CA 93257 (559) 781-6389	R	NA	Y	Y	Y		N	Y	N	N	N	No testing required forasphalt	N			Soil is case by case basis, call Jerry Cobb to verify volumes prior to sending. No Petromat.

Site Name	County/State	Address & Contact Info	Facility Type		Site Accepts						Total Petroleum Hydrocarbon Limits (ppm)			Site Accepts Non-Haz levels of Arsenic (ppm)	Site Accepts Non-Haz levels of PCBs	Size Restriction for Concrete Waste and/or Debris	Days and Hours of Operation for Waste Disposal	Notes
			Landfill (L) Recycler(R) Other (O)	Class	Soil	Concrete	Asphalt	Treated Wood	Construction Debris	Out of County Waste	Gasoline Range TPH	Diesel Range TPH	Oil Range TPH					
Teapot Dome Landfill	Tulare, CA	21063 Avenue 128 Porterville, CA 93257 (559) 624-7195	L	III	Y	Y	Y		Y	Y	N	N	N	Soil: <500 No testing required for asphalt	N	No restrictions	Mon-Fri 7am-4pm Saturday 8am-4pm	Clean soil accepted. Extensive analytical (WET) needed for potentially impacted soil Email contact Jonah Trevino, JTrevino@co.tulare.ca.us
Visalia Landfill	Tulare, CA	Road 80 North of Avenue 328 Visalia, CA 93291 (559) 624-7195	L	III	Y	Y	Y		Y	Y	N	N	N	Soil: <500 No testing required for asphalt	N	No restrictions	Mon-Fri 7am-4pm Saturday 8am-4pm	Clean soil accepted. Extensive analytical (WET) needed for potentially impacted soil Email contact Jonah Trevino, JTrevino@co.tulare.ca.us
West Coast Sand and Gravel	Tulare, CA	7715 Avenue 296, Visalia, CA 93291 (559) 802-1150	R	NA	N	Y	Y		N	Y	N	N	N	No testing required for asphalt	N	No restrictions		
Santa Paula Materials, Inc.	Ventura, CA	1224 Santa Clara St., Santa Paula, CA 93060 (805) 525-6858	R	NA	Y	Y	Y		N	Y	N	N	N		N		Mon-Fri 7am-3:30pm Saturday 7:30am-3pm	
Simi Valley Landfill	Ventura, CA	2801 Madera Road Simi Valley, CA 93065 (805) 579-7267	L, R	III	Y	Y	Y	Y	Y	Y	1,000	10,000	50,000	50	N			Rebar must be flush with surface. Will accept non-haz levels of arsenic over 12 ppm.
State Ready Mix	Ventura, CA	3127 West Los Angeles Ave., Ventura, CA 93030 (805) 647-2817	R	NA	N	Y	Y		N	Y	110	2,500	2,500		N	2x2	M-F 5am-7pm	Rebar flush with surface
Toland Road Landfill	Ventura, CA	3500 North Toland Road Santa Paula, CA 93060 (805) 525-8217	L	III	N	Y	Y		Y	N	N	N	N		N		M-F 9am-2pm	Only accepts material from zip codes 93015, 93016, 93060, 93061, or 93040, or processed through a Ventura County transfer station or materials recycling facility and originating from those zip codes.
Vulcan Materials Company - Oxnard	Ventura, CA	6029 E. Vineyard Ave., Oxnard, CA 93036 (626) 856-6156	R	NA	N	Y	Y		N	Y	110	2,500	2,500		N	2x2, larger is charged extra		
Apex Regional Landfill	Clark County NV	13550 N. Highway 93, Las Vegas, NV (702) 599-5920	L	NA	Y	Y	Y		Y	NA	NA	NA	NA		N			Call or email Rob Tidwell (702) 599-5907 with acceptance criteria questions tidwellr@republicservices.com
Boulder City Landfill	Clark County NV		L,R	NA						NA					N			
Las Vegas Paving	Clark County NV	4420 S. Decatur Blvd (Corp. Office), Las Vegas, NV (702) 251-5800	R	NA	Y	Y	Y	N	N	NA	N	N	N		N			
Laughlin Regional Landfill	Clark County NV	Needles Highway, 1/4 mile South of Highway 163, Laughlin, NV (702) 735-5151	L	NA	Y	Y	Y		Y	N	N	N	N		N			Call or email Rob Tidwell (702) 599-5907 with acceptance criteria questions tidwellr@republicservices.com
Portable Aggregate Producers	Clark County NV	13055 Old U.S. 95, Boulder City, NV 89005 (702) 556-9682	R	NA	Y	Y	Y		N	NA	110	2,500	2,500		N			
Tonopah Landfill	Clark County NV	377 Jackson Street Tonopah, NV 89049 Ph: (775) 482-8135	L	NA	Y	Y	Y	Y	Y	NA	100	100	100		N			No liquids
La Paz County Regional Landfill	La Paz, AZ	26999 Highway 95, Milepost 128 Parker, AZ 85344 (928) 669-8886	L	NA	Y	Y	Y		Y	NA	N	N	N		N			

Attachment B
SCE Approved Hazardous Waste Disposal Facilities

Facility Location	Facility Address
Azusa Land Reclamation	1211 W. Gladstone, Azusa, CA 91702
Clean Harbors Aragonite, LLC	11600 North Aptus Road, Exit 56, Aragonite, UT 84029
Clean Harbors, Buttonwillow, LLC	2500 West Lokern Road, Buttonwillow, CA 93206
Clean Harbors Coffeyville	2474 North US Highway 169, Coffeyville, KS 67337
Clean Harbors Deerpark Tx	2027 Independence Parkway South, La Porte, TX 77571
Clean Harbors Grassy Mountain	3 Miles East, 7 Miles North of Knolls, Exit 41 off I-80, Grantsville, UT 84029
Emerald Transformer Los Angeles	5756 Alba Street, Los Angeles, CA 90058
Crosby & Overton	1610 W. 17th St., Long Beach, CA, 90813
Demenno Kerdoon (Compton Facility Only)	2000 N. Alameda Street, Compton, CA 90222
E-Recyclinig	7230 Petterson Lane, Paramount, CA 90723-2022
eWaste Center Inc.	5788 Smithway St. Commerce, CA 90040
IMS Electronics Recycling,	12455 Kerran Street, Suite 300, Poway, CA 92064
Kettleman Hills	35251 Old Skyline Rd, Kettleman City, CA 93239
Kinsbursky Brothers	125 E. Commercial St. #A, Aneheim, Ca 92801-1214
US Ecology, Nevada	Highway 95, 12 Miles South of Beatty, NV
Veolia ES Technical Solutions, LLC	1704 W. First St. Azusa, CA 91702
Clean Harbors El Dorado, LLC	309 American Circle El Dorado, AR 71730
Clean Harbors Kimbell, Inc.	2247 South Highway 71 Kimball, NE 69145
Clean Harbors Deer Trail, LLC	108555 East Highway 36 Deer Trail, CO 80105
Clean Harbors Arizona, LLC	1340 West Lincoln Street Phoenix, AZ 85007
Clean Harbors of San Jose, LLC	1040 Commercial Street San Jose, CA 95112
Clean Harbors Wilmington, LLC	1737 East Denni Street Wilmington, CA 90744
Clean Harbors Colfax, LLC	3763 Highway 471 Colfax, LA 71417
Clean Harbors LaPorte, LLC	500 Battleground Road La Porte, TX 77571
Transformer Technologies	4709 Turner Road SE Salem, OR 97317 503.364.5476
A-line Environmental Decomission Service	808 Dearborn Ave. Waterloo, IA 50703 503.364.5476
Electronic Recyclers International, LLC	2860 South East Avenue Fresno,CA
Energy Solutions of Utah; formerly ENVIROCARE OF UTAH (Only Approved for use via an Approved Rad Waste Broker - contact Outbound Disposal)	423 West 300 South Salt Lake City , UT
E-Recycling of California	7230 Petterson Lane Paramount,CA
E-World Recyclers	2480 Ash Street Vista,CA
Kinsbursky Brothers Inc.	125 East Commercial Street #A Anaheim,CA

Facility Location	Facility Address
Thermal Remediation Solutions, LLC	1211 West Gladstone Street Azusa,CA
THOMAS GRAY & ASSOCIATES INC. (Only Approved for use via an Approved Rad Waste Broker - contact Outbound Disposal)	1205 West Barkley Avenue Orange,CA
US Ecology Idaho, Inc.	10.5 miles NW on HWY 78, Lemley Road Grand View, ID
WM Mercury Waste Inc (Mercury Waste Solutions)	21211 Durand Avenue Union Grove, WI
Waste Management Asset Recovery Group, Southeast Center (Lamp Tracker)	221 North 48th Avenue Phoenix, AZ
Butterfield Station Landfill	40404 South 99th Avenue Mobile, Arizona, 85139
Li-Cycle	Processing Facility: 4461 E. Nunneley Road, Gilbert, AZ 95296 Wasrehouse: 7958 E. Ray Road, STE 125 Mesa, AZ 85212

APPENDIX O

Helicopter Use and Safety Plan

TLRR: Eldorado-Pisgah-Lugo Project

Helicopter Use and Safety Plan

Prepared for
Southern California Edison

December 2022

Prepared by
Arcadis U.S., Inc.

Applicable Agencies

Bureau of Land Management ☒
National Park Service ☒
California Public Utilities Commission ☒

Contents

Acronyms and Abbreviations

BLM	Bureau of Land Management
CAP	Congested Area Plan
CEQA	California Environmental Quality Act
CPUC	California Public Utilities Commission
EPL	Eldorado-Pisgah-Lugo
FAA	Federal Aviation Administration
GPS	global positioning system
NEPA	National Environmental Protection Act
NPS	National Park Service
NTSB	National Transportation Safety Board
PEA	Proponent's Environmental Assessment
SCE	Southern California Edison

1.0 Introduction

This Helicopter Use and Safety Plan (Plan) has been prepared for the Southern California Edison (SCE) Eldorado-Pisgah-Lugo Project (EPL Project or Project). The implementation of this Plan is detailed in the EPL Project's Project Description; further, a Helicopter Use and Safety Plan is listed as a Potentially Required Appendix in the California Public Utility Commission's *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments* document.

The Helicopter Use and Safety Plan provides guidance for the use of helicopters during construction activities. This Plan summarizes crew training, Federal Aviation Administration (FAA) notification procedures, private property owner notification, and helicopter use monitoring that will be implemented during construction of the EPL Project.

This Plan is based on information in the EPL Project Proponent's Environmental Assessment (PEA). In the event revisions are made to the Plan, based on final engineering or receipt of final environmental clearance document(s), the revised Plan will be provided to the California Public Utilities Commission (CPUC), Bureau of Land Management (BLM), and National Park Service (NPS).

This Plan will be supplemented by a project-specific helicopter operations/safety plan prepared by the helicopter construction contractor selected by SCE to complete helicopter-related construction associated with the EPL Project.

1.1 Project Overview

Through the EPL Project, SCE proposes to remediate physical clearance discrepancies on four existing transmission circuits. The EPL Project includes the following components to remediate the identified discrepancies.

1.1.1 Transmission

The EPL Project would install new, and replace existing infrastructure along portions of existing 220 kV transmission lines by:

- Installing new inter-set transmission structures and replacing or modifying the existing hardware on adjacent structures.
- Replacing the insulator assemblies on some existing structures that are not adjacent to new inter-set transmission structures.
- Removing existing conductor and installing new 609.5 Irving Aluminum Conductor Composite Core Ultra-Low Sag transmission conductor on existing structures.
- Removing existing overhead groundwire and installing 7#7 Alumoweld overhead groundwire on existing structures for system protection.

1.1.2 Substations

The EPL Project would include the following substation-related work:

- Disconnect existing conductor from existing positions at the existing Pisgah Switchyard and Cima Substation and connect newly installed conductors to existing substation positions.
- Remove existing overhead groundwire and install new overhead groundwire at the existing Pisgah Switchyard and Cima Substation. Make minor modifications to the existing terminal racks to accommodate the new overhead groundwire.
- Update, as necessary, relay settings at the existing Lugo, Cima, and Eldorado substations and at the existing Pisgah Switchyard.

1.2 Project Location

The EPL Project is located in unincorporated San Bernardino County and in the City of Hesperia in California, and in unincorporated Clark County and in the City of Boulder City in Nevada. The EPL Project is located on federal lands managed by the BLM and the NPS, on State lands, and on private property.

1.3 Lead, Cooperating, and Consulting Agencies

Lead agencies have discretionary approval over the EPL Project and are responsible for reviewing aspects of the measures documented in this Plan. The CPUC is the state lead agency responsible for compliance with the California Environmental Quality Act (CEQA) for Project areas on non-federal lands. The BLM is the federal lead agency responsible for compliance with National Environmental Policy Act (NEPA) for the Project areas on federal lands. Identified materials or documentation will be provided to the CPUC, BLM, and NPS.

Because the Project also crosses lands managed by the NPS, this agency as well as the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and U.S. Environmental Protection Agency are anticipated to participate as a Cooperating Agency for the environmental review of the Project.

Consulting agencies are public agencies, other than the lead agencies, that may provide guidance or information needed to satisfy the requirements of the measures contained in this Plan. Consulting agencies include the FAA.

1.4 Applicable Activities and Project Areas

This Plan addresses the following helicopter-assisted construction activities:

- Installation of new inter-set structures
- Installation of new conductor
- Installation of overhead groundwire
- Installation of marker balls (as necessary)
- Short-haul operations/Human external cargo (HEC) operations

These activities may be performed in all Segments of the EPL Project. Helicopter-supported construction activities will be conducted from one of the material yards as described in the EPL PEA document, from landing zones identified along the Project alignment, and from existing access roads along the Segments.

1.5 Timing

The measures described in this Plan are applicable during the preconstruction/mobilization and active construction periods of the EPL Project. Operations and Maintenance will be conducted in accordance with all applicable rules and regulations.

2.0 Methods

This Plan will be implemented as described in the following sections.

2.1 Locations of Helicopter Construction Work Areas

The installation of new inter-set structures, the replacement of hardware on existing structures, and the removal of existing conductor and installation of new conductor have been identified as potentially requiring helicopter-supported construction. No conductor spans have been identified as requiring the installation of marker balls.

2.2 Flight Corridors and External Load Operations

Following the completion of final engineering and receipt of authorizations for the EPL Project, SCE will identify the structures requiring helicopter-supported construction and the associated material yards and landing zones. After issuance of contract(s) to construct the EPL Project, SCE's helicopter construction contractor will identify potential flight corridors between these features.

Helicopter flight paths will, at a minimum, maintain the necessary elevation to avoid hazards and impacts to noise sensitive receptors, dust sensitive receptors, and environmentally sensitive areas while in transit. Flight activities will be minimized near schools, hospitals, nursing homes, and other sensitive group receptors, to the extent feasible, and buffers will be established around noise sensitive receptors and environmentally sensitive areas. Helicopter flight corridors will typically be a direct path from the material yard to the construction site(s) identified on the Plan of the Day, avoiding all buffers.

The material yards and helicopter landing zones have been sited to ensure that external load operations (including short-haul operations/HEC operations) avoid the need to fly over or near occupied structures; the final material yards and helicopter landing zones will not be sited, as is feasible, on soils identified in LUPA-SW-8 as susceptible to wind erosion (Wind Erosion Classes 1 and 2).

The material yards and helicopter landing zones have been sited so that external load operations (including short-haul operations/HEC operations) over public roadways are avoided to the greatest extent feasible; the final material yards and helicopter landing zones will also be so-sited. If external load operations (including short-haul operations/HEC operations) must be performed over public roadways, traffic control measures will be implemented as per the EPL Project's Project Description. These locations, if any, will be provided in a figure in the final Helicopter Use and Safety Plan.

2.3 Congested Area Plan(s)

A Congested Area Plan (CAP) is required by the FAA if helicopter operations are proposed to take place in any congested area accessible by the non-participating public.

Helicopter external load operations (including short-haul operations/HEC operations) will not be conducted over homes, businesses, or public areas without measures in place to exclude any non-participating public from entering the area. Flight operations will be minimized near schools, hospitals, nursing homes, and other sensitive group receptors. Except in an emergency, helicopters shall land or hover near the ground only in areas previously approved for landing (i.e. material yards and helicopter landing zones); helicopters may hover near the ground at structures subject to helicopter-assisted construction, or at areas where eternal loads or HEC are being dropped-off or picked-up. All dust control measures (including LUPA-SW-8) and biological and cultural resource protection requirements shall apply. CAPs will follow the FAA guidance contained in 8900.1, Volume 3, Chapter 51, Part 133 External Load Operations. CAPs will be filed with the FAA; approved CAPs will be made available to the CPUC prior to implementation.

2.4 Flight Restrictions

Following consultation with the FAA, any areas that are identified as flight restricted will be listed in this section and a figure developed showing such areas.

2.5 FAA Notification

Prior to the start of EPL Project construction activities, SCE or its helicopter construction contractor will notify the FAA Fresno, Las Vegas, Reno, and Riverside Flight Standards District Offices of planned helicopter operations. As helicopter construction schedules become known, SCE or its helicopter construction contractor will notify the FAA Las Vegas or Riverside Flight Standards District Office at least one week in advance of all days during which helicopter operations are planned to occur. Should the FAA Flight Standards District Office require more or less frequent notification, SCE or its helicopter

construction contractor will comply with the Office's requirements. Should the Flight Standards District Office require more or less frequent notification, SCE will notify the CPUC, BLM and/or NPS of the Office's requirements.

2.6 Training

All SCE and contractor personnel, including flight crews and ground crews, involved with helicopter operations will take the EPL Project-specific Helicopter Operations Training. This Training will cover and be compliant with:

- Occupational and Safety Health Administration Standard 1926.551, Subpart N, Helicopter Regulations
- Federal Aviation Regulations Part 133, Rotorcraft External - Load Operations and Part 91, General Operating Rules.
- California Division of Occupational Safety and Health, Title 8 - Subchapter 4, Article 35, sections 1900 through 1909-Helicopter Operations.

2.6.1 Basic Helicopter Training

Basic Helicopter Training is required for all project personnel being transported by a helicopter. Basic Helicopter Training will include a helicopter safety video and safety briefing administered by a helicopter safety coordinator that includes:

- Flight principles
- Ground safety
- Entering and exiting
- The main and tail rotor
- How to carry and stow tools and equipment
- Seat belt, intercom use
- Emergency procedures and equipment
- Helicopter landing zone safety
- Door off flight
- Slinging
- Hover exits
- Mechanical capabilities

Upon completion, participants will receive a hardhat sticker, and will sign the Basic Helicopter Training sign-in sheet.

2.6.2 Pilot Orientation and Training

Prior to flying on the EPL Project, all Pilots will attend the Project Worker Environmental Awareness Program Training and will undergo project-specific orientation training. Orientation training includes specifics to the project as it is related to environmental issues, project details, project rules, safety, and other EPL Project-specific requirements.

2.6.3 Helicopter Rigging Training and Crew Training

Helicopter Rigging Training and Crew Training will be provided to all personnel involved in helicopter rigging. The Helicopter Rigging Training will include information on the following:

- Rigging procedure – All boxes, baskets or other devices used to lift items or external loads will be inspected and approved for use by contractor safety personnel prior to being put into use on the project.
- Any loads carrying multiple items will be enclosed in a net, box, basket or have each piece individually rigged to the best extent possible. Boxes and baskets without a secured cover will have netting secured over the opening or strapping that adequately secures the load. Long cylindrical objects flown together such as pipe or bar will be held together with chokers and flown with a drag chute to keep the load from spinning.
- Long Lines & Line Inspection Program – Helicopter operators are required to use increased load safety factors for all long lines and document daily rope inspections.
- Qualified Rigging Training will be required for all personnel that will be rigging and sending or receiving external helicopter loads.
- Helicopter Rigging Training and Crew Training will cover the following topics:
    - General Requirements
    - Eye bolts
    - Sling Angles
    - Sling Tension
    - Inspections
    - Hooks & Snatch Blocks
    - Load Calculation
    - Use of Multiple Slings
    - Housekeeping
    - Chain Slings
    - Shock Loads
    - Sling Load Calculations
    - Equipment Inspection
    - Fiber Rope
    - Determining Volume
    - Developing a Lift Plan
    - Wire Rope
    - D/d Ratio
    - Center of Gravity
    - Synthetic Web Slings
    - Ropes & Splices-Knots-Splices
    - Load Angle Factors
    - Shackles
    - Hitches
    - Attachment Points

2.7 Helicopter Operations Briefings

Helicopter Operations Briefings pursuant to Part 133, Operations, will be conducted by a qualified pilot or crew member employed by the subcontracted helicopter operator and will include all SCE and contractor personnel who will be working in and around the helicopter operation, including all crews that will send or receive long line loads or who will be engaged with short-haul operations/HEC operations.

A specific Briefing will be prepared and delivered for each type of helicopter being used. No individual will be allowed to fly in or work around the helicopter without a briefing. Items that will be covered will be specific to the helicopter type and operations. Where possible, the Briefing will be conducted at a helicopter landing zone with the helicopter as a tool for explanation.

An initial Helicopter Operations Briefing shall take place prior to the start of helicopter construction activities, and will be repeated at least once per month thereafter. When new project personnel are introduced into the project, they will be given the Briefing prior to their participation in helicopter operations. All personnel in attendance will be required to sign their name on the Monthly Helicopter Briefing sign-in sheet.

2.8 Daily Helicopter Safety Briefing

A Daily Safety Tailboard briefing will be conducted by a qualified helicopter contractor representative before any work is started and any time significant changes occur during the course of the work. No individual will be allowed to fly in or work around the helicopter without attending the Daily Safety Tailboard briefing. The briefing will include, but will not be limited to:

- Identify the Person-In-Charge of the operation
- Roles and responsibilities of crew members
- Hazards associated with the job
- Flight routes/paths, landing areas, and timing/construction operations schedule for the day
- Types of helicopter construction activities to be completed that day
- Work procedures involved in completing the construction activities
- Rigging
- Communications
- Personal Protective Equipment
- Any special precautions such as weather factors, walkout routes or environmental restrictions.

Clear expectations will be communicated to personnel in this briefing. The briefer will discuss complacency, as this is the major contribution to helicopter accidents and incidents. Any concerns in operating procedures will be addressed and a reminder of situational awareness will be emphasized.

Attendance will include all personnel who will be working in and around the helicopter operation. This will include any crew that will send or receive long line loads.

The Tailboard will be held at the beginning of each day and at any time new crews or crew members are introduced to the operation. All personnel in attendance will be required to sign their name on the Daily Helicopter Safety Tailboard sign-in sheet.

2.9 Private Property Owner Notification

Residents, businesses, and owners of private property located within 1,000 feet of material yards used during helicopter operations, helicopter landing zones, and helicopter-supported construction work areas will be notified of helicopter operations at least one week in advance of planned helicopter operations.

Where habitable structures on private property are located within 500 feet of a finalized flight corridor, the owner of said property will be notified of helicopter operations at least one week in advance of planned helicopter operations.

Prior to the start of construction of the EPL Project, notifications will be provided by mail. As helicopter construction schedules become known, notifications will be provided by mail, electronic mail (where addresses are known to SCE), or by telephone (where contact phone numbers are known to SCE). These later notifications will include the day or days on which helicopter operations are planned, as well as information on the timing of helicopter operations on each day or days.

2.10 Helicopter Use Monitoring

The monitoring and coordination of helicopters will be performed by SCE AirOps. The following activities will be utilized to monitor helicopter use:

- All contract aviation support will notify SCE AirOps before initiating flight activity for the day.
- All contract aviation support will attend daily tailboards.
- All contract aviation support will permit SCE AirOps to track aircraft while performing work on SCE projects.
- Flight routes and altitudes will be established to prevent flight into sensitive areas and avoid aircraft congestion.
- VHF Air-to-Air communication will be established and maintained.
- Air-to-Ground 900 MHz Communication will be established and maintained.

2.10.1 Global Positioning System-based Flight Tracking System

Cylinder-shaped horizontal and vertical default buffer distances will be established for helicopter construction activities, in accordance with the distances established in the EPL Project Nesting Bird Management Plan and by sensitive receptor buffers. The species-specific default buffers provided in the Nesting Bird Management Plan will be adjusted based on site-specific, nest-specific observations in the field.

The helicopter construction contractor will use global positioning system (GPS) units in helicopters to track and record flights. The GPS units will be capable of providing the information required with regard to flight path and aircraft, and will provide a ‘ping’ no less frequently than once every 3 seconds. GPS data showing buffers, corridors, and other pertinent restrictions will be distributed to contractor helicopter operations to keep pilots informed of flight restrictions. GPS data will be updated daily or as often as new restrictions are implemented or lifted.

The environmental compliance team will monitor helicopter tracks (flight patterns and durations) daily to ensure compliance with established helicopter buffers and document non-compliances accordingly. SCE will retain helicopter track data and provide the tracks to the agencies upon request.

2.10.2 Incident/Near-Miss Reporting

All incidents/accidents will be reported to SCE personnel. This includes any contact between an aircraft and some other object, regardless of perceived damage and/or federal reporting requirements.

In compliance with federal regulations, all accidents or incidents subject to federal reporting will be reported to the National Transportation Safety Board (NTSB) or the FAA, as applicable. Copies of all reports submitted to the NTSB or FAA will be submitted to the CPUC at the same time as they are submitted to the NTSB or FAA.

Events that had the potential to result in an accident or incident as defined by NTSB, but that do not require NTSB notification, will be described on a dated record by SCE and immediately reported to the SCE helicopter safety coordinator and the CPUC.

3.0 Plan Approval

This Plan has been prepared to address the requirements of APM TRA-2. SCE is not presently requesting review or approval of this Plan. This Plan will be amended to incorporate and reflect any mitigation measures imposed on the EPL Project by the CPUC, BLM, and/or during each agency's respective project approval process. Following such revisions, and as required in any mitigation measure imposed on the EPL Project, SCE will request approval of this Plan by the CPUC, BLM, and NPS.

4.0 Revisions

Date	Description of Revision	Contact

APPENDIX P

Fugitive Dust Control Plan

TLRR: Eldorado-Pisgah-Lugo Project

Fugitive Dust Control Plan

Prepared for
Southern California Edison

December 2022

Prepared by
Arcadis U.S., Inc.

Applicable Agencies

Bureau of Land Management	☒
National Park Service	☒
California Public Utilities Commission	☒

Draft Environmental Measure or Conservation and Management Actions Addressed:

CPUC Draft Environmental Measure 5.3, Air Quality: Dust Control During Construction
DRECP LUPA-AIR-2 and LUPA-AIR-5
DRECP LUPA-BIO-6

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Acronyms and Abbreviations

BLM	Bureau of Land Management
CALTRANS	California Department of Transportation
CEQA	California Environmental Quality Act
CMA	Conservation Management Action
CPUC	California Public Utilities Commission
DEM	Draft Environmental Measure
EPL	Eldorado-Pisgah-Lugo
MDAQMD	Mojave Desert Air Quality Management District
NEPA	National Environmental Protection Act
PEA	Proponent's Environmental Assessment
SCE	Southern California Edison

1.0 Introduction

This Fugitive Dust Control Plan (Plan) for Southern California Edison's (SCE) Eldorado-Pisgah-Lugo (EPL) Project presents the activities to be conducted to support compliance with the California Public Utilities Commission's (CPUC's) Draft Environmental Measure (DEM) listed in Table 1, and to support compliance with the Bureau of Land Management's Desert Renewable Energy Conservation Plan Land Use Plan Amendment (DRECP LUPA) Conservation Management Actions (CMAs) LUPA-AIR-2, LUPA-AIR-5, and LUPA-BIO-6 (as necessary). Compliance with the DEM and CMAs will reduce potential fugitive dust impacts resulting from construction of the Project. This plan is independent of any fugitive dust control plan that may be required by specific local air districts, cities, or counties.

This Plan provides fugitive dust control methods for construction activities and/or sources that emit fugitive dust. These sources and/or activities include unpaved and paved roads, disturbed surface areas, earth-moving activities, and the management of large material stockpiles.

This Plan is based on information in the EPL Project Proponent's Environmental Assessment (PEA). In the event revisions are made to the Plan, based on final engineering or receipt of final environmental clearance document(s), the revised Plan will be provided to the CPUC, Bureau of Land Management (BLM), and National Park Service (NPS).

1.1 Project Overview

Through the EPL Project, SCE proposes to remediate physical clearance discrepancies on four existing transmission circuits. The EPL Project includes the following components to remediate the identified discrepancies.

1.1.1 Transmission

The EPL Project would install new, and replace existing infrastructure along portions of existing 220 kilovolt transmission lines by:

- Installing new inter-set transmission structures and replacing or modifying the existing hardware on adjacent structures.
- Replacing the insulator assemblies on some existing structures that are not adjacent to new inter-set transmission structures.
- Removing existing conductor and installing new 609.5 Irving Aluminum Conductor Composite Core Ultra-Low Sag transmission conductor on existing structures.
- Removing existing overhead groundwire and installing 7#7 Alumoweld overhead groundwire on existing structures for system protection.

1.1.2 Substations

The EPL Project would include the following substation-related work:

- Disconnect existing conductor from existing positions at the existing Pisgah Switchyard and Cima Substation and connect newly installed conductors to existing substation positions.
- Remove existing overhead groundwire and install new overhead groundwire at the existing Pisgah Switchyard and Cima Substation. Make minor modifications to the existing terminal racks to accommodate the new overhead groundwire.
- Update, as necessary, relay settings at the existing Lugo, Cima, and Eldorado substations and at the existing Pisgah Switchyard.

1.2 Project Location

The EPL Project is located in unincorporated San Bernardino County and in the City of Hesperia in California, and in unincorporated Clark County and the City of Boulder City in Nevada. The EPL Project is located on federal lands managed by the BLM, NPS, on State lands, and on private property.

1.3 Lead, Cooperating, and Consulting Agencies

Lead agencies have discretionary approval over the EPL Project and are responsible for reviewing aspects of the measures documented in this Plan. The CPUC is the state lead agency responsible for compliance with the California Environmental Quality Act (CEQA) for Project areas on non-federal lands. The BLM is the federal lead agency responsible for compliance with National Environmental Policy Act (NEPA) for the Project areas on federal lands. Identified materials or documentation will be provided to the CPUC and the BLM.

Because the Project also crosses lands managed by the National Park Service (NPS), this agency as well as the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and U.S. Environmental Protection Agency are anticipated to participate as a Cooperating Agency for the environmental review of the Project.

Consulting agencies are public agencies, other than the lead agencies, that may provide guidance or information needed to satisfy the requirements of the measures contained in this Plan. Consulting agencies for select measures listed in Table 1 may include the Mojave Desert Air Quality Management District (MDAQMD) and the Clark County Division of Air Quality (DAQ).

1.4 Draft Environmental Measure and Conservation and Management Actions

The CPUC DEM and CMAs addressed in this Plan are provided in Table 1. This Plan is listed as a submittal requirement for PEA documents. No components of the Mojave National Preserve General Plan are applicable to this Plan.

Table 1 Measure and Actions Addressed

Measure/CMA	Description
CPUC Draft Environmental Measure 5.3 Air Quality: Dust Control During Construction	**Dust Control During Construction** The Applicant shall implement measures to control fugitive dust in compliance with all local air district(s) standards. Dust control measures shall include the following at a minimum: • All exposed surfaces with the potential of dust-generating shall be watered or covered with coarse rock to reduce the potential for airborne dust from leaving the site. • The simultaneous occurrence of more than two ground disturbing construction phases on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time. • Cover all haul trucks entering/leaving the site and trim their loads as necessary. • Use wet power vacuum street sweepers to sweep all paved access road, parking areas, staging areas, and public roads adjacent to project sites on a daily basis (at minimum) during construction. The use of dry power sweeping is prohibited. • All trucks and equipment, including their tires, shall be washed off prior to leaving project sites. • Apply gravel or non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at project sites.

	• Water and/or cover soil stockpiles daily. • Vegetative ground cover shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. • All vehicle speeds shall be limited to fifteen (15) miles per hour or less on unpaved areas. • Implement dust monitoring in compliance with the standards of the local air district. • Halt construction during any periods when wind speeds are in excess of 50 mph.
LUPA-AIR-2	Because project authorizations are a federal undertaking, air quality standards for fugitive dust may not exceed local standards and requirements.
LUPA-AIR-5	A fugitive Dust Control Plan will be developed for all projects where the NEPA analysis shows an impact on air quality from fugitive dust.
LUPA-BIO-6	The application of water and/or other palliatives for dust abatement in construction areas and during project operations and maintenance will be done with the minimum amount of water necessary to meet safety and air quality standards and in a manner that prevents the formation of puddles, which could attract wildlife and wildlife predators.

1.5 Applicable Activities and Project Areas

The activities addressed in this Plan are as follows:

- Construction work, including ground-disturbing activities, and paved and unpaved road travel

This Plan is applicable to all components of the Project, including transmission, substation, civil engineering, and pre-construction and post-construction restoration work. Any activities specific to ensuring compliance with a LUPA CMA will be performed on lands managed per the DRECP LUPA.

1.6 Timing

The measures described in this Plan are applicable during the preconstruction/mobilization, construction, and post-construction/restoration periods of the EPL Project. Operations and Maintenance will be conducted in accordance with all applicable rules and regulations.

2.0 Methods

This section includes a detailed description of the actions required to implement the CPUC DEM for the Project work packages covered by this Plan. The Project spans the Mojave Desert Air Quality Management District and the Las Vegas Intrastate Air Quality Control Region (AQCR, which is under the jurisdiction of the Clark County Division of Air Quality [DAQ]). All portions of the EPL Project located in California fall under the jurisdiction of the MDAQMD, and all portions of the EPL Project located in Nevada fall under the jurisdiction of the DAQ. The CPUC DEM contains requirements that apply to construction activities in associated Air Districts. As such, the construction team also shall comply with applicable local Air District regulations.

A standard practice for dust control includes the use of dust palliatives. Dust palliatives are commonly referred to by several names. For this plan, the terms ‘dust palliative’, ‘soil stabilizer’, and ‘soil binder are used interchangeably. Dust palliatives that may be used on the EPL Project consist of the following types:

- Water
- Chemical Stabilizers, which include:

- Synthetic polymers- (e.g. FSB1000)
- Organic petroleum products: modified & unmodified Asphalt emulsions (Grade SS1h)
- Deliquescent/ Hygroscopic salts: magnesium chloride only
- Lignin-Based Types (Lignosulfonate)
- Fibers/Mulches
- Organic non-petroleum products

2.1 Fugitive Dust Control Measures for Project Implementation

This section contains fugitive dust control measures applicable to all project components at various stages of construction. The following methods are meant to allow compliance with the CPUC DEM and LUPA CMAs (as applicable). The project must still follow all rules and regulation applicable to SCE's policy and local Air District requirements.

2.1.1 Travel on Unpaved Roads

The following fugitive dust control measures may be implemented for travel on unpaved roads and unpaved parking lots during construction:

1. Travel on unpaved roads will be limited to the extent possible, and traffic will be directed over established haul routes.
2. Unpaved road (access and spur) vehicle travel will be maintained to the lowest practical speeds, no greater than 15 miles per hour. Vehicle travel and activity on substation sites will conform to standard industry practices.
3. For active unpaved roads, staging areas, and parking areas, non-toxic soil binders, equivalent to or better efficiencies than CPUC-, BLM-, or NPS-approved soil binders (as allowed by responsible agencies such as the CPUC, BLM, and NPS), shall be applied in amounts meeting manufacturer recommendations.
4. Gravel will be placed on access road approaches and track-out control devices such as shaker plates will be installed at the intersection of unpaved access roads and paved roads.
5. Construction team shall conduct a visual inspection of the vehicle wheels and the wheels of the equipment loaded upon each vehicle to assess the presence of dirt. If caked dirt or mud is present, such shall be removed from wheels prior to entering paved intersections, to the extent feasible.

2.1.2 Travel on Paved Roads

Prior to construction equipment travel on paved roads, the following may be implemented:

1. Fugitive dust will be minimized while transporting soil and other materials on paved roads by covering vehicles hauling soil and other loose material with tarps, in addition to maintaining freeboard in compliance with local Air District regulations.
2. Vehicle tires will be inspected prior to entering paved roadways from unpaved areas to verify they are free of dirt. To clean tires, the following will be implemented:
    a. Gravel will be placed on access road approaches and track-out control devices such as shaker plates will be installed at the intersection of unpaved access roads and paved roads.
    b. Construction team shall conduct a visual inspection of the vehicle wheels and the wheels of the equipment loaded upon each vehicle, to assess the presence of dirt. If caked dirt or mud is present, such shall be removed from wheels prior to entering paved intersections, to the extent feasible.

c. Track-out onto paved roads will be removed at the conclusion of the workday or evening shift with water sweepers (or as required by local District regulations) if visible soil material from the construction sites or unpaved access roads is carried onto adjacent public streets.

2.1.3 Active Disturbed Surface Areas

The following will be implemented, for areas disturbed by construction activities, to limit visible dust emissions from exiting the Project boundaries, in compliance with regulatory requirements:

1. Water or non-toxic soil binders, equivalent to or better in efficiencies than CPUC-, BLM-, or NPS-approved soil binders, will be applied in accordance with manufacturer recommendations, to suppress dust from unpaved disturbed areas.
   a. When water is used, it will be applied at least 1 time per day, or as needed.
   b. Open Storage Pile: Any accumulation of bulk material with 5 percent or greater silt content not fully enclosed, covered or chemically stabilized, attaining a height of 3 feet or more and a total surface area of 500 or more square feet. Silt content level shall be assumed to be 5 percent or greater unless a person shows, by sampling and analysis in accordance with ASTM Method C-136 or equivalent method approved in writing by the APCO, EPA, or CARB, that the silt content is less than 5 percent. Results of ASTM Method C-136 or equivalent method is valid for 60 days from the date the sample was taken.
2. When instantaneous wind gusts exceed 25 miles per hour, the frequency of watering will be increased or other additional fugitive dust mitigation measures will be implemented.

2.1.4 Inactive Disturbed Surface Areas

Inactive disturbed areas are not intended to result during construction of the EPL Project. Project areas will be actively used during construction, or if work has been completed the area will be addressed as described below.

Should inactive disturbed surface areas result during construction, the following dust mitigation would apply.

Inactive disturbed areas (project approved grading site surfaces) will be sufficiently watered or will be covered. Areas will be stabilized upon completion of grading when subsequent development is delayed or expected to be delayed more than 7 days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate fugitive dust emissions. Stabilization will include:

- Restricting vehicular access
- Applying and maintaining water on unvegetated areas
- The use of water or non-toxic dust palliatives for dust control will be minimized to the extent needed to comply with air quality standards and to minimize or prevent pooling of water that may attract wildlife and nearby predators.

2.1.5 Post-Construction

Within 10 days after active construction operations have ceased, disturbed surface areas will be treated with a vegetative ground cover (in compliance with biological mitigation measures) or other stabilized surfaces will be created.

Surfaces disturbed by construction activities will be covered or treated with a dust palliative after completion of activities at each site of disturbance.

2.1.6 Open Storage Piles

One of the following measures will be implemented for open storage piles with a silt content of 5 percent or greater:

1. Enclose storage pile
2. Cover
3. Water at least 1 time daily
4. Apply non-toxic soil binders according to manufacturer specifications

2.1.7 Construction Transportation Plan

No specific mitigation is applicable.

2.1.8 Road Travel Plan

For construction sites with unpaved access greater than 1 mile, the following actions will be taken:

1. Prior to construction at a site, the site access roads will be reviewed by SCE and the construction team and, if feasible, alternative travel routes that reduce travel on unpaved access roads will be used. Changes in access road design will be approved by the land owner/manager prior to use.
2. Travel of heavy equipment in and out of the unpaved areas will be limited by moving from construction site to construction site rather than back to marshalling or staging areas daily, to the extent feasible.
3. Construction workers will carpool and/or be bused to construction sites, as practicable.
4. CPUC, BLM, NPS, CALTRANS, or other regulatory agency road use restrictions will be reviewed and followed by SCE and the construction team.

2.1.9 Earth Moving Activities

Earth moving activities will occur across the length of the EPL Project alignment and will be associated with the development of new spur roads, rehabilitation of existing access roads, and development of material yards and construction work areas, among others. The following will be implemented for earth-moving activities:

- Earthwork activities such as clearing, grading, cutting, and back fill will be limited to designated areas.
- Earthwork will be minimized to the extent feasible while meeting project needs.
- Earthwork being performed in work areas will be minimized to maintain natural topography to the extent possible to assist in final restoration efforts.
- Areas that will be cleared of vegetation that have low soil moisture content will be watered up to 48 hours in advance of vegetation clearance.
- Water will be applied prior to, during, or after earthmoving operations as needed should visible emissions occur.
- The simultaneous occurrence of more than two ground disturbing construction phases on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- Earth moving activities and other construction activities will be halted during any periods when wind speeds are in excess of 50 mph

2.2 Air District-Specific Dust Control Rules

This Plan is applicable to all components of the EPL Project. The fugitive dust control rules promulgated by the air districts traversed by the Project—the MDAQMD and DAQ—contain required fugitive dust control requirements that will be implemented by the construction team. The requirements are provided in Appendix A. The construction team shall comply with the Air Districts' rules to ensure project compliance.

2.2.1 Mojave Desert Air Quality Management District

Construction for the EPL Project within areas under the jurisdiction of the MDAQMD will need to comply with Rule 403, Fugitive Dust.

2.2.2 Clark County Division of Air Quality

Construction for the EPL Project within areas under the jurisdiction of the DAQ will need to comply with Section 41, Fugitive Dust and Section 90, Fugitive Dust from Open Areas and Vacant Lots.

2.3 Monitoring Requirements

Per the CPUC DEM, SCE will implement dust monitoring in compliance with the standards of the applicable local air district and as set forth in any Project-specific permits approved by the jurisdictional air districts.

Monitoring records will be completed by the on-site environmental monitor and uploaded to FRED, SCE's record distribution database.

3.0 Plan Approval

This Plan has been prepared to address the requirements of CPUC Draft Environmental Measure 5.3 Air Quality: Dust Control During Construction and, should the eventual NEPA analysis show an impact on air quality from fugitive dust, to comply with CMA LUPA-AIR-5.

SCE is not presently requesting review or approval of this Plan. This Plan will be amended to incorporate and reflect any mitigation measures imposed on the EPL Project by the CPUC, BLM, or NPS during each agency's respective project approval process. Following such revisions, and as required in any mitigation measure imposed on the EPL Project, SCE will request approval of this Plan by either or all of the CPUC, BLM, and NPS.

4.0 Revisions

Date	Description of Revision	Contact

APPENDIX A
Mojave Desert Air Quality Management District Rule 403

(**Adopted:** 05/07/76; **CARB Ex. Ord. G-73:** 02/01/77;
Readopted: 07/25/77)

RULE 403
Fugitive Dust

(a) A person shall not cause or allow the emissions of fugitive dust from any transport, handling, construction or storage activity so that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source. (Does not apply to emissions emanating from unpaved roadways open to public travel or farm roads. This exclusion shall not apply to industrial or commercial facilities).

(b) A person shall take every reasonable precaution to minimize fugitive dust emissions from wrecking, excavation, grading, clearing of land and solid waste disposal operations.

(c) A person shall not cause or allow particulate matter to exceed 100 micrograms per cubic meter when determined as the difference between upwind and downwind samples collected on high volume samplers at the property line for a minimum of five hours.

(d) A person shall take every reasonable precaution to prevent visible particulate matter from being deposited upon public roadways as a direct result of their operations. Reasonable precautions shall include, but are not limited to, the removal of particulate matter from equipment prior to movement on paved streets or the prompt removal of any material from paved streets onto which such material has been deposited.

(e) Subsections (a) and (c) shall not be applicable when the wind speed instantaneously exceeds 40 kilometers (25 miles) per hour, or when the average wind speed is greater than 24 kilometers (15 miles) per hour. The average wind speed determination shall be on a 15 minute average at the nearest official air-monitoring station or by wind instrument located at the site being checked.

(f) The provisions of this rule shall not apply to agricultural operations.

[SIP: Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(ii)(B); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(32)(iv)(A)]

APPENDIX B
Clark County Division of Air Quality
Section 41 and Section 90

SECTION 41: FUGITIVE DUST

41.1 Prohibitions:

41.1.1 Any Person engaged in activities involving the dismantling or demolition of buildings, grubbing, grading, clearing of land, public or private construction, the operation of machines and equipment, the grading of roads, ~~T~~rrenching operations, the operation and use of Unpaved Parking facilities, Agricultural Operations, use and operation of livestock arenas, horse arenas and feed lots, and operation and use of raceways for Motor Vehicles shall take all reasonable precautions to abate Fugitive Dust from becoming airborne from such activities. Reasonable precautions may include, but are not limited to the conditions agreed upon in the Permit for the project, sprinkling, compacting, enclosure, chemical, or asphalt sealing, cleaning up, sweeping, or such other measures as the Control Officer may specify to accomplish satisfactory results.

41.1.1.1 The following circumstances represent examples of Fugitive Dust becoming airborne:

a) a visible plume of dust, resulting from construction activities, which extends more than 100 yards from the point of origin or beyond the nearest property line, whichever is less;

b) visible dust Emissions on an unpaved road at a construction site being used by haul trucks;

c) visible dust Emissions generated by vehicles traveling over mud and dirt carried out to a paved road near or adjacent to a construction site.

41.1.1.2 A visible plume of dust resulting from construction activities which extends more than 50 yards from the point of origin, but less than 100 yards and which has not crossed the nearest property line may be subject to an issuance of a Notice of violation including an order to take corrective action for which no penalty will be assessed.

41.1.2 No Person shall cause or permit the handling, transporting, or storage of any material in a manner which allows or may allow controllable particulate matter to become airborne;

41.1.3 Sand and abrasive blasting operation will not be permitted unless effective enclosures or other such dust control devices including but not limited to the injection of water have been installed to prevent excessive sand and dust dispersal.

41.2 Off-road vehicle and motocross racing;

41.2.1 No Person shall cause, permit, or allow the conduct of off-road vehicle racing or motocross racing within the designated boundaries of a PM_{10} nonattainment area or an area subject to a PM_{10} maintenance plan defined under 42 U.S. Code § 7505a unless adequate dust control measures are provided and approved in advance by the Control Officer.

41.2.2 Motocross racing will only be permitted at permanent motocross race courses within a PM_{10} nonattainment area or an area subject to a PM_{10} maintenance plan defined under 42 U.S. Code § 7505a.

41.2.3 Permanent motocross race courses, within a PM_{10} nonattainment area or an area subject to a PM_{10} maintenance plan defined under 42 U.S. Code § 7505a, shall be registered with and permitted by the Control Officer in accordance with Subsections 15.1 and 15.6.

41.3 Correction of condition:

41.3.1 If loose sand, dust, or dust particles are found to exist in excess of acceptable limits, as determined by the Control Officer, the Control Officer shall notify the owner, lessee, occupant, operator, or user of said land that said situation is to be corrected within a specified period of time, dependent upon the scope and extent of the problem. The failure to correct said situation within the specified period of time shall be in violation of this section.

41.4 Remedial Action:

41.4.1 The Control Officer, his designated agent, or any other authorized representative of the Clark County Board of County Commissioners, after due notice shall be further empowered to enter upon any said land where any sand or dust problem exists, and to take such remedial and corrective action as may be deemed appropriate to cope with and relieve, reduce, or remedy the existent sand and dust situation and condition, when the Owner, occupant, Operator, or any tenant, lessee, or holder of any possessory interest or right in the involved land fails to do so.

41.5 Costs:

41.5.1 Any cost incurred in connection with any such remedial or corrective action by the Clark County Board of County Commissioners or any Person acting for the Clark County Board of County Commissioners shall remain in full force and effect until any and all such costs shall have been fully paid.

History: Amended: June 25, 1992; May 17, 2001; June 3, 2003; July 1, 2004; April 15, 2014; January 21, 2020.

SECTION 90: FUGITIVE DUST FROM OPEN AREAS AND VACANT LOTS

90.1 **Fugitive Dust from Open Areas and Vacant Lots**

90.1.1 **Purpose:** To limit the emission of particulate matter into the ambient air from Open Areas and Vacant Lots.

90.1.2 **Applicability:** The provisions of this regulation shall apply to Open Areas and Vacant Lots which are located in a PM_{10} nonattainment area, an area subject to a PM_{10} maintenance plan defined under 42 U.S. Code § 7505a, or the Apex Valley (hydrographic areas 216 and 217). Nothing in Section 90 of these Regulations shall be construed to prevent enforcement of Section 40 (Prohibition of Nuisance Conditions) of these Regulations. The provisions of this regulation shall not apply to normal farm cultural practices or the raising of fowl or animals. The provisions of this regulation shall not apply to Stationary Sources as defined in Section 0, except that these control measures shall be considered as part of a BACT determination.

90.1.3 **Effective Date of This Regulation:**

90.1.3.1 Section 90, adopted by the Clark County Board of County Commissioners on June 22, 2000, shall be effective in hydrographic area 212 on January 1, 2001, except as otherwise provided herein.

90.1.3.2 Section 90 shall be effective in hydrographic areas 216 and 217 on April 1, 2002, except as otherwise provided herein.

90.2 **Requirements:**

90.2.1 **Open Areas And Vacant Lots:** If Open Areas and Vacant Lots are 5,000 square feet or larger and are disturbed by any means, including use by Motor Vehicles and/or Off-Road Motor Vehicles or material dumping, then the Owner and or Operator of such Open Areas and Vacant Lots shall implement one or more of the Control Measures described in Subsection 90.2.1.1 of this regulation within 30 calendar days following the initial discovery of disturbance or vehicle use on Open Areas and Vacant Lots. The Owner and/or Operator shall implement all control measures necessary to limit the disturbance of Open Areas and Vacant Lots in accordance with the requirements of this regulation. **Advisory Notice:** In order to conserve water to the greatest extent practicable, the use of Reclaimed Water is highly encouraged.

90.2.1.1 **Control Measures:**

(a) Where there is evidence of soil disturbance by Motor Vehicles and/or Off-Road Vehicle use, prevent Motor Vehicle and/or Off-Road Vehicle trespassing, parking, and/or access, by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees, or other effective traffic Control Measures. A stable surface area shall be established and maintained by using one of the Control Measures set forth in Subsections 90.2.1.1(b) or (c) or by the effective application of water in compliance with the stabilization standards set forth in Subsection 90.2.1.2. Where measures to prevent vehicular trespassing and movement are not effective, the application of water will not be utilized for surface stabilization. For the purposes of this subsection, use of or parking on Open Areas and Vacant Lots for noncommercial and non-institutional purposes by the Owner and/or Operator of such Open Areas and Vacant Lots shall not be considered vehicle use under this subsection. In addition, vehicle use related to landscaping maintenance shall not be considered vehicle use under this subsection. For the purpose of this regulation, landscape maintenance does not include grading, trenching, or any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes; or

(b) Where a Disturbed Surface Area exists (including disturbed surfaces caused by Motor Vehicles), uniformly apply and maintain surface gravel or Dust Palliatives to all areas disturbed by Motor Vehicles in compliance with one of the stabilization standards described in Subsection 90.2.1.2 of this regulation; or

(c) Where a Disturbed Surface Area exists (including disturbed surfaces caused by motor vehicles and/or Off-Road motor Vehicles), apply and maintain an alternative control measure approved in writing by the Control Officer and the Region IX Administrator of the Environmental Protection Agency (EPA).

90.2.1.2 **Stabilization Standards:**

(a) A visible crust shall be established, as determined by Subsection 90.4.1.1 (The Drop Ball/Steel Ball Test) of these Regulations; or,

(b) A percent cover that is equal to or greater than 20% for non-erodible elements shall be established, as determined by Subsection 90.4.1.2 (Rock Test Method) of these Regulations; or,

(c) A threshold friction velocity, corrected for non-erodible elements of 100 cm/second or higher, shall be established, as determined by

Subsection 90.4.1.3 (Determination of Threshold Friction Velocity) of this regulation; or,

(d) An alternative test method approved in writing by the Control Officer and the Region IX Administrator of the EPA.

90.2.2 **Dust Mitigation Plans Required:** Any Owner and/or Operator of Open Areas and Vacant Lots having a cumulative area of 10,000 acres or greater must submit a dust mitigation plan to the department for approval by March 31, 2003, in a format prescribed by the Control Officer.

90.2.3 **Mechanized Weed Abatement and/or Trash Removal:** If machinery is used to clear weeds and/or trash from Open Areas and Vacant Lots of 5,000 square feet or larger, then the following control measures set forth in Subsection 90.2.3.1 shall be applied. **Advisory Notice:** In order to conserve water to the greatest extent practicable, the use of reclaimed water is highly encouraged.

90.2.3.1 **Control Measures**

(a) Pre-wet surface soils before mechanized weed abatement and/or trash removal occurs; and,

(b) Maintain dust control measures while mechanized weed abatement and/or trash removal is occurring; and,

(c) Pave, apply gravel, apply water, or apply a suitable Dust Palliative, in compliance with the stabilization standards set forth in Subsection 90.2.1.2 of this regulation, after mechanized weed abatement and/or trash removal occurs.

90.3 **Record Keeping Requirements**

90.3.1 **Record Keeping:** Any Person subject to the requirements of this regulation shall compile and retain records that provide evidence of Control Measure application, by indicating type of treatment or Control Measure, extent of coverage, and date applied. The records and supporting documentation shall be made available to the Control Officer within 24 hours of a written request.

90.3.2 **Record Retention:** Copies of the records required by Subsection 90.3.1 (Record Keeping Requirements) of this regulation shall be retained for at least one year.

90.4 **Test Methods**

90.4.1 **Stabilization Standards for Open Areas and Vacant Lots**: The test methods described in Subsections 90.4.1.1 through Subsections 90.4.1.3 of this regulation shall be used to determine whether an Open Area or a Vacant Lot has a stabilized surface. Should a disturbed Open Area or Vacant Lot contain more than one type of disturbance, soil, or other characteristics which are visibly distinguishable, each representative surface must be tested separately for stability in an area that represents a random portion of the overall disturbed conditions of the site, utilizing the appropriate test methods in Subsections 90.4.1.1 through Subsections 90.4.1.3 of this regulation. Depending upon test method results, include or eliminate each representative surface from the total size assessment of the Disturbed Surface Area(s).

90.4.1.1 **Soil Crust Determination** (**The Drop Ball Test):** Drop a steel ball with a diameter of 15.9 millimeters (0.625 inches) and a mass ranging from 16-17 grams from a distance of 30 centimeters (one foot) directly above the soil surface. If blowsand is present, clear the blowsand from the surfaces on which the soil crust test method is conducted. Blowsand is defined as thin deposits of loose uncombined grains covering less than 50% of an Open Area or Vacant Lot which have not originated from the representative Open Area or Vacant Lot surface being tested. If material covers a visible crust, which is not blowsand, apply the test method in Subsection 90.4.1.3 (Determination of Threshold Friction Velocity) of this regulation to the loose material to determine whether the surface is stabilized.

(a) A sufficient crust is defined under the following conditions: once a ball has been dropped according to Subsection 90.4.1.1 of this regulation, the ball does not sink into the surface, so that it is partially or fully surrounded by loose grains and, upon removal of the ball, the surface upon which it fell has not been pulverized, so that loose grains are visible.

(b) Randomly select each representative Disturbed Surface Area for the drop ball test by using a blind “over the shoulder” toss of a throwable object (for example, a metal weight with survey tape attached). Using the point of fall as the lower left hand corner, measure a 1-foot square area. Drop the ball three times within the 1-foot by 1-foot square survey area, using a consistent pattern across the survey area. The survey area shall be considered to have passed the Soil Crust Determination Test if at least two of the three times the ball was dropped, the results met the criteria in Subsection 90.4.1.1(a) of this regulation. Select at least two other survey areas that represent a random portion of the overall disturbed conditions of the site, and repeat this procedure. If the results meet the criteria of Subsection 90.4.1.1(a) of this regulation for all of the survey areas tested, then

the site shall be considered to have passed the Soil Crust Determination Test and shall be considered sufficiently crusted.

(c) At any given site, the existence of a sufficient crust covering one portion of the site may not represent the existence or protectiveness of a crust on another portion of the site. Repeat the soil crust test as often as necessary on each portion of the overall conditions of the site using the random selection method set forth in Subsection 90.4.1.1(b) of this regulation for an accurate assessment.

90.4.1.2 **Rock Test Method:** The Rock Test Method, which is similar to Subsection 90.4.1.3 (Determination of Threshold Friction Velocity) of this Regulation, examines the wind-resistance effects of rocks and other non-erodible elements on disturbed surfaces. Non-erodible elements are objects larger than 1 centimeter (cm) in diameter that remain firmly in place even on windy days. Typically, non-erodible elements include rocks, stones, glass fragments, and hardpacked clumps of soil lying on or embedded in the surface. Vegetation does not count as a non-erodible element in this method. The purpose of this test method is to estimate the percent cover of non-erodible elements on a given surface to see whether such elements take up enough space to offer protection against windblown dust. For simplification, the following test method refers to all non-erodible elements as “rocks.”

(a) Randomly select a 1 meter by 1 meter survey area within an area that represents the general rock distribution on the surface (a 1 meter by 1 meter area is slightly greater than a 3 foot by 3 foot area). Use a blind “over the shoulder” toss of a throwable object (for example, a metal weight with survey tape attached) to select the survey surface and using the point of fall as the lower left hand corner, measure a 1 meter by 1 meter survey area. Mark-off the survey area by tracing a straight, visible line in the dirt along the edge of a measuring tape or by placing short ropes, yard sticks, or other straight objects in a square around the survey area.

(b) Without moving any of the rocks or other elements, examine the survey area. Since rocks greater than 3/8 inch (1 cm) in diameter are of interest, measure the diameter of some of the smaller rocks to a get a sense of which rocks need to be considered.

(c) Mentally group the rocks greater than 3/8 inch (1cm) diameter lying in the survey area into small, medium, and large size categories. If the rocks are all approximately the same size, simply select a rock of average size and typical shape. Without removing any of the rocks from the ground, count the number of rocks in the survey area in each group and write down the resulting number.

(d) Without removing rocks, select one or two average-size rocks in each group and measure the length and width. Use either metric units or standard units. Using a calculator, multiply the length times the width of the rocks to get the average dimensions of the rocks in each group. Write down the results for each rock group.

(e) For each rock group, multiply the average dimensions (length times width) by the number of rocks counted in the group. Add the results from each rock group to get the total rock area within the survey area.

(f) Divide the total rock area, calculated in Subsection 90.4.1.2(e) of this regulation, by two (to get frontal area). Divide the resulting number by the size of the survey area (make sure the units of measurement match), and multiply by 100 for percent rock cover. For example, the total rock area is 1,400 square centimeters, divide 1,400 by 2 to get 700. Divide 700 by 10,000 (the survey area is 1 meter by 1 meter, which is 100 centimeters by 100 centimeters or 10,000 centimeters) and multiply by 100. The result is 7% rock cover. If rock measurements are made in inches, convert the survey area from meters to inches (1 inch = 2.54 centimeters).

(g) Select and mark-off two additional survey areas and repeat the procedures described in Subsection 90.4.1.2(a) through Subsection 90.4.1.2(f) of this regulation. Make sure the additional survey areas also represent the general rock distribution on the site. Average the percent cover results from all three survey areas to estimate the average percent of rock cover.

(h) If the average rock cover is greater than or equal to 20%, the surface is stable. If the average rock cover is less than 20%, follow the procedures in Subsection 90.4.1.2(i) of this regulation.

(i) If the average rock cover is less than 20%, the surface may or may not be stable. Follow the procedures in Subsection 90.4.1.3 (Determination of Threshold Friction Velocity) of this regulation and use the results from the rock test method as a correction (i.e., multiplication) factor. If the rock cover is at least 1%, such rock cover helps to limit windblown dust. However, depending on the soil's ability to release fine dust particles into the air, the percent rock cover may or may not be sufficient enough to stabilize the surface. It is also possible that the soil itself has a high enough Threshold Friction Velocity (TFV) to be stable without accounting for rock cover.

(j) After completing the procedures described in Subsection 90.4.1.2(i) of this regulation, use Table 2 of this regulation to identify the appropriate correction

factor to the TFV, depending on the percent rock cover. Multiply the correction factor by the TFV value for a final TFV estimate that is corrected for non-erodible elements.

90.4.1.3 **Determination Of Threshold Friction Velocity (TFV):** For Disturbed Surface Areas that are not crusted or vegetated, determine TFV according to the following sieving field procedure (based on a 1952 laboratory procedure published by W. S. Chepil).

(a) Obtain and stack a set of sieves with the following openings: 4 millimeters (mm), 2 mm, 1 mm, 0.5 mm, and 0.25 mm, or obtain and stack a set of standard/commonly available sieves. Place the sieves in order according to size openings, beginning with the largest size opening at the top. Place a collector pan underneath the bottom (0.25 mm) sieve. Collect a sample of loose surface material from an area at least 30 cm by 30 cm in size, to a depth of approximately 1 cm using a brush and dustpan or other similar device. Only collect soil samples from dry surfaces (i.e., when the surface is not damp to the touch). Remove any rocks larger than 1 cm in diameter from the sample. Pour the sample into the top sieve (4 mm opening) and cover the sieve/collector pan unit with a lid. Minimize escape of particles into the air when transferring surface soil into the sieve/collector pan unit. Move the covered sieve/collector pan unit by hand using a broad, circular arm motion in the horizontal plane. Complete twenty circular arm movements, ten clockwise and ten counterclockwise, at a speed just necessary to achieve some relative horizontal motion between the sieves and the particles. Remove the lid from the sieve/collector pan unit and disassemble each sieve separately, beginning with the largest sieve. As each sieve is removed, examine it for loose particles. If loose particles have not been sifted to the finest sieve through which they can pass, reassemble and cover the sieve/collector pan unit and gently rotate it an additional ten times. After disassembling the sieve/collector pan unit, slightly tilt and gently tap each sieve, and the collector pan, so that material aligns along one side. In doing so, minimize escape of particles into the air. Line up the sieves and collector pan in a row and visibly inspect the relative quantities of catch in order to determine which sieve (or whether the collector pan) contains the greatest volume of material. If a visual determination of relative volumes of catch among sieves is difficult, use a graduated cylinder to measure the volume. Estimate TFV for the sieve catch with the greatest volume using Table 1 of this Subsection, which provides a correlation between sieve opening size and TFV.

Table 1. Determination of Threshold Friction Velocity

Tyler Sieve No.	ASTM 11 Sieve No.	Opening (mm)	TFV (cm/s)
5	5	4	135
9	10	2	100
16	18	1	76
32	35	0.5	58
60	60	0.25	43
Collector Pan	—	—	30

(b) Collect at least three soil samples which represent random portions of the overall conditions of the site, repeat the above TFV test method for each sample and average the resulting TFVs together to determine the TFV uncorrected for non-erodible elements. Non-erodible elements are distinct elements, in the random portion of the overall conditions of the site, that are larger than 1 cm in diameter, remain firmly in place during a wind episode, and inhibit soil loss by consuming part of the shear stress of the wind. Non-erodible elements include stones and bulk surface material but do not include flat or standing vegetation. For surfaces with non-erodible elements, determine corrections to the TFV by identifying the fraction of the survey area, as viewed from directly overhead, that is occupied by non-erodible elements using the following procedure. For a more detailed description of this procedure, see Subsection 90.4.1.2 (Rock Test Method) of this regulation. Select a survey area of 1 meter by 1 meter that represents a random portion of the overall conditions of the site. Where many non-erodible elements lie within the survey area, separate the non-erodible elements into groups according to size. For each group, calculate the overhead area for the non-erodible elements according to the following equations:

Eq. 1: (Average length) x (Average width) = Average Dimensions.
Eq. 2: (Average Dimensions) x (Number of Elements) = Overhead Area.
Eq. 3: Overhead Area of Group 1 + Overhead Area of Group 2 (etc.) = Total Overhead Area.
Eq. 4: Total Overhead Area/2 = Total Frontal Area.
Eq. 5: (Total Frontal Area/Survey Area) x 100 = Percent Cover Of Non-Erodible Elements.

Note: Ensure consistent units of measurement (e.g. square meters or square inches when calculating percent cover).

Repeat this procedure on an additional two distinct survey areas that represent a random portion of the overall conditions of the site and average the results. Use Table 2 of this Subsection to identify the correction factor for the percent

cover of non-erodible elements. Multiply the TFV by the corresponding correction factor to calculate the TFV corrected for non-erodible elements.

Table 2. Correction Factors for Threshold Friction Velocity

Percent Cover of Non-Erodible Elements	Correction Factor
Greater than or equal to 10%	5
Greater than or equal to 5% and less than 10%	3
Less than 5% and greater than or equal to 1%	2
Less than 1%	None

History: Initial adoption: June 22, 2000
Amended: November 16, 2000; November 20, 2001; December 17, 2002; June 3, 2003; July 1, 2004; April 15, 2014; January 21, 2020.

APPENDIX Q

Wildfire Mitigation Plan

SCE's current Wildfire Mitigation Plan can be found on the California Public Utilities Commission website at http://cpuc.ca.gov/industries-and-topics/wildfires/utility-wildfire-mitigation-plans

APPENDIX R

Burrowing Owl Management
and Passive Relocation Plan

TLRR: Eldorado-Pisgah-Lugo Project

Burrowing Owl Management and Passive Relocation Plan

Prepared for
Southern California Edison

December 2022

Prepared by
Arcadis U.S., Inc.

Applicable Agencies

Bureau of Land Management	☒
National Park Service	☒
California Public Utilities Commission	☒

Conservation and Management Actions Addressed:

DRECP LUPA CMAs LUPA-BIO-IFS-12, LUPA-BIO-IFS-13, and LUPA-BIO-IFS-14

Contents

Tables

Attachments

1.0 Introduction

Southern California Edison (SCE) will implement this Burrowing Owl Management and Passive Relocation Plan (Plan) as needed to minimize impacts on burrowing owl (*Athene cunicularia*) during construction of the Eldorado-Pisgah-Lugo Project (Project or EPL Project). A portion of the Project is located within the known range for burrowing owl and suitable habitat occurs within the Project alignment. This Plan has been created to ensure the protection of burrowing owls.

This Plan is prepared to be complementary to similar documents addressing protected biological resources during construction of the Project. For example, the Nesting Bird Management Plan (NBMP) includes requirements related to nesting bird surveys, monitoring, and reporting. Because of the unique concerns associated with burrowing owls, this Plan provides supplementary detail to the information in the NBMP.

1.1 Project Description

1.1.1 Project Purpose Statement

SCE is a public utility that provides electric service to a population of approximately 15 million people within an approximately 50,000-square-mile service area that encompasses 180 cities throughout southern California.

SCE has identified that the physical clearances along some of its transmission and subtransmission circuits are not compliant with the clearances set forth in California Public Utilities Commission (CPUC) General Order (GO) 95 or Section 23 of the National Electrical Safety Code (NESC) due to: the installation of additional infrastructure under SCE lines over time; survey, engineering, and construction inaccuracies; the growth of vegetation; and changes in topography.

The collective effort to identify and remediate these discrepancies across SCE's system is referred to as the Transmission Line Rating Remediation (TLRR) effort. Based on the LiDAR and engineering modeling work, SCE's TLRR effort is developing a remediation plan for each discrepancy to ensure compliance with GO 95 and NESC Section 23 standards.

1.1.2 Project Overview

Through the EPL Project, SCE proposes to remediate physical clearance discrepancies on four existing transmission circuits. The EPL Project includes the following components to remediate the identified discrepancies.

1.1.2.1 Transmission

The EPL Project would install new, and replace existing infrastructure along portions of existing 220 kV transmission lines by:

- Installing new inter-set transmission structures and replacing or modifying the existing hardware on adjacent structures.
- Replacing the insulator assemblies on some existing structures that are not adjacent to new inter-set transmission structures.
- Removing existing conductor and installing new 609.5 Irving Aluminum Conductor Composite Core Ultra-Low Sag transmission conductor on existing structures.
- Removing existing overhead groundwire and installing 7#7 Alumoweld overhead groundwire on existing structures for system protection.

1.1.2.2 Substations

The EPL Project would include the following substation-related work:

- Disconnect existing conductor from existing positions at the existing Pisgah Switchyard and Cima Substation and connect newly installed conductors to existing substation positions.
- Remove existing overhead groundwire and install new overhead groundwire at the existing Pisgah Switchyard and Cima Substation. Make minor modifications to the existing terminal racks to accommodate the new overhead groundwire.
- Update, as necessary, relay settings at the existing Lugo, Cima, and Eldorado substations and at the existing Pisgah Switchyard.

1.2 Burrowing Owl Standard Construction Measure

SCE has included in the project description for the EPL Project the following standard measure related to burrowing owl:

> "SCE has prepared and will implement a Burrowing Owl Management and Passive Relocation Plan. The Plan describes methods to avoid impacts to nesting burrowing owl."

1.3 Conservation and Management Actions

The BLM has identified the following Conservation and Management Actions (CMAs) for reference and incorporation in this Plan; no components of the Mojave National Preserve are specific to burrowing owl.

> LUPA-BIO-IFS-12: If burrowing owls are present, a designated biologist (see Glossary of Terms) will conduct appropriate activity-specific biological monitoring (see Glossary of Terms) to ensure avoidance of occupied burrows and establishment of the 656 feet (200 meter) setback to sufficiently minimize disturbance during the nesting period on all activity sites, when practical.
>
> LUPA-BIO-IFS-13: If burrows cannot be avoided on-site, passive burrow exclusion by a designated biologist (see Glossary of Terms) through the use of one-way doors will occur according to the specifications in Appendix D or the most up-to-date agency BLM or CDFW specifications. Before exclusion, there must be verification that burrows are empty as specified in Appendix D or the most up-to-date BLM or CDFW protocols. Confirmation that the burrow is not currently supporting nesting or fledgling activities is required prior to any burrow exclusions or excavations.
>
> LUPA-BIO-IFS-14: Activity-specific active translocation of burrowing owls may be considered, in coordination with CDFW.

1.4 Species Biology

Burrowing owls are widespread throughout the western United States and may occur almost anywhere suitable habitat is present within its range. The burrowing owl is a CDFW Species of Special Concern when associated with nesting sites and some wintering sites, a Nevada 2012 Wildlife Action Plan Species of Conservation Priority, a BLM sensitive species in California and Nevada, and an USFWS Bird of Conservation Concern; burrowing owl are also protected under both the federal Migratory Bird Treaty Act and the CDFG Code (Section 3503.5 and other sections).

Burrowing owls prefer areas with sparse or no vegetation around the burrow entrance. Burrows may occur in grasslands, areas with scattered shrubs, and farmland but rarely occur in densely vegetated areas. Perches or areas of higher ground near burrows are used by burrowing owls and burrowing owls are generally most active near dawn and dusk (Zarn 1974). Grinnell and Miller (1944) describe suitable burrowing owl habitat in California as "open, dry, nearly or quite level, grassland; prairie; desert floor." The California Burrowing Owl Consortium (CBOC) protocol (1993) notes that shrubland should be considered

potential habitat if the shrub cover is below 30 percent (CBOC 1993).[1] Burrowing owls utilize underground burrows for shelter and nesting and suitable burrows in the Mojave Desert may be constructed by rodents such as ground squirrels or kangaroo rats, as well as kit foxes, badgers or desert tortoises. Burrows in the Mojave Desert must be deep enough to provide a thermal refugium during summer, typically with chambers approximately 3 feet below the ground surface (Johnson et al. 2010). Shallow, temporary shelters that may often be used by desert tortoises would not be suitable for occupancy by burrowing owls in the Mojave Desert, although shallow shelters may be used in areas with cooler climates (Klute et al. 2003). Additionally, burrows with multiple entrances are preferred. Outside the nesting season, burrow structure may be less important. Soils suitable for burrows (typically friable soils such as silty clay loams) may limit distribution in natural areas; however, human-made features such as pipes and culverts may also be used as shelter outside the nesting season or as surrogate or satellite burrows at any time (Williford et al. 2009).

Several factors in combination probably explain the species' distribution on local scales: vegetation density, availability of suitable prey, availability of burrows or suitable soil, and disturbance (primarily from humans). In a few areas, the threat of predators may be an important limiting factor. Threats include deaths caused directly by humans (including vehicle collisions), excessive disturbance by humans and pets, pesticide use (resulting in death, loss of prey populations, and loss of burrow-constructing animals), habitat degradation and loss, and predatory behavior by nonnative animals, especially pets. Burrowing owls are greatly reduced in numbers in coastal southern California as compared to historical populations (Garrett and Dunn 1981; Unitt 2004), with the species now nearly extirpated from many areas (Hamilton and Willick 1996).

Across their range, burrowing owls may be migratory, partial migrants (only some members of the population migrate), or year-round residents. Year-round resident burrowing owl populations are often associated with agriculture where water and food availability persists year-round and are typically in the southern part of the species' overall range (Klute et al. 2003). Consistent with the Nesting Bird Management Plan (NBMP) and the species' biology in the Mojave Desert, this Plan defines the burrowing owl nesting season as February 1 to August 31. Fledglings appear to reach independence in August and September (Martin 1973), although this may be a more gradual process in non-migratory populations. In non-migratory burrowing owls, pair bonds often continue year-round; pairs produce only a single brood per year, but they will re-nest in response to early nest failures (Haug et al. 1993).

1.4.1 Presence in the Project Area

A habitat assessment and burrow surveys have been completed as part of the Project. Burrowing owl surveys were conducted in 2017 and 2018 as summarized below.

Table 1 Burrowing Owl Survey History

Type of Survey	Year	Date(s)	Segments
Burrowing Owl	2017	April 18—May 4	All
Burrowing Owl	2018	April 2—April 6	All

No live burrowing owls were observed within the Project area at the time of the special-status wildlife surveys. Three burrowing owl burrows were observed during the surveys. Two burrowing owl burrows with whitewash were observed in the Apple Valley south of the southern foothills of the Granite Mountains. A third burrow and a casting were observed in the northern foothills and washes of the Bristol Mountains just west of the western perimeter of the Mojave National Preserve. None of the burrows

[1] The BLM has suggested "an alternate approach to identifying best-quality Burrowing Owl habitat based on soil texture, extent of undisturbed/natural area, vegetation, etc. Best-quality Burrowing Owl habitat can be designated as the collective distribution of soil map units determined to be loam, clay loam, silty clay loam, and silty loam." Citations supporting this approach are noted in Section 3.0.

showed sign of recent use (i.e. fresh whitewash, feathers, prey remains, etc.). Based on the condition of the burrows, the burrows may have been used by burrowing owls as wintering burrows.

2.0 Approach

SCE will implement a phased approach to avoiding and reducing potential impacts on burrowing owl during construction of the EPL Project. The primary goal would be to avoid disturbance of active nesting burrowing owl burrows as described below. If Project activities occur within 300 feet of an active nesting burrowing owl burrow or adjacent to known occupied burrowing owl burrows, a series of indirect impact reduction measures will be implemented, which would include construction monitoring by an Avian Biologist (the role and responsibility of the Avian Biologist is addressed in the NBMP developed for the EPL Project). Only when direct and indirect impacts are unavoidable, and avoidance is infeasible, will passive relocation (artificial burrow creation, and/or offsite existing burrow enhancement, and burrow collapse) be utilized as a method for avoiding potential direct or indirect mortality. For the management approaches described below, an Avian Biologist(s) that has experience in surveying, monitoring, and relocation of the species will be consulted and utilized.

2.1 Preconstruction Surveys and Clearance Sweeps

Per the NBMP, an Avian Biologist will conduct a preconstruction nest survey within ten days prior to the start of work at any given site. Burrowing owl surveys shall be conducted in accordance with the most current CDFW guidelines (CDFG, 2012; or updated guidelines as they become available). Pedestrian transects will be spaced to allow for 100 percent visual coverage of the ground surface, as accessible. Areas that are not accessible will be surveyed using binoculars and/or spotting scopes. Surveys will be performed during the periods of (1) from one hour before to two hours after sunrise or (2) from two hours before to one hour after sunset. Surveys will not be performed during heavy precipitation, high winds (>20 mph), or dense fog. All burrows and occupied burrows will be mapped using Global Positioning System (GPS) technology. Each burrow will be determined to be occupied or not based upon the field evidence including the presence of owls and/or owl sign including, their droppings, pellets, tracks, feathers, or other debris often deposited at the burrow entrances by the owls.

During construction, daily morning biological clearance sweeps will be conducted and prior to work each day.

2.2 Impact Avoidance

SCE will work closely with the contractor to reduce or adjust the construction work areas and overland travel routes to avoid direct and indirect impacts on occupied burrowing owl burrows as identified during the preconstruction surveys. The primary goal is to avoid take of burrowing owls or their burrows through the implementation of environmentally sensitive area buffers. The default buffer for a burrowing owl burrow is 300 feet for ground construction, and 300 feet horizontal and 200 feet vertical for helicopter construction. Effectiveness of the buffer area will be monitored, and adjustments will be made if necessary. To avoid take of burrowing owl individuals, burrows occupied outside the nesting season will be avoided through the implementation of a 160-foot environmentally sensitive area buffer.[2]

[2] Note that a 656-foot (200 meter) buffer is defined in DRECP LUPA CMA-BIO-IFS-12. SCE will implement the stated buffers; these buffers are taken from the Nesting Bird Management Plan that has been developed in coordination with BLM and CDFW. A 656-foot (200 meter) setback will be established when practical; however, the locations of work in areas where burrowing owl may be present are fixed in space and thus may be nearer than 200 meters to an occupied burrow. Avoidance of work at these fixed locations during the nesting period may be impractical due to other project scheduling constraints. The buffers presented here will be protective of burrowing owl, and thus the EPL Project will conform to the intent of CMA LUPA-BIO-IFS-12.

2.3 Impact Reduction Measures

If construction will occur during the nesting season within 300 feet of occupied and/or active nest burrows or within the 160-foot buffer during the non-breeding season, the following measures will be implemented to reduce potential indirect impacts to occupied burrowing owl burrows.

- If an active nesting burrow is identified, the standard buffers will be implemented.
- If avoidance is not feasible within the buffer during the nesting season, the buffer reduction process identified in the NBMP shall be followed.
- Recommendations of reduced buffers will be determined by construction type, activity, and duration; natural history; individual behavior; stage of the reproductive cycle; known tolerances; and site conditions at each specific active nesting burrow.
- As described below, worker training, monitoring, shielding, perch installation, and construction restriction measures apply to the entire Project and would benefit burrowing owl where they occur by reducing the potential for impacts to the species.

2.3.1 Training

SCE will provide a Worker Environmental Awareness Program (WEAP) training to the construction crews and all monitors involved with the Project. The WEAP training will be used to educate personnel on identification of the species; their locations within the Project areas; the requirements of this Plan; the mitigation measures (if any) to reduce potential direct and indirect impacts; and consequences of violations of the Plan requirements. The WEAP training satisfies DRECP LUPA CMA LUPA-BIO-5.

2.3.2 Biological Construction Monitoring

A Biological Monitor(s), the roles and responsibilities of whom is addressed in the NBMP developed for the EPL Project, will be on-site during construction to ensure work is being conducted according to this Plan and that the appropriate buffers are being maintained. Monitoring will provide regular updates on locations and status of all known burrowing owls detected during preconstruction surveys. If burrowing owls appear to be distressed by work activities, additional measures described in this Plan will be implemented as directed by the Biological Monitor and SCE. This satisfies DRECP LUP CMA LUPA-BIO-2.

2.3.3 Shielding

If disturbance must occur inside the 300-foot buffer during the breeding season, shielding the construction activity from the line-of-sight of the occupied burrowing owl burrow and/or active nest will be considered. There are several options that can be selected dependent on site-specific conditions. One option would be to utilize portable chain-link fencing (five-foot height) with shade cloth, constructed so that wind may pass through. Another option may include erecting hay bales. The decision to install shielding will be determined by the Avian Biologist and a plan will be submitted to the CDFW for concurrence prior to the implementation shielding methods.

2.3.4 Perches

Appropriate perches may be erected surrounding the burrow to provide safe locations for the burrowing owl to utilize. Appropriate perches may reduce the distance an owl moves away from the burrow when disturbed, and thus reducing potential nest abandonment and predation risk. Perches would be installed at least one week prior to any construction activity. Perches would consist of wooden “T” stakes inserted into the ground, or would consist of other materials that would be suitable for each specific occupied burrow and/or active nest. A plan will be submitted to the CDFW for concurrence prior to implementing perching methods.

2.3.5 Buffer Reduction

If construction activities must occur within a buffer area, the area of the buffer may be reduced with the recommendation of the Avian Biologist. A reduced buffer plan will be prepared that will include options to manage impacts associated with the construction type, activity, and duration at each active nesting burrow.

A reduced buffer may be implemented according to the following process:

1. The Construction Contractor will file a buffer reduction request to the SCE Environmental Project Manager (EPM), describing the proposed work activity within the buffer area, reason the activity must be completed while the nest remains active, and total period of proposed buffer reduction.
2. Once a request for a buffer reduction is received from the Construction Contractor, the SCE EPM will review the nest status and the need for the reduction with the Construction Contractor. Potential avoidance of the buffer reduction will be evaluated (e.g., by staging equipment in a different location). Wherever feasible, proposed work activities and locations will be adjusted to avoid or minimize incursion into the buffer area.
3. The SCE EPM, SCE Construction team, and Avian Biologist will evaluate the request and determine whether a reduced buffer can be applied. The decision will be based on the documented nest information and site-specific conditions such as distance to construction, type and anticipated duration of construction, microhabitat at the nest location that may provide visual and acoustic barriers, behavior of the pair, its reproductive stage, the species' natural history, species' known tolerances to human presence and activities, proposed buffer reduction distance and start and end dates, and anticipated work activities and durations. If determined to be acceptable, the SCE EPM will submit a buffer reduction request to CPUC, BLM, or NPS (depending on underlying land ownership) and CDFW.
4. If no objections are received within 24 hours (or within a period identified in coordination with the CPUC or BLM or NPS and incorporated in a latter version of this Plan, or in a mitigation measure established by the CPUC or BLM or NPS [if such period is greater than 24 hours]), the buffer reduction may be implemented at the discretion of the SCE EPM and Avian Biologist. The Biological Monitor will then modify the buffer markers to the new buffer distance. The SCE EPM will modify the buffer distance, upload the approval information, document the request and approval dates in SCE's Field Reporting and Environmental Database (FRED).
5. As the work activity is initiated, the Avian Biologist will monitor the nest long enough to determine how the nesting pair is responding to the disturbance activity. If necessary, the Avian Biologist will adjust the buffer accordingly to minimize disturbance at the nest.
6. If the activities described in the request do not begin within seven calendar days or if Project activities change to a higher level of disturbance, the nest will be re-evaluated and an updated buffer reduction request shall be submitted for the proposed activities.

Once the Project activity is complete, the buffer will revert back to the original established buffer. The Biological Monitor will adjust the buffer markers and the SCE EPM will update the nest record in FRED.

When implementing a reduced buffer for an active burrow, the follow conditions will apply to allow the proposed work above to occur.

- Whenever a Prairie Falcon and/or Peregrine Falcon is visually/audibly detected, all work within the buffer reduction will be halted until the falcon(s) is no longer detected.
- Whenever a Cooper's Hawk is visually/audibly detected within 500 feet of the nest event, all work within the buffer reduction will be halted until the hawk(s) is no longer within 500 feet of the nest event.
- Whenever a Red-tailed Hawk is observed perched within 500 feet of the nest event, all work within the buffer reduction will be halted until the hawk(s) is no longer within 500 feet of the nest event.

- Work will be halted for 15 minutes when the owl(s) flush from the burrow giving the bird(s) time to acclimate. All efforts will be made to not flush the bird(s) a second time.

2.4 Passive Relocation

If direct impacts to an occupied burrowing owl burrow are unavoidable, or the Avian Biologist determines that indirect impacts could cause occupied burrow abandonment, passive relocation will occur. Active relocation will not be conducted as part of this Plan.

If passive relocation is necessary, occupied burrows will not be disturbed during the nesting season (1 February through 31 August) unless an Avian Biologist approved by CDFW verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Passive relocation outside of the nesting season may be permitted pending evaluation of detailed, site-specific passive relocation plans and receipt of formal written approval from the CDFW authorizing the passive relocation. A site-specific passive relocation plan would be submitted to CDFW for approval and would be provided to the CPUC.[3] If suitable natural burrows are not available, artificial burrows may be required as described below.

2.4.1 Passive Relocation Process

Passive relocation (Trulio 1995) is the most common method of removing burrowing owls from sites prior to clearing/grubbing activities. Passive relocation will be accomplished by installation of one-way doors on all occupied burrows, including surrogate or potential burrows, within the Project work area. One-way doors used in passive relocation can be created with a simple modification to readily available dryer vents (Clark and Plumpton 2005). After one-way door installation, burrow excavation will not proceed for at least 48 hours. Burrowing owls and any other wildlife that leave the burrow will be unable to re-enter.

Once one-way doors have been installed as part of the passive relocation process, dawn and dusk surveys will take place for the subsequent 48 hours. The goal of these surveys will be to record whether burrowing owl use is seen at the recipient burrow location. Individual burrowing owls will not be identifiable in most cases, and monitors will be unable to determine that an individual burrowing owl was subject to passive exclusion. Observations of burrowing owls will not substitute for the 48-hour waiting period, as other burrowing owls or animals could remain in the burrow.

Alternatively, no one-way doors would be required if occupied burrows are actively monitored at dawn (1 hour before sunrise to 2 hours after sunrise) and dusk (2 hours before sunset to 1 hour after sunset) over a 48-hour period to monitor and document owl activities. When an Avian Biologist(s) has directly observed that all owls are away from their burrows, the burrows would be collapsed using approved methods. Burrows will be collapsed using hand tools. Down-hole cameras may be used to determine vacancy and some burrows may require hand excavation to ensure no harm to burrowing owls. Once it is confirmed that burrowing owls are absent, the burrow is collapsed/removed and construction may be initiated. For occupied burrows and other vacant burrows within the disturbance footprint, all burrows will be collapsed once confirmed to be absent of burrowing owls. For other burrows not within the disturbance footprint but within the buffer during the nesting season, exclusionary devices may remain in place to prevent future burrowing owl occupation until construction is complete if described so in the implemented CDFW-approved passive relocation plan. All burrows located in the buffer will be preserved and not destroyed as they will be uncovered at the end of construction.

Burrow excavation will be accomplished with hand tools to avoid harm to any burrowing owls or other animals that may remain in the burrow. A scope may also be used to aid in verifying that the burrow is

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[3] If passive relocation on BLM lands is required, a site-specific passive relocation plan will be submitted to BLM for approval. The content of such a site-specific passive relocation plan—including any long-term plan and/or funding that the BLM identifies needs to be in place for the maintenance and monitoring of any artificial burrows constructed on BLM lands—will be determined if and/or when such a site-specific passive relocation plan is developed.

empty. Flexible plastic tubing will be inserted if possible, to allow an escape route and prevent burrow collapse while soil over the burrow is removed. Placement of the tubing will be adjusted as needed during the excavation. If tubing cannot be inserted, other material such as packed cardboard or paper can be used to prevent burrow collapse but would require greater caution if animals are trapped in the burrow.

Burrowing owls will not be handled during the excavation process, unless necessary to prevent injury. Other animals would be handled by Biological Monitors or other biologists according to the Project's monitoring protocol as described in the Burrowing Owl Consortium Protocol Guidelines (CBOC 1993).

2.4.2 Unoccupied Burrows

Unoccupied burrows will be preserved in place, if possible. Vacated or unoccupied burrows on the edge of work areas, or those within work areas but in a location that could feasibly be avoided, may be preserved in place by protecting the structure of the burrow by inserting flexible plastic tubing or another easily removable filling and by blocking the entrance to prevent wildlife entry. Once work activities in that location have concluded, the burrow can be cleared and left open for potential use by burrowing owls or other wildlife. If an unoccupied burrow cannot be avoided, the burrow will be hand-excavated and collapsed after ensuring that no burrowing animals are present.

2.4.3 Artificial Burrow Construction

If artificial burrows are required, they will be installed at least one week prior to the start of passive relocation. The location of these artificial burrows will be strategically selected based on local site conditions, proximity of the Project disturbances, and property accessibility and land ownership. The ultimate goal will be to relocate them as far from the work activity as feasible, but as close to the burrows being removed as possible. Artificial burrows will be constructed at a 2:1 mitigation ratio per burrowing owl observed to occupy burrows within the construction area.

2.4.3.1 Underground Artificial Burrow Construction

As applicable, a backhoe or similar heavy equipment will be used to dig a trench for the artificial burrow entrance and exit openings, accessway, and a nesting chamber; hand tools may also be used depending on local conditions. Each artificial burrow will consist of a nest box, composed of an upside-down sprinkler valve box, placed so the bottom is 4 feet underground so that the average temperature in the burrow will be approximately 75 degrees Fahrenheit. The open bottom of the nest box will have hardware cloth stretched across it to prevent potential predators from digging underneath it, as well as to allow moisture to escape. Extending from the nest box will be an access tunnel made from black 4-inch flexible perforated irrigation hose (to prevent flooding of burrows due to rain events), and extending a minimum of 12 feet from the box. The first six feet of hose are laid at the same level as the box. The second six feet of hose are laid at 90 degrees from the first six feet and will slope gently upward to ground level. For protection from dogs and other predators, a rigid 6-inch PVC pipe will be used as a sleeve over the 4-inch flexible perforated irrigation hose (Figure 1). Each opening will also consist of an apron of dirt spread by hand to mimic the original burrow to the extent possible. White-painted stakes will be placed around the burrow openings to mark the burrow location and to attract burrowing owls (CDFW 2012).

2.4.3.2 Aboveground Artificial Burrow Construction

An alternative design of an artificial a mound or aboveground burrow may be utilized due to its attractiveness to burrowing owl (P. Bloom, personal communication) and when excavation is not permitted in an area. The artificial nest chamber and entrance tubes used are the same as for an underground burrow, except these items are arranged flat on the ground. Some soil is applied by hand to keep the nest chamber and tubes in place before a backhoe is used to build the mound. Soils should be piled to a five-foot depth on isolated mounds to approach the temperature stability of an underground burrow.

2.4.4 Natural Burrow Improvement

If natural burrows are available nearby, but outside of the EPL Project alignment, these burrows should be evaluated for passive relocation of burrowing owls. If necessary, improvements will be made to the burrows, if improvements are necessary, to increase the likelihood of detection and occupancy by the burrowing owls that would be relocated. Burrow improvements may include clearing vegetation to increase visibility around the burrow entrance, widening the burrow entrance, modifying the burrow structure, and installing perches near the burrow entrance. Any burrow modifications will be done with hand tools and only after ensuring no other sensitive wildlife are present in the burrow.

The enhancement process will be completed in three general steps: (1) a burrow survey; (2) burrow evaluation; and (3) physical enhancement. The first step is to conduct a burrow suitability survey of adjacent areas of suitable habitat to determine the existence and suitability of existing burrows for burrowing owl. If burrows are found, the second step will be to complete a burrow evaluation. The evaluation process will include inspecting any natural burrows to determine that they appear vacant, in good condition (not susceptible to collapse), that the burrow entrance is intact, and that the burrow is of a sufficient depth to provide thermoregulation. Natural burrows meeting these conditions will be selected for physical enhancement (Step 3) based on local site conditions, proximity of the Project disturbances, and property accessibility and land ownership.

The ultimate goal will be to relocate them as far from the work activity as feasible, but as close to the burrows being removed as possible. Physical burrow enhancement can include constructing a substantial apron, securing and widening the burrow entrance, providing suitable perches adjacent to the burrow, and baiting the burrows with prey items to entice the displaced burrowing owls to the burrow vicinity. Existing burrow enhancement will be conducted at a 2:1 mitigation ratio per burrowing owl observed to occupy burrows within the construction area.

2.4.5 Post-Relocation Monitoring

Monitoring of passive relocation sites will be conducted twice daily by Biological Monitors through the duration of construction activities within 300 feet of an occupied burrow. The artificial burrows or enhanced natural burrows will be monitored for a period that will be defined in the site-specific relocation plan to determine if they are being utilized by owls. The extent and timing of all monitoring will be detailed in the site-specific relocation plan. During the first breeding season (February 1 through August 31) after construction of the artificial burrows or the burrow enhancement, burrowing owl surveys shall be conducted in accordance with the most current CDFW guidelines (CDFG, 2012; or updated guidelines as they become available).

2.5 Reporting

During the passive relocation process and during construction, SCE will prepare daily and weekly monitoring logs that will include information regarding work activities in areas with burrowing owls and areas of passive relocation activities. Monitoring logs will be prepared using the reporting structure described in the NBMP.

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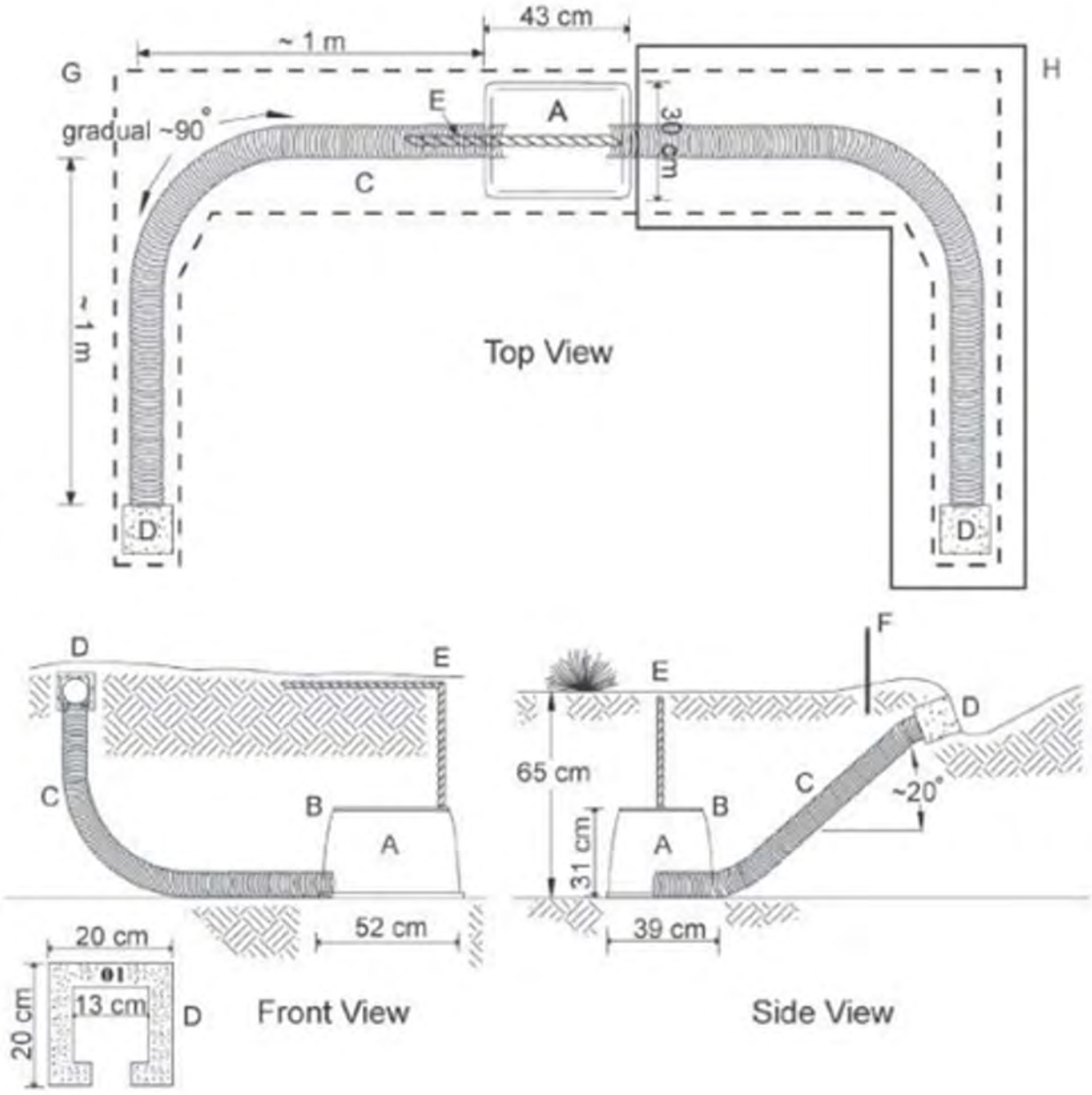
Attachment A
Figure



A - Plastic irrigation valve box, 48 cm long x 35 cm wide x 27 cm high (inside dimensions)
B - Removable lid
C - Ca. 2 m of 10-cm diameter perforated flexible plastic pipe
D - 20 x 20 x 15 cm hollow concrete block
E - Plastic rope or chain marking location of nest chamber on ground surface
F - 0.5 m perch post (optional)
G - Excavation footprint for installation – – –

Artificial Burrow Schematic

APPENDIX S

Nesting Bird Management Plan

Eldorado – Pisgah – Lugo Project

Nesting Bird Management Plan

Prepared for
Southern California Edison

December 2022

Prepared by
Arcadis U.S., Inc.

Applicable agencies

Bureau of Land Management	☒
National Park Service	☒
California Public Utilities Commission	☒

Contents

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Appendices

Acronyms and Abbreviations

ACCC	Aluminum Conductor Composite Core
ADSS	All-Dielectric Self-Supporting
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMP	Best Management Practices
BSA	Biological Survey Area
CAISO	California Independent System Operator
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CNDDB	California Natural Diversity Database
CPUC	California Public Utilities Commission
CSS	California Species of Special Concern
EPM	Environmental Project Manager
EPL Project	Eldorado – Pisgah – Lugo Project
ESA	Environmentally Sensitive Area
FESA	Federal Endangered Species Act
FRED	Field Environmental Reporting Database
GPS	Geographical Positioning System
kV	Kilovolt
LWS	lightweight steel
MBTA	Migratory Bird Treaty Act
MEER	mechanical electrical equipment room
MM	Mitigation Measure
MW	Megawatt
mph	miles per hour
NBMP	Nesting Bird Management Plan
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act
NPS	National Park Service
NRS	Nevada Revised Statutes
NTP	Notice to proceed
OHGW	overhead ground wire
OPGW	optical ground wire
Plan	Nesting Bird Management Plan
SCE	Southern California Edison
SPUT	USFWS Special Purpose Utility (permit)
TSP	tubular steel pole
USFWS	U.S. Fish and Wildlife Service
WEAP	Workers Environmental Awareness Plan

1. Introduction

The proposed Eldorado – Pisgah – Lugo Project (EPL Project) is located in unincorporated San Bernardino County and in the City of Hesperia in the State of California and in unincorporated Clark County and the City of Boulder City in the State of Nevada. The existing transmission facilities that would be rebuilt or replaced under the EPL Project are located on or span private and public lands, including lands owned, administered, or managed by the Bureau of Land Management (BLM), National Park Service (NPS), California State Lands, and the City of Boulder City. Southern California Edison (SCE) proposes to (1) reconductor portions of the transmission lines, (2) install inter-set structures and replace the hardware on adjacent structures, and (3) replace the existing insulator assemblies with shorter assemblies on some other structures.

The purpose of this Nesting Bird Management Plan (Plan or NBMP) is to specify the SCE strategy and procedures to comply with applicable federal and state regulations and permits as well as to identify specific mitigation measures pertaining to nesting birds encountered during construction of the EPL Project, and to obtain agency feedback on the strategy and procedures.

This is an adaptive management plan that may be revised or modified in consultation with the California Public Utilities Commission (CPUC), BLM, NPS, the California Department of Fish and Wildlife (CDFW), Nevada Department of Wildlife (NDOW), and the United States Fish and Wildlife Service (USFWS) to address field conditions, to improve the mitigation measures outlined in this plan, or to address changes in local, state, and federal regulations. The amendment process is described in Section 4.

This Plan includes the following:

- The definition of active and inactive nests
- Establishing species-specific default buffers[1] for construction activities
- Establishing procedures for implementing species-specific default buffers
- Establishing communication protocol for proposed reduction in established species-specific default buffers
- Survey methodology and monitoring procedures,
- Reporting contents, format, and schedule

1.1. Project Description

Under the EPL Project, SCE proposes to remediate physical clearance discrepancies on four existing transmission circuits. The EPL Project includes the following components to remediate the identified discrepancies:

[1] A buffer is a defined area surrounding the nest where most project work activities will not be permitted, to minimize project-related disturbance to nesting. Buffer distances vary according to bird species and other factors, and distances may be adjusted on a case-by-case basis, as described in this Plan.

1.1.1. Transmission

The EPL Project would install new, and replace existing infrastructure along portions of existing 220 kilovolt transmission lines by:

- Installing new inter-set transmission structures and replacing or modifying the existing hardware on adjacent structures.
- Replacing the insulator assemblies on some existing structures that are not adjacent to new inter-set transmission structures.
- Removing existing conductor and installing new 609.5 Irving Aluminum Conductor Composite Core Ultra-Low Sag transmission conductor (ACCC conductor) on existing structures.
- Removing existing overhead groundwire (OHGW) and installing 7#7 Alumoweld OHGW on existing structures for system protection.

1.1.2. Distribution

No distribution-related work is included under the EPL Project.

1.1.3. Substations

The EPL Project would include the following substation-related work:

- Disconnect existing conductor from existing positions at the existing Pisgah Switchyard and Cima Substation and connect newly installed conductors to existing substation positions.
- Remove existing OHGW and install new OHGW at the existing Pisgah Switchyard and Cima Substation. Make minor modifications to the existing terminal racks to accommodate the new OHGW.
- Update, as necessary, relay settings at the existing Lugo, Cima, and Eldorado substations and at the existing Pisgah Switchyard.

1.1.4. Project Activities

Table 1, below, provides a list of typical project activities and their corresponding disturbance level for nesting birds. The disturbance levels in Table 1 were categorized based upon the activities' disturbance to nesting birds observed on previous similar projects and analysis of the following factors. The disturbance level category for any construction activity may be revised by SCE and the agencies on a case-by-case basis to account for site-specific conditions or unforeseen circumstances (e.g., contractors may use equipment or techniques not anticipated here).

- Duration of activity
- Type of equipment used
- Noise Level associated
- Number of personnel needed
- Position of equipment used to complete activity
- Types of helicopters used

The disturbance-level category for any construction activity may be revised by SCE and the agencies on a case-by-case basis to account for site-specific conditions or unforeseen circumstances (e.g., contractors may use equipment or techniques not anticipated here).

Low disturbance level activities generally produce little to no noise, utilize no machinery, create minimal fugitive dust, are short in duration, and cause minimal to no ground or vegetation disturbance. Examples of low disturbance activities are Vegetation Clearing (Hand Tools) and Bird Deterrent Installation. Some low disturbance level activities such as surveys, staking and flagging, and BMP (best management practice) installation and repairs generate very minimal levels of disturbance compared to other construction activities. These activities are classified in Table 1 as minimal disturbance level activities and do not require the typical buffers that other construction activities necessitate. Minimal disturbance level activities and their applicable buffers are described in greater detail in Section 2.4.2 and Section 2.4.4.

Medium disturbance level activities generally produce some noise, create minimal fugitive dust, utilize light machinery that may cause noise and vibrations, and cause medium ground and vegetation disturbance; however, the activities are relatively stationary and shorter in duration than high disturbance level activities. Light construction machinery is considered to be equipment such as or similar to power tools, small Bobcats, Ditch Witch, small skid steers, small backhoes, small excavators, boom trucks, and small bulldozers. Vegetation clearing (light machinery), foundation drilling, and grading (hand tools/light machinery) are examples of medium disturbance level activities.

High disturbance level activities generally produce high levels of noise, create fugitive dust, utilize heavy machinery that create noise and vibrations, and cause ground and vegetation disturbance. Heavy machinery is considered to be equipment such as or similar to: cranes, large Bobcats, large bulldozers, large excavators, large skid steers, and motor graders. Vegetation clearing (heavy machinery) and structure erection are examples of high disturbance activities. These high disturbance level activities usually take place over larger areas and for longer durations.

Construction activities and typical equipment used are classified in Table 1 and are categorized as a Minimal, Low, Medium and High.

Table 1. Typical Project Activities and Their Disturbance Levels

Construction Activity Category	Construction Activity	Disturbance Level
Preconstruction	Environmental Resource Surveys*	Minimal
	Civil Survey*	Minimal
	Construction Staking and Re-staking*	Minimal
	ESA Staking and Re-staking*	Minimal
	Site Visits*	Minimal
	Utility Potholing	Medium
	Bird Deterrent Installation*	Low
Site Preparation	Vegetation Clearing (Hand Tools))	Low
	Vegetation Clearing (Light Machinery)	Medium
	Vegetation Clearing (Heavy Machinery)	High
	Grading (Hand Tools/Light Machinery)	Medium
	Grading (Heavy Machinery)	High
	BMP Installation (Hand Tools)*	Minimal

Construction Activity Category	Construction Activity	Disturbance Level
	BMP Maintenance (Hand Tools)*	Minimal
	BMP Installation (Light Machinery)	Medium
	Fence Installation	Medium
Foundation Construction	Casing/Steel Preparation	Low
	Drilling	High
	Casing/Steel Installation	Medium
	Concrete Pouring	High
	Concrete Finishing/Cleanup (Excluding Grinding)	Low
	Concrete Finishing (Grinding)	Medium
H-Frame Assembly	Delivery (Truck)	Medium
	Delivery (Helicopter)	Helicopter Buffer
	Assembly (Crane)	Medium
	Assembly (Helicopter)	Helicopter Buffer
H-Frame Installation	Pole Erection (Crane/Ground)	High
	Pole Erection (Helicopter)	Helicopter Buffer
	Pole Erection (Bolting Only)	Low
	QA/QC Inspection*	Minimal

Construction Activity Category	Construction Activity	Disturbance Level
Wire Stringing	Traveler Installation	Helicopter Buffer
	Remove/Install Insulators	Helicopter Buffer
	Wire Stringing (Ground Equipment)	Medium
	Wire Stringing (Helicopter)	Helicopter Buffer
	Spacer Installation	Helicopter Buffer
	Helicopter Transport	Helicopter Buffer
	Clipping	Medium
	Guard Structure Placement (Truck)	Low
	Guard Structure Installation	Medium
	Guard Structure Removal	Medium
Construction Yards	Personnel Meeting	Minimal
	Material Storage	Minimal
	Deliveries	Minimal
Restoration	Site Re-contouring (Grading)	High
	Topsoil Replacement	Medium
	Hydraulic BMP/seed application	Low
	Seeding (Hand)	Low
	Seeding (Machinery)	Medium
	Watering	Low
	Herbicide Application	Low
	Weed Removal (Hand)	Low
	Weed Removal (Machinery)	Medium
Substations	(Assume activities will take place within existing disturbance limits, but see Tower Assembly, Tower Erection, Wire Stringing for activities that may occur at locations just within the substation fence.	Low-High
General	Existing Access Road Grading	Medium

*See Section 2.4.2 and Section 2.4.4

1.2. Agency Roles and Responsibilities

The CPUC is the state lead agency responsible for California Environmental Quality Act (CEQA) review and compliance. The BLM is the federal lead agency responsible for National Environmental Policy Act (NEPA) review and compliance. Under CEQA and NEPA, both lead agencies must address the project as a whole. CDFW is responsible for the California Endangered Species Act and the California Fish and Game Code (CFGC) and is the trustee agency for activities affecting wildlife in California. Nevada Department of Wildlife (NDOW) s the state agency responsible for wildlife management in Nevada (Nevada Revised Statutes [NRS] Title 45 – Wildlife). USFWS is responsible for consistency with Federal Endangered Species Act, Migratory Bird Treaty Act (MBTA), and Bald and Golden Eagle Protection Act (BGEPA).

1.2.1. CPUC

CPUC staff have participated in development of the Plan and, upon finalization, will recommend its adoption as a condition of the CPUC's decision on the Project. In addition, CPUC will review any proposed amendments of the Plan. CPUC staff reviews and approves biologists that will

work on the Project. CPUC designated avian consultant reviews nest buffer reduction notifications and requests and may confer directly with the SCE Environmental Project Manager (EPM), SCE Avian Protection Specialist, Avian Biologists, and Biological Monitors for information on bird behavior at specific nests. In addition, the CPUC monitor may confer with the designated SCE construction representative, in coordination with the SCE EPM, for information about project activities.

1.2.2. BLM

BLM staff provides feedback on drafts and amendments of the Plan. BLM staff provides concurrence on the final version of the Plan. In addition, BLM will review any proposed amendments of the Plan. BLM staff may confer directly with the SCE EPM, SCE Avian Protection Specialist, Avian Biologists, and Biological Monitors for information on bird behavior at specific nests.

1.2.3. NPS

NPS staff provides feedback on drafts and amendments of the Plan. NPS staff provides concurrence on the final version of the Plan. In addition, NPS will review any proposed amendments of the Plan. NPS staff may confer directly with the SCE EPM, SCE Avian Protection Specialist, Avian Biologists, and Biological Monitors for information on bird behavior at specific nests.

1.2.4. CDFW

CDFW is a Trustee Agency for fish and wildlife resources (CFGC Sections 711.7 and 1802; and CEQA Guidelines Section 15386), and a Responsible Agency regarding any discretionary actions taken by CDFW (CEQA Guidelines Section 15381). CDFW provides feedback on drafts and amendments and reviews and comments on the final version of the Plan. Buffer reduction requests for special-status species are submitted to CDFW staff for review in accordance with state regulations. EPL Project defines a special-status species to be any state or federally listed (threatened, endangered, or candidate) species under CESA (or FESA), California species of special concern (CSS), California “fully protected” species under (CFGC), California “special animals”, and “watch list” species (non-listed special-status species).

1.2.5. NDOW

NDOW is the state agency responsible for wildlife management in Nevada (NRS Title 45 – Wildlife). NDOW provides feedback on drafts and amendments and reviews and comments on the final version of the Plan, as it applies to Project activities in Nevada. Buffer reduction requests for special-status species (see Section1.4) in Nevada are submitted to NDOW staff for final review in accordance with state and federal regulations.

1.2.6. USFWS

USFWS is responsible for consistency with the federal Endangered Species Act (FESA), MBTA, and BGEPA. USFWS provides feedback on drafts and amendments of the Plan. USFWS staff provides feedback on the final version of this Plan. Buffer reduction requests for special-status species are submitted to UFWS staff for review in accordance with federal regulations.

1.3. Regulatory Setting

There are a number of federal and state laws that protect birds and their nesting activities. The applicable regulations and statutes are summarized below to provide the regulatory framework within which the EPL Project must comply. In the event regulations impacting nesting birds are revised prior to or during implementation of EPL Project, the Plan may be modified to reflect these revisions. Proposed revisions to this Plan will be provided to the reviewing agencies as described in Section 4.

1.3.1. Federal Regulations

1.3.1.1. Federal Endangered Species Act

The FESA and its subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. Section 9 of FESA lists activities that are prohibited by the act. For example, unauthorized "take" of any listed species is prohibited. FESA defines take as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. No take of federally listed endangered or threatened species is proposed in this plan. See applicable permits and consultation documents for direction on these species.

1.3.1.2. Migratory Bird Treaty Act

The federal MBTA makes it unlawful, except as formally permitted, to "take" (pursue, hunt, take, capture, or kill) migratory birds, except under permits for special situations such as imminent threat to human safety or scientific research. The law currently applies to more than 1,000 species, including most native birds, and covers the destruction or removal of active nests of those species.

1.3.1.3. Bald and Golden Eagle Protection Act

Bald and golden eagles, their eggs, and their nests receive additional protection under the BGEPA (16 U.S.C. 668-668d, 54 Stat. 250 and Amendments). The BGEPA states "no person shall take, possess, sell, purchase, barter, offer for sale, transport, export, or import any bald or golden eagle alive or dead, or any part, nests or eggs, thereof without a valid permit to do so."

1.3.2. State Regulations

1.3.2.1. California Fish and Game Code

Section 2050 et seq. – California Endangered Species Act. The California Endangered Species Act (CESA) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA is administered by the CDFW and prohibits the take of any species that the California Fish and Game Commission determines to be a threatened or endangered species. The CESA also mandates that, "state agencies should not approve projects as proposed which would jeopardize the continued existence of any endangered species or threatened species," if reasonable and prudent alternatives are available that would avoid jeopardy. The CDFW administers the act and authorizes take through CFGC Section 2081 Incidental Take Permits or through Section 2080.1 (for species also listed under FESA, consistency determination with Biological Opinion). No take of state listed endangered or threatened species is proposed in this Plan. See the applicable permits and consultation documents for management direction on these species.

Section 3511 – Fully Protected Species. The legislature of the State of California designated certain species as “fully protected” prior to the creation of CESA. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, mammals, amphibians and reptiles, and birds. Most fully protected species have since been listed as threatened or endangered under CESA and/or FESA. The “fully protected” designation applies to several non-listed species in the EPL Project vicinity, including golden eagle and white-tailed kite.

Sections 3503, 3503.5, 3505, 3513 – Birds. These CFGC sections protect all birds, birds of prey, and all nongame birds, as well as their eggs and nests, for species that are not already listed as fully protected and that occur naturally within the state. Sections 3503 and 3503.5 of the CFGC stipulate the following regarding eggs and nests: Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by CFGC or any regulation made pursuant thereto; and Section 3503.5 states that is it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird, except as otherwise provided by CFGC or any regulation adopted pursuant thereto. Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA, or any part of such migratory nongame bird, except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

CDFW Special Animals List. “Special Animals” is a broad term used to refer to all the animal taxa tracked by the CDFW’s California Natural Diversity Database (CNDDB), regardless of their legal or protection status. This list is also referred to as the list of “species at risk” or “special-status species.” CDFW considers the taxa on this list to be those of greatest conservation need. The “special-status species” designation applies to several non-listed bird species in the EPL Project vicinity, such as loggerhead shrikes and yellow warblers.

In most cases, issues that will arise during construction will be associated with species protection under the MBTA and the CFGC sections pertaining to native birds. Therefore, the management strategies presented in this Plan focus on those species protected under these regulations.

1.3.2.2. Nevada Revised Statutes

Nevada Revised Statutes Chapter 503 Section 584-589: Chapter 503.584 of the NRS provides for state conservation and protection of certain fish and wildlife species. Chapter 503.584-589 provides a ‘program for the conservation, protection, restoration and propagation of selected species if native fish and other vertebrate wildlife, including migratory birds, and perpetuation of the populations and habitats of such species. This program includes under NRS 503.585 the “Placement of animals threatened with extinction on a list of fully protected species; special permit for capture, removal or destruction” and for “[a]ny animal so declared to be threatened with extinction must be placed on the list of fully protected species, and no member of its kind may be captured, removed or destroyed at any time by any means except under special permit issued by the Department.”

Section 610: NRS Chapter 503.610 provides for the protection of bald eagle and golden eagle and states that without a state issued permit, “it is unlawful for any person, firm, company, corporation or association to kill, destroy, wound, trap, injure, possess dead or alive, or in any other manner to catch, capture, take or remove from the wild, or to pursue with such intent, the birds known as the bald eagle and the golden eagle, or to take or remove from the wild, injure, possess or destroy the nests, eggs or newly hatched offspring of such birds.”

Section 620: NRS Chapter 503.620 furthers the intent of the MBTA by providing the 'Protection of birds' making it "unlawful for any person to hunt or take any dead or alive birds, nests of birds or eggs of birds protected by" the MBTA, as amended.

1.4. Measures and Conditions from Environmental Documents

Section 3.13 of the EPL Project PEA, to which this Plan is an Appendix, contains a host of standard construction measures that SCE will apply during the construction of the EPL Project. This Plan has been developed per Section 3.13.2.1.1, Nesting Bird Management Plan:

> 3.13.2.1.1 Nesting Bird Management Plan
>
> SCE has prepared and will implement a Nesting Bird Management Plan (NBMP). The NBMP shall describe methods to minimize potential project effects to nesting birds and avoid any potential for unauthorized take. The NBMP is contained in Appendix S.

2. Management for Nesting Birds

2.1. Management Summary

When practicable, EPL Project activities will be conducted outside of the nesting season in the project area. However, this Plan focuses on managing nesting birds and nests both outside of and during the nesting season. Management of nesting birds means avoiding or minimizing project activities that have the potential to cause active nest failures as well as to minimize or avoid construction delays. Protecting active nests involves establishing construction disturbance-free buffers within which construction activities are restricted. Establishing and maintaining buffers is designed to prevent take of active nests, eggs, nestlings, or nesting birds as a result of construction activities. Tolerance to disturbance can vary from one bird species to another. Therefore, it is feasible to establish species-specific, or family/group-specific, variances to default buffers that would allow successful nesting of these groups, while reducing constraints on construction activities. This Plan details buffers per species or family/group (see Table 2).

Nest buffers for avian species listed under CESA and FESA are not addressed in this Plan. Only one avian species listed under CESA and/or FESA has a potential to occur within or near the EPL Project alignment, the gilded flicker (*Colaptes chrysoides*). The gilded flicker has a low to moderate potential to occur within the EPL Project alignment in suitable habitat in Segments 3, 4, 5, and 6, where it is unlikely to nest.

Nest management for listed species will conform to any applicable conditions or requirements adopted by the lead agencies or permitting agencies, including conditions of the CPUC's Decision, federal agency records of decisions, Biological Opinion, among other authorizations or permits as required.

This section describes the definition of an active nest, determination, and implementation of reduced species-specific or family/group-specific default buffers, implementation of nest buffers, nesting bird deterrent methodologies, and the removal of inactive nests.

2.1.1. Management Roles and Responsibilities

The following describes the roles and responsibilities of the persons discussed in this Plan in determining active nests and implementing the appropriate default buffers or buffer reductions. Figure 1 presents the flow of information between roles on this Project. SCE's average qualifications for Avian Biologist and Biological Monitor described in this Plan are included in Section 3.1.2, below.

- **Environmental Project Manager (EPM):** Manages the overall environmental compliance monitoring aspects of the Project, coordinating all environmental compliance activities, operations, and reporting, and managing the mitigation compliance for the Project, among other responsibilities. The EPM reports to the Project Manager, directs the work of the Project Environmental Compliance Field Team, and communicates with all members of the Project Environmental Compliance Monitoring Team.
- **Lead Avian Biologist:** Evaluates and approves Bird Nest Events (i.e., nest records) in the Field Reporting Environmental Database (FRED), default buffers and contractor-initiated buffer reduction requests for special status species to be implemented per this Plan; will be primary point of contact with CDFW, NDOW, USFWS, CPUC, BLM, and NPS regarding active nests, default buffers, and reduced buffers; regularly reviews and critiques FRED nesting bird database (i.e., Bird Nest Events) and submits reports to

CDFW, NDOW, USFWS, CPUC, BLM, and NPS. Reviews and approves the Avian Biologist's conservation recommendations and directs the contractor to implement them; confers directly with agency staff regarding Project activities, bird behavior, and nest locations.

- **Avian Biologist:** Searches for and identifies active bird nests; documents behavior to evaluate appropriate default buffer (for species such as red-tailed hawk with more than one default buffer); recommends buffer reduction distances as appropriate and communicates these to the Lead Avian Biologist; the avian biologist may also recommend indirect impact reductions, such as establishing no parking/stopping/loitering zones or chick fencing for ground-nesting precocial species; approves buffers larger than standard buffers; determines when a nest is active or no longer active based on personal observations or those of the Biological Monitor (including all nests located at any time during project survey efforts); tracks and updates the Bird Nest Events in FRED. May also erect any required Environmentally Sensitive Area (ESA) staking and fencing around an active nest. Confers directly with agency staff regarding bird behavior at specific nest locations.
- **Biological Monitor:** Responsible for monitoring compliance during construction activities, documenting non-compliances and wildlife species observations. Establishes any required ESA staking and fencing around an active nest following guidance provided by the Avian Biologist; assists with monitoring nests and adjacent construction activities under supervision of the Avian Biologist; conducts regular sweeps to search for and identify additional nests; communicates regularly with the Avian Biologist about any nesting bird behaviors observed; reports observations and recommendations of nest activity and inactivity; and creates new and updates existing Bird Nest Events in FRED. Confers directly with agency staff regarding bird behavior at specific nest locations.

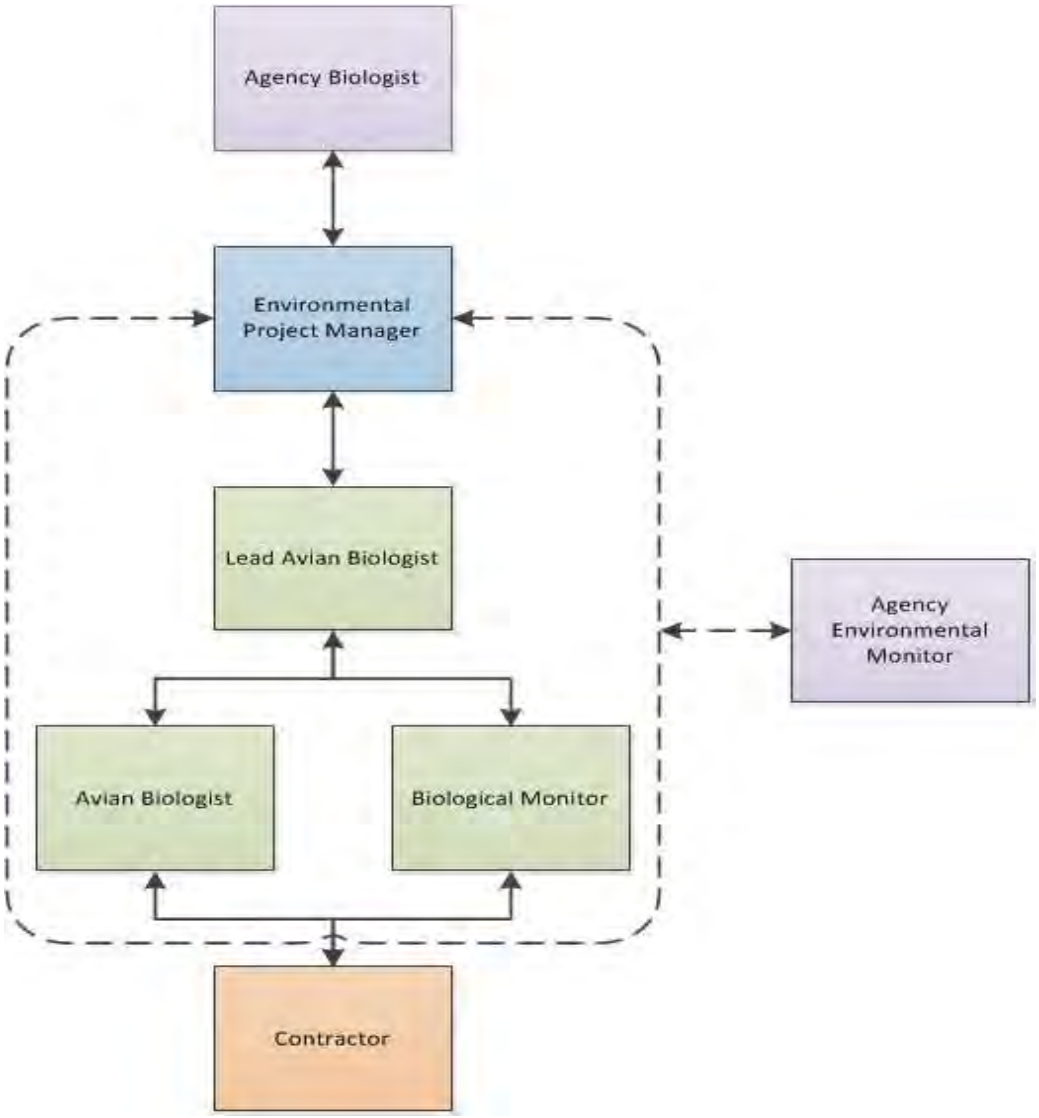


Figure 1. Avian Monitoring Communication Flow

2.2. Nest Definitions

2.2.1. Active Nest

Birds and their nests are protected in the state of California by both state and federal law. At the federal level, the MBTA states:

> *it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, any part, nest, or eggs of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof.*

At the state level, CFGC Section 3503 states:

> *It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto*.

CFGC Section 3503.5 states:

> *It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.*

NRS 503 Section 610 states:

> "*it is unlawful for any person, firm, company, corporation or association to kill, destroy, wound, trap, injure, possess dead or alive, or in any other manner to catch, capture, take or remove from the wild, or to pursue with such intent, the birds known as the bald eagle and the golden eagle, or to take or remove from the wild, injure, possess or destroy the nests, eggs or newly hatched offspring of such birds."*

NRS 503.620 states:

> "[it is] *unlawful for any person to hunt or take any dead or alive birds, nests of birds or eggs of birds protected by" the MBTA, as amended*.

While MBTA does not clearly define what an active (or inactive) nest is, the USFWS (USFWS, 2003) has clarified that the federal regulations do not pertain to the destruction of nests alone (without birds or eggs), provided that possession of the nests does not occur and the activities do not otherwise result in take of migratory birds covered by the MBTA. CDFW has not provided clarification on the regulations pertaining to nesting birds. CFGC 3503 provides protection of nests and eggs from "needless" destruction. Therefore, for purposes of this Plan, non-raptor, non-special-status species nests without eggs or chicks are considered inactive. For raptors and special-status species, a nest is considered active upon initiation of construction or when raptors exhibit "nest decorating" behavior. The initiation of nest construction will be determined by an Avian Biologist based upon field observations of the activity at each nest.

Because a moderate number of avian species never “build” nests, special attention will be provided to potential nests, known old nests, and the behavior of adults of any member of the orders Strigiformes (owls), Caprimulgiformes (nightjars), Cathartidae (new world vultures) or families in the order Falconiformes (diurnal birds of prey) including Falconidae (falcons), and Accipitridae (eagles, hawks, and kites), and some ground-nesting species (e.g., killdeer). The determination of an active nest will be made by the Avian Biologist with a minimum observation time as described below.

2.2.2. Inactive Nest

For the purpose of implementing this Plan, non-raptor and non-special-status species nests that are under construction will be considered inactive until eggs are present within the nest. Raptor and special-status species nests will be considered active during the nest building phase.

A previously active nest becomes inactive when it no longer contains viable eggs and/or living young and is not being used by a bird as part of the reproductive cycle (eggs, young, fledging young still dependent upon nest). Egg inviability will be inferred if eggs are present or believed present, but the adult birds have stopped brooding the eggs or abandoned the nest, based upon repeated observations of inactivity at the nest location when required. In some cases, a nest can be abandoned by the bird constructing it and become inactive prior to egg laying. In such cases, determination that the nest is inactive is made on a case-by-case basis based on consistent observations and the determination of an Avian Biologist.

2.3. Active Nest Avoidance and Documentation

During construction of the EPL Project, the Avian Biologists, Biological Monitors and the SCE construction team will work together to avoid or minimize impacts to active nests. The principal means of avoiding or minimizing impacts will be to establish designated areas (“buffers”) surrounding each nest, where most project activities will not be authorized. When work activities are required adjacent to an active nest, the SCE construction team will work with the SCE biology team and the agencies to determine whether the following default buffer distances may be modified to minimize impacts to the nest while allowing work to proceed.

2.3.1. Determination of Species-specific or Avian Group/Family Specific Buffers

The recommended default buffers around active nests for the various groups of birds depicted in Table 2 are the recommended distances at which construction activities can occur without disturbing the nest, adults and/or young to the point of potential nest failure. The default buffers established in Table 2 will be applied, unless a specific change is approved by the Avian Biologist to increase or decrease the buffer on a case-by-case determination based on the behavior of the bird and planned project activities. The procedures for buffer reductions (i.e., decreased distances) are described in this section below and in Section 2.3.3.

It is important to emphasize that species-specific buffers are measured from the nest to the site of the construction activity outwards (horizontally for ground or helicopter activities) or upwards (vertically for helicopter activities), as appropriate, and accounts for the nest’s location, including the height of the nest (see Figures 2, 3, 4, and 5). Upon discovery of an active nest the Biological Monitor shall mark the cylinder-shaped buffer area by ESA signage or markings on the work site, based on horizontal distance from the nest location. The buffer distances in the figures are for illustration purposes only; please see Table 2 for species specific default buffers.

2.3.1.1. Ground Based Construction Activities

A cylinder-shaped default buffer (Figures 2 and 3) will be established around active nests prior to the initiation of ground-based construction activities or upon discovery of a new active nest by the Biological Monitor or Avian Biologist. The default buffer distance established around a particular nest will be species-specific, according to the established buffer distances in Table 2.

2.3.1.2. Helicopter Based Construction Activities

Helicopter activities typically include moving crews, moving equipment, moving materials, construction activities, and wire stringing/removal. The duration of helicopter use varies based on activity, type of construction, and terrain.

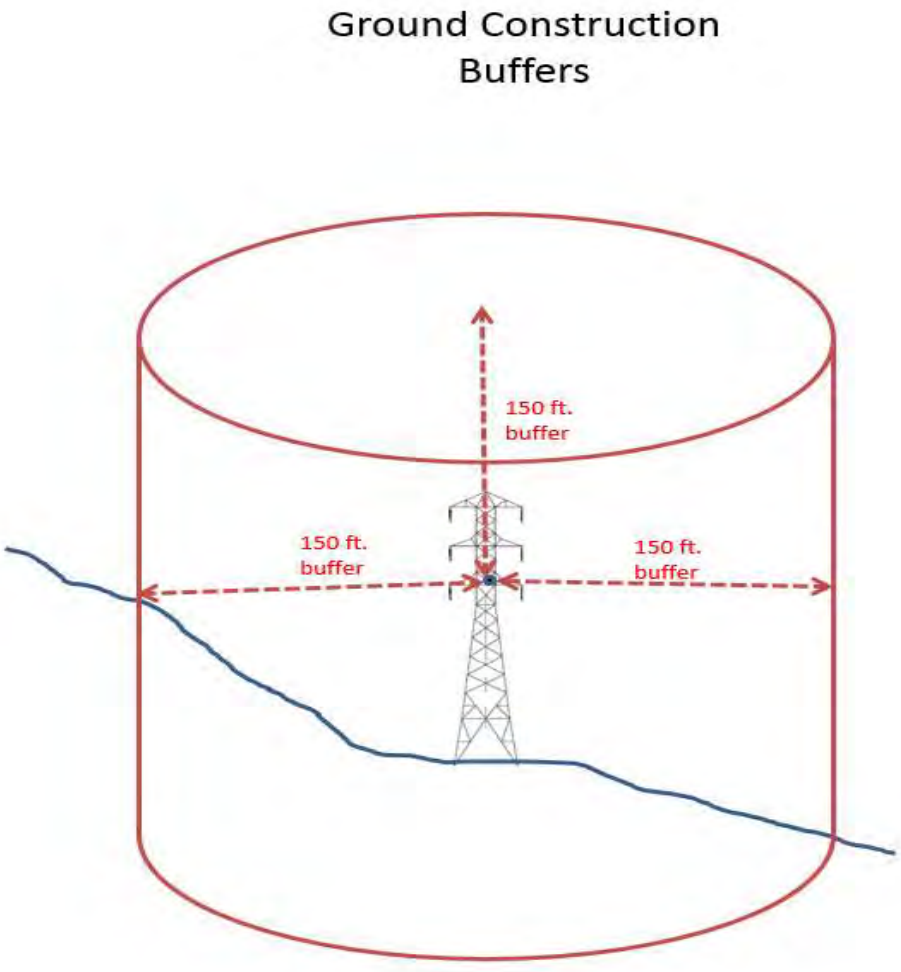


Figure 2. Example of Cylindrical Ground Construction Buffers for Nest in a Structure

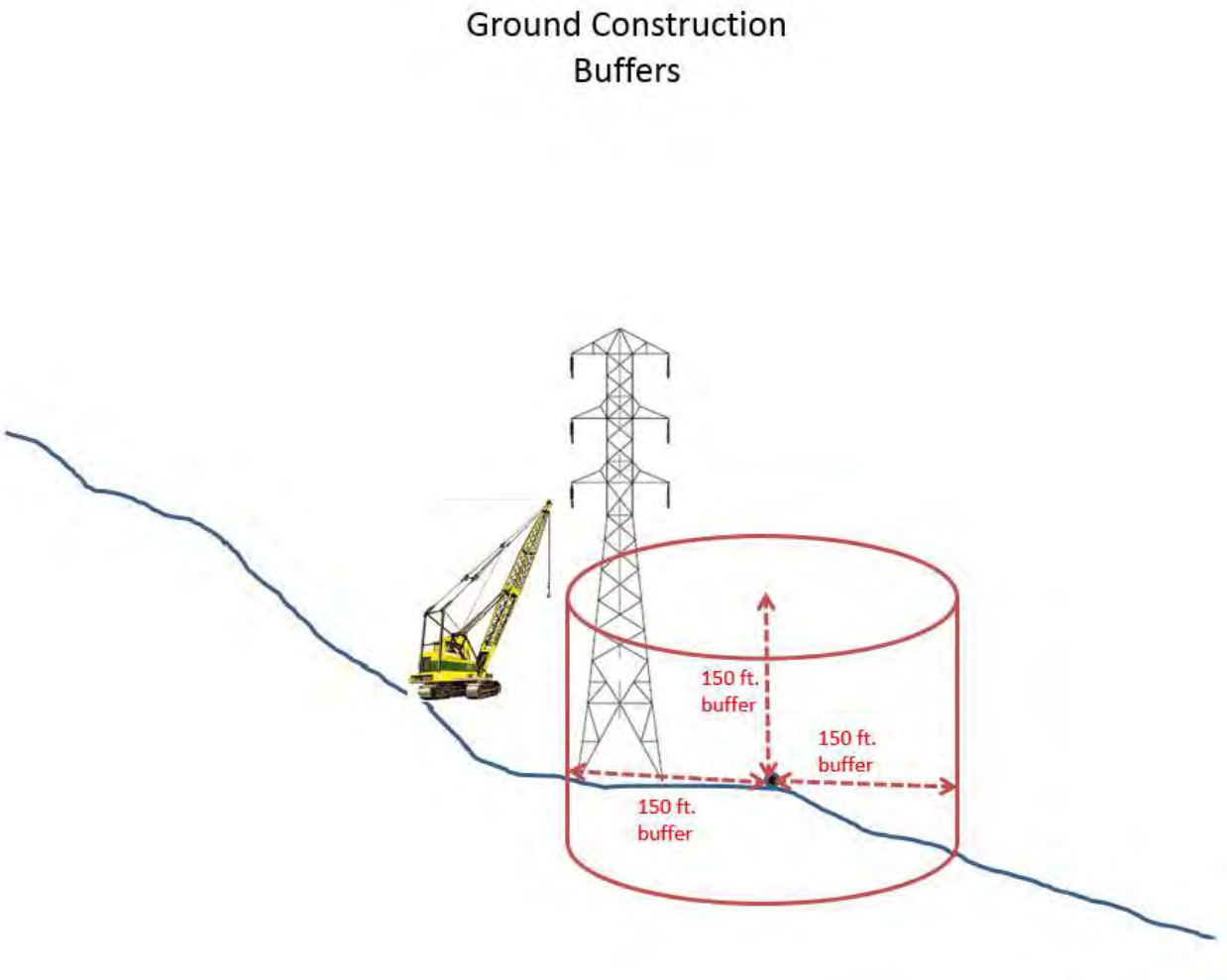


Figure 3 Example of Cylindrical Ground Construction Buffers for a Nest Nearby Construction Activities

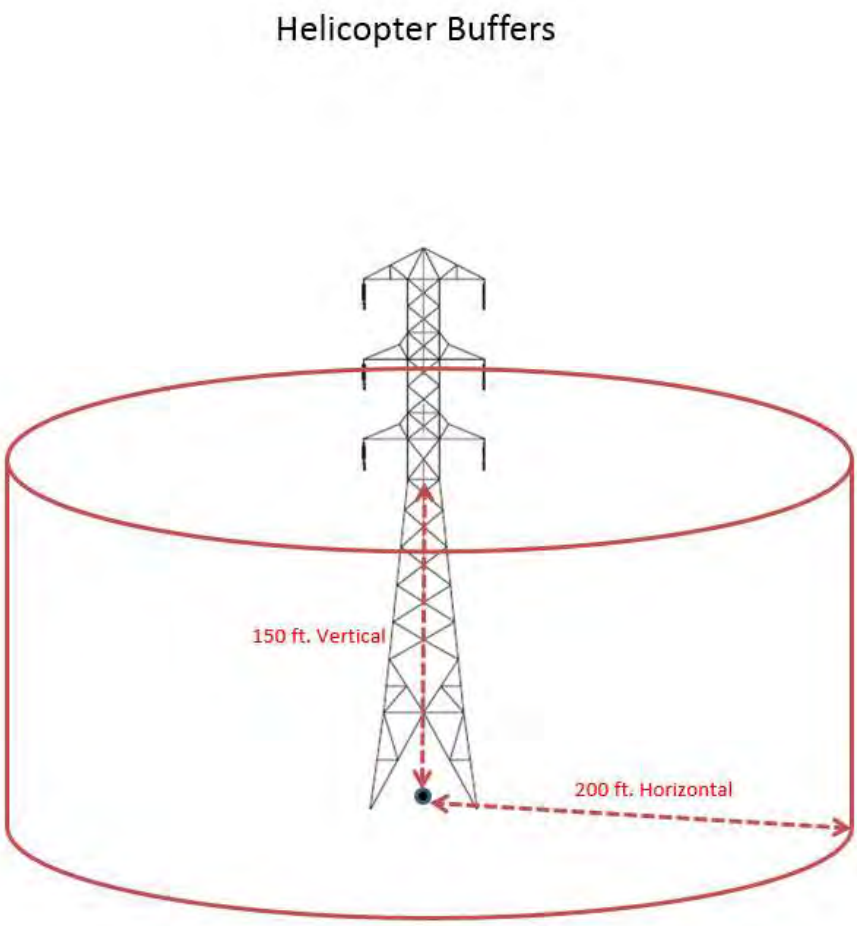


Figure 4. Example of Helicopter Buffer When Nest Is on the Ground

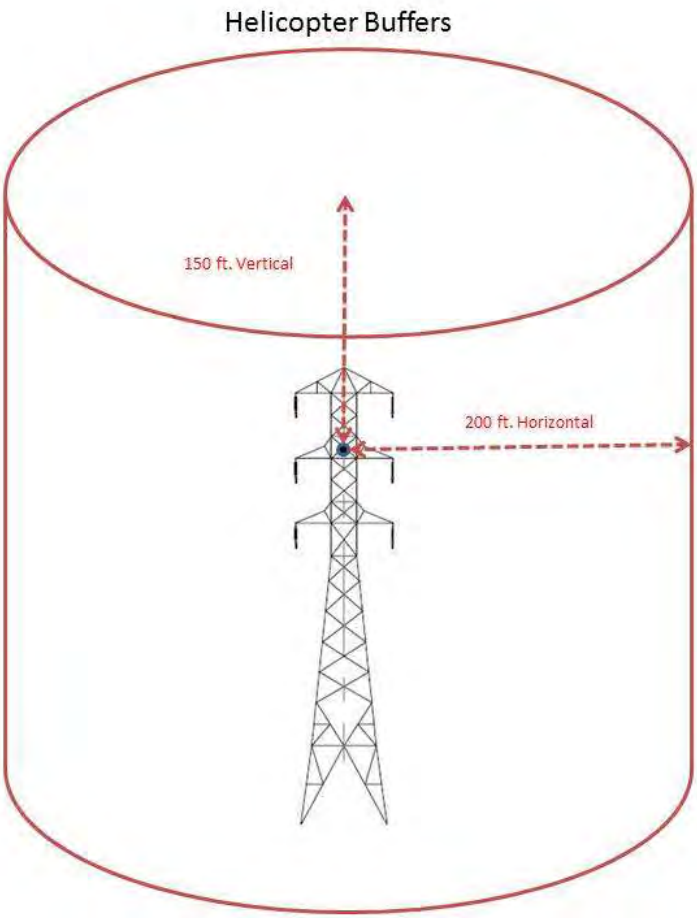


Figure 5. Example of Helicopter Buffers When a Nest Is Located Within the Tower

Cylinder-shaped horizontal and vertical default buffer distances will be established for helicopter construction activities according to the distances established in Table 2 due to the limitations of the Global Positioning System (GPS) units on the helicopter. Project Team members shall monitor the helicopter tracks (flight patterns and durations) daily to ensure compliance with established helicopter buffers and document any non-compliances. SCE shall retain helicopter track data and provide the agencies with these tracks when requested.

In many respects, helicopter construction work is similar to heavy ground-based construction activity. Therefore, the horizontal species-specific default buffers established for helicopter construction activity are greater than those for light ground-based construction activity (see Table 2, Column 4). The only exception is for raptors in Category 3, for which a 300-foot species-specific default buffer is adequate under most circumstances for both ground-based and helicopter construction activities.

Vertical species-specific default buffers established for helicopter work are also greater than for ground-based construction work in most cases (Table 2), although generally not as great as the horizontal helicopter species-specific default buffers. The species-specific default buffers provided in this Plan may need to be adjusted based on site-specific and nest-specific observations in the field. The vertical species-specific default buffers take into account the effects of rotor wash from the smaller helicopters proposed for use on the EPL Project, which typically cause a down draft of 15 to 18 miles per hour (mph) at up to 150 feet. Larger-sized

helicopters with greater rotor wash could require larger buffers. For exposed nests, vertical default buffers will be modified accordingly, based on site-specific conditions recorded in FRED.

The duration and frequency of activity in the vicinity of a nest should also be taken into consideration when evaluating whether or not the buffer requirement is met. The default buffers were established based on construction activities that are temporary or infrequent in nature. If a construction crew will be working in the vicinity of an active nest for an extended period depending on the nature of the work (an extended period can be defined as a few minutes for heavy construction or helicopter work to an hour or more for light construction), then the Avian biologist may determine that species-specific default buffer is insufficient for the nest and adjust the distance appropriately. The helicopter species-specific buffers assume that the helicopter will only be present in the area for a brief period adjacent to the nest, typically less than a minute, and that it will only visit the site once in a day, or once in the early morning and again in the late afternoon. This time frame is consistent with most types of anticipated helicopter use on the project. Helicopter flight track data will be reviewed by project team members as described above, to confirm helicopter activity periods near nests.

The vertical helicopter buffers are projected on the GPS displays in all helicopters based upon the elevation from sea level. The elevation of each nest is taken during the initial determination of “active nest.” The location of the nest in relation to the biologist taking the GPS coordinates is also added to the buffer prior to the nesting data being pushed to the helicopters daily. For example, to maintain a vertical species-specific default buffer of 100 ft. for a nest that is 100 ft. off the ground in a tower arm will appear in the GPS as a 200 ft. buffer from the ground elevation.

In Table 2, some species fall into more than one category and may therefore have more than one species-specific buffer associated with it. A blue-gray gnatcatcher (*Polioptila caerulea*), for example, nesting in a thicket or understory is less likely to be disturbed than one nesting in a more exposed location in a shrub or small tree even though both nests are the same distance from the construction activity. Likewise, a red-tailed hawk (*Buteo jamaicensis*) that has acclimated to human activities is less likely to be disturbed at its nest (and thus placed in Birds of Prey Category 2) than one that is not accustomed to human activity (placed in Birds of Prey Category 3).

The category for each nest will be determined by the Avian Biologist based upon location of the nest relative to surrounding commercial, residential areas, or other activities, as well as, the bird’s documented tolerance to human activity observed during field observations. For specific construction activities, sound monitoring information may be used during analysis of potential impacts from construction-related activity. For similar reasons, birds assigned to a category based on their nesting habits are not all likely to have similar thresholds of disturbance. In these instances, a range of species-specific buffers is indicated in Table 2.

Default buffers consider species tolerances for disturbance, if known. Larger default buffers are used for large avian species and for species that are not tolerant of disturbance. Smaller default buffers are generally used for smaller avian species and also species that have a high tolerance for disturbance, such as those that are commonly found nesting close to development. Several species have been identified as common species that use some electric power transmission structures (lattice steel towers) or build nests in or on equipment that is stored at a site. These include some red-tailed hawks, common ravens, western kingbirds, Cassin’s kingbirds, and house finches.

Appendix A provides relevant natural history information for species, including breeding information and the potential to nest in the Project area. Appendix B provides additional

information on species and their sensitivity to construction. Biological Monitors will have this Plan in their possession to refer to individual species to assist in determining appropriate buffers in the field for specific construction activities. There may be instances where a bird may be showing signs of agitation and the buffer may need to be increased. The Avian Biologist will approve increases to buffer sizes as needed.

Table 2 provides nesting bird buffers for horizontal and vertical ground and helicopter construction for only those birds with a potential to nest within the EPL Project alignment.

Table 2. Nesting Bird Buffers for Horizontal and Vertical Ground and Helicopter Construction

Avian Group (nest type /location)	Species Potentially Nesting within EPL Project Limits and Survey Area[1]	Default Buffers for Ground Construction Per Disturbance Level (feet)	Horizontal Buffer for Helicopter Construction (feet)	Vertical Buffer for Helicopter Construction (feet)[2]
Quail	California quail, Gambel's quail	150	200	150
Birds of prey (category 1)	American kestrel, barn owl, merlin	300	200	150
Birds of prey (Category 2)	Red-tailed hawk (2); some urban/suburban), red-shouldered hawk, great horned owl, burrowing owl[3], peregrine falcon, prairie falcon	300	300	200
Birds of prey (Category 3)	Turkey vulture, red-tailed hawk (2; some rural/remote), white-tailed kite, northern harrier, long-eared owl	500	500	300
Eagles	Golden eagle	1 mile	1 mile	1 mile
Shorebirds	killdeer	200	200	200
Doves	Mourning dove, white-winged dove, common ground-dove	150	200	150
Roadrunners	Greater roadrunner	300	200	150
Nightjars	Lesser nighthawk, common poorwill	150	200	150
Swifts	White-throated swift	200	200	150
Hummingbirds	Black-chinned hummingbird, Anna's hummingbird, Costa's hummingbird	100	200	150
Woodpeckers	Ladder-backed woodpecker	150	200	150
Passerines (cavity and crevice nesters)	Say's phoebe (2), ash-throated flycatcher, violet-green swallow, rock wren (2), canyon wren, house wren, juniper titmouse	100	150	100
Passerines (bridge, culvert, and building nesters)	Say's phoebe (2), house finch (3)	100	150	100
Passerines (ground nesters, open habitats)	Horned lark, rock wren (2), western meadowlark	150	200	150
Passerines (understory and thicket nesters)	Bushtit (2), blue-gray gnatcatcher (2), blue grosbeak, white-crowned sparrow	150	200	150
Passerines (shrub and tree nesters)	Olive-sided flycatcher, vermillion flycatcher, Cassin's kingbird, western kingbird (2), loggerhead shrike (2),* Cassin's vireo, California scrub-jay,	150 (300 for species marked with an *)	200	150

	Woodhouse's scrub-jay, pinyon jay, common raven (2), verdin (2), bushtit (2), black-tailed gnatcatcher (2), blue-gray gnatcatcher (2), cactus wren (2),* northern mockingbird (2), Le Conte's thrasher (2), Bendire's thrasher (2), Crissal thrasher, phainopepla (2), Bell's sparrow, black-throated sparrow, summer tanager, great-tailed grackle (2), hooded oriole, Bullock's oriole, Scott's oriole, house finch (3), lesser goldfinch (2), western wood-pewee, brown-headed cowbird, sage thrasher			
Passerines (open scrub nesters)	Loggerhead shrike (2),* verdin (2), cactus wren (2),* black-tailed gnatcatcher (2), northern mockingbird (2), Le Conte's thrasher (2), Bendire's thrasher (2), phainopepla (2), southern rufous-crowned sparrow, black-throated sparrow, Brewer's blackbird, lesser goldfinch (2)	150 (300 for species marked with an *)	200	150
Passerines (tower nesters)	Western kingbird (2), common raven (2), house finch (3)	150	200	150
Passerines (marsh nesters)	Great-tailed grackle (2)	150 (300 for species marked with an *)	200	150
Species not covered under MBTA.	Domestic waterfowl, including domesticated mallards, feral (rock) pigeon, ring-necked pheasant, chukar, Eurasian collared-dove, spotted dove, parrots, parakeets, European starling, house sparrow	NA	NA	NA

Notes:
1. For species listed under two or more categories, the number of categories is indicated in parentheses, e.g., "red-tailed hawk (2)."
2. Standard distances applicable only to small helicopters, which typically cause a down draft of 15 to 18 mph at up to 150 feet, operating in nest vicinity for up to 3 minutes once or twice per day, with a minimum of 4 hours between helicopter activities. Larger helicopters or longer work periods may require larger buffers.
3. Burrowing owl buffers are specified in the separate Burrowing Owl Management and Passive Relocation Plan.
Source: Nesting ranges from Birds of the World (Cornell Laboratory of Ornithology 2022) and Baicich, P. J. and C. J. O. Harrison (1997)

2.3.2. Implementation of Species-specific Buffers

This section describes the process of implementing species-specific default buffers for active nests. Species-specific nesting buffer implementation during construction will be designed to avoid take of an active nest. Buffers implemented for each particular nest may be greater than the buffers detailed in this Plan (Table 2) if deemed necessary by the Avian Biologist. Implemented buffers for non-special-status species may be reduced to smaller buffers than detailed in the Plan (Table 2), on a case-by-case basis as determined by an Avian Biologist as described in section 2.3.3.1, below.

When an active nest is discovered during a preconstruction nest survey, a Biological Monitor will delineate the buffer area and restrict construction as necessary per the species-specific default buffer (Table 2). A Biological Monitor will document the individual behavior of the bird; the stage

of the reproductive cycle; and the site conditions. Section 3 provides survey methods for identifying nests within the Project area.

In the event an active nest is detected by a Biological Monitor during construction activities at a specific work site during a work day, construction activities will be suspended and the species-specific default disturbance-free buffer will be established around the active nest. Demobilization activities, for work that was occurring inside the disturbance free buffer prior to the identification of the active nest, will be allowed within the buffer in order for field personnel and equipment to vacate the affected work site utilizing approved access roads and maintain vehicle speeds under 15 miles per hour, in a timely manner once the site has been secured and can be left safely. Monitoring of the nest will continue to track the status and stage of the nest site. The Avian Monitor or Biological Monitor will observe and record the work suspension and demobilization activities.

For ground-based construction activities, vertical separation of the nest from the construction area may be considered when selecting the appropriate horizontal buffer. Some species build their nests very high in trees and structures. For example, a common raven nest 150 feet off the ground in an existing structure is less likely to be affected by ground work occurring directly below than a nest 50 feet off the ground. The horizontal and vertical buffers will be implemented using the guidelines as described in Section 2.3 of this Plan.

For species such as red-tailed hawk with two or more default buffer distances, as shown in Table 2, the default distance will be determined by site-specific conditions. For these species, the habitat and infrastructure surrounding a nest location will be evaluated for its ability to provide a visual and/or acoustic barrier to construction. This information will be used to help determine the appropriate avian group from Table 2 for implementation of the default buffer.

The observed behavior of an individual bird during the nest search process and consequent nest monitoring will help determine the appropriate buffer distance. For example, an incubating adult that appears more skittish and is readily disturbed could receive a larger buffer than an incubating adult that sits tight and appears more acclimated to disturbance.

Generally, nesting birds are most susceptible to failure early in the nesting cycle when fewer resources have been invested towards the nest. Therefore, it is more important to reduce disturbances during egg laying rather than later in the nesting cycle, which could result in the determination of a larger buffer being necessary early on, then reducing its size later in the nesting season.

Extreme weather events may produce conditions that would increase the likelihood of nest failure. Combined with the stress of nearby construction activity, a nest might fail that would otherwise succeed. On unseasonably hot, cold, or windy days, species-specific buffers ***may*** need to be temporarily increased.

Information will be maintained in FRED for all nests identified within active EPL Project construction areas. At a minimum, for each nest, the following information will be documented:

- Status (active or inactive)
- Species
- Nest location including nest height
- Behavioral observations
- Site conditions

- Nest exposure
- Estimated date of nest establishment
- Estimated fledge date
- Buffer size implemented

To avoid take of active nests whose buffer areas overlap active construction areas or access roads, an Avian Biologist or Biological Monitor will implement and maintain the established default ESA buffer, monitor adjacent construction activities, and document the nesting birds' behavior observations and active nest status. SCE will ensure that the construction contractor is made aware of the ESA buffers through the use of construction maps outlining environmental and biological constraint areas, flagging, staking and signage, and direct communication in the field. Nest monitoring will be discussed in more detail in Section 3.4 below.

2.3.3. Buffer Reductions

For project activities of any disturbance level that are inconsistent with established buffer distances, the SCE EPM and Avian Biologists will evaluate the proposed activity on a case by case basis. Where appropriate, they may work with the construction team to revise a buffer reduction request to minimize potential impacts to nesting birds. A reduced buffer distance, as outlined below, may be implemented if recommended by the Avian Biologist and approved by the SCE EPM. For common species, SCE will notify the agencies of each buffer reduction. For special-status species, SCE will submit a request for agency review of any proposed buffer reduction. This Plan does not include a buffer reduction procedure for listed threatened or endangered species. Buffer reduction for listed species will be issued by CDFW or NDOW and/or USFWS only.

For each proposed buffer reduction, an Avian Biologist will be consulted and will determine whether the default species-specific buffers (Table 2) may be reduced for the specific activity and duration associated with the active nest. An Avian Biologist will make this determination based on the information provided by a Biological Monitor, the species' natural history, and its known tolerances including those observed during SCE nesting bird management on the EPL Project. If a reduced species-specific buffer can be implemented, the SCE EPM will be consulted prior to the reduction of the default buffer. Buffer reductions will take place only after consideration of site-specific conditions such as distance to construction, type of disturbance activity, anticipated duration of the disturbance, microhabitat at the location of the nest that may provide visual and acoustic barriers, behavior of the pair, and its reproductive stage

2.3.3.1. Common Species Buffer Reductions

For common species, buffers listed in Table 2 may be reduced to smaller buffers through the following notification process:

1. The Construction Contractor will file a buffer reduction request to the Lead Avian Biologist, describing the proposed work activity within the default buffer area, reason the activity must be completed while the nest remains active, and total period of proposed buffer reduction.
2. Once a request for a buffer reduction is received from the Construction Contractor, the Lead Avian Biologist will review the nest status and the need for the reductions with the contractor or construction manager. Potential avoidance of the buffer reduction will be evaluated by the Lead Avian Biologist (e.g., staging equipment in a different location).

Wherever feasible, proposed work activities and locations will be adjusted by the Avian Biologist or Biological Monitor to avoid or minimize incursion into the buffer area.

3. The SCE EPM, SCE construction team, and Lead Avian Biologist will evaluate the request and determine whether a reduced buffer can be applied. The decision will be based on the documented nest information and site-specific conditions such as distance to construction, type of disturbance activity, anticipated duration of disturbance, microhabitat at the nest location that may provide visual and acoustic barriers, behavior of the pair, its reproductive stage, the species' natural history, species' known tolerances to human presence and activities, proposed buffer reduction distance and start and end dates, and anticipated work activities and durations. If determined to be acceptable by the SCE team, the SCE EPM will submit a buffer reduction notification to the CPUC, BLM, NPS, USFWS, and CDFW or NDOW. The following will be included in the notification:
    - Complete description of activities proposed within the reduced buffer, including types of equipment, duration, and start date
    - Description of project activity in the vicinity of the nest within the last 30 days
    - Identification of the current and reduced buffers
    - Map showing current and reduced buffers
    - Avian species, nest activity, location, topography or other features that may shield the nest from the work area,[2] the pair's response to the biologist, and photos
    - Assessment made by the Avian Biologist
    - Description of monitoring if different from the monitoring protocol described within the Plan
    - Statement regarding returning to the established default buffer after work has been completed in the reduced buffer area.
4. The SCE EPM or Lead Avian Biologist will notify the Avian Biologist and the Biological Monitor. The Biological Monitor will modify the ESA markers to the new buffer distance. The SCE EPM will modify the buffer distance, upload the notification information, document the notification and feedback (if applicable) dates in FRED.
5. As the work activity is initiated, the Avian Biologist will monitor the nest long enough to determine how the nesting pair is responding to the disturbance activity. If necessary, the avian biologist will adjust the buffer accordingly to minimize disturbance at the nest.
6. If the activities described in the notification do not begin within seven calendar days or if project activities change to a higher level of disturbance the nest will be re-evaluated and an updated buffer reduction notification will be submitted for the proposed activities.

Once the project activity is complete, the buffer will revert back to the original established buffer. The Biological Monitor will adjust the ESA markers and the SCE EPM will update the nest record in FRED.

[2] Throughout this NBMP, "work area," "active work area," "construction area," or "active construction area" refer to the construction work limits as approved by the CPUC, BLM, and NPS.

2.3.3.2. Special-Status Species Buffer Reductions

Buffers listed in Table 2 for special-status species may be reduced to smaller buffers through consultation with the appropriate resource and land management agencies (refer to Appendix A). This NBMP does not fully address buffers or buffer reductions for listed threatened or endangered species. Project activities that may affect those species will be regulated according to conditions of the project's Biological Opinion and Incidental Take Permit. If a buffer for a special-status species nest impedes Project activities, a reduced buffer may be implemented according to the following process:

1. The Construction Contractor will file a buffer reduction request to the SCE EPM, describing the proposed work activity within the default buffer area, reason the activity must be completed while the nest remains active, and total period of proposed buffer reduction.

2. Once a request for a buffer reduction is received from the Construction Contractor, the SCE EPM will review the nest status and the need for the reduction with the contractor or construction manager. Potential avoidance of the buffer reduction will be evaluated (e.g., by staging equipment in a different location). Wherever feasible, proposed work activities and locations will be adjusted to avoid or minimize incursion into the buffer area.

3. The SCE EPM, SCE Construction team, and Avian Biologist will evaluate the request and determine whether a reduced buffer can be applied. The decision will be based on the documented nest information and site-specific conditions such as distance to construction, type and anticipated duration of construction, microhabitat at the nest location that may provide visual and acoustic barriers, behavior of the pair, its reproductive stage, the species' natural history, species' known tolerances to human presence and activities, proposed buffer reduction distance and start and end dates, and anticipated work activities and durations. If determined to be acceptable, the SCE EPM will submit a buffer reduction request to CPUC, BLM, NPS, USFWS, and CDFW or NDOW.

4. If no objections are received within 24 hours (or within a period identified in coordination with the CPUC, BLM, or NPS and incorporated in a later version of this Plan, or in a mitigation measure established by the CPUC, BLM, or NPS [if such period is greater than 24 hours]), the buffer reduction may be implemented at the discretion of the SCE Biologist and Avian Biologist. The Biological Monitor will then modify the ESA markers to the new buffer distance. The SCE EPM will modify the buffer distance, upload the approval information, document the request and approval dates in FRED.

5. As the work activity is initiated, the Avian Biologist will monitor the nest long enough to determine how the nesting pair is responding to the disturbance activity. If necessary, the avian biologist will adjust the buffer accordingly to minimize disturbance at the nest.

6. If the activities described in the request do not begin within seven calendar days or if project activities change to a higher level of disturbance the nest will be re-evaluated and an updated buffer reduction request shall be submitted for the proposed activities.

Once the project activity is complete, the buffer will revert back to the original established buffer. The Biological Monitor will adjust the ESA markers and the SCE EPM will update the nest record in FRED.

2.3.4. Accidental Disturbance of Active Nests

In the event project activities cause abandonment of a nest with eggs or chicks or damage to eggs, chicks, or the nest resulting in a low chance of survival, the eggs or chicks will be transported by a Biological Monitor to the closest wildlife rehabilitation facility able to accept the eggs or chicks and the CPUC, BLM, NPS, USFWS, and CDFW or NDOW will be immediately notified (within 24 hours). See Appendix C for a list of permitted wildlife rehabilitation facilities. The final disposition of the eggs or chicks will be reported in FRED as well as by the SCE EPM directly to the CPUC, USFWS, and CDFW or NDOW via email. SCE will cover the cost of the care by the wildlife rehabilitation facility. When incidents like this occur they will be documented as non-compliances and provided to the agencies and included within daily incident email summaries and weekly reports.

2.4. Exceptions to Notification Requirements

The following sections describe construction activities that do not follow the buffer implementation and reduction procedures in Sections 2.3.2 and 2.3.3. In each of the scenarios below, every effort will be taken to avoid take of active nests. These activities are not exempt from nest protection but are either necessary to ensure public health and safety or are considered such low impact as to be unlikely to cause nest failures. Crews or personnel performing these activities will be made aware of nest locations to avoid impacting these nests.

2.4.1. Critical Construction Activities

Some critical construction activities must be completed to ensure public health and safety, and structural integrity. When an active nest that had not been documented prior to beginning the activity is identified during performance of a critical construction activity, the construction team may complete the necessary task to ensure public health and safety or structural integrity is not compromised. SCE will provide a valid USFWS Special Purpose Utility (SPUT) permit allowing management of nests in emergency circumstances or, if the permit has expired, will provide the expired SPUT and USFWS confirmation that the expired permit remains valid until issuance of a new or renewed permit. The SCE EPM will follow the notification of USFWS and CDFW or NDOW required by the permit as well as CPUC, BLM, and NPS. The Avian Biologist or Biological Monitor will monitor the nest throughout the continuing activity and will work with the construction crew during the activity and demobilization to take action as feasible to minimize impacts to the nest. These actions may include repositioning equipment to take advantage of visual or sound barriers, shutting down unneeded equipment, or minimizing work activities in some portions of the site. Following completion of the activity the work area will be promptly demobilized and the default buffer distance will be put into place. The list of critical construction activities is included in Appendix D. When incidents like this result in a nest failure, it will be documented as a non-compliance, provided to the agencies, and included within a daily incident email summary, weekly report, and annual report.

2.4.2. Buffer Distances for Access Roads

Substations, material storage yards, helicopter landing zones, assembly and support yards, contractor yards, and construction areas associated with EPL Project may be accessed by a single ingress/egress point. These access roads into construction areas are frequently located

adjacent to vegetation (e.g., shrubs and trees) or other habitat, including vegetation planted to screen substation facilities, which provide suitable nesting habitat for birds. Implementing buffers for active nests that become established along access roads may restrict access to and construction activities within substations and yards.

In the event of an active nest located less than the default buffer distance from the ingress/egress point, ingress/egress to the project work areas will be managed by the Biological Monitor working with the Avian Biologist to avoid take of an active nest, while allowing use of these roads for construction activities. Take of an active nest from vehicular travel along Project access roads can be avoided through the implementation of the following management practices:

- The areas along access roads will be surveyed up to 100 feet on either side by the Avian Biologist to document locations of active nests and to assess buffers,
- The speed limit on all project access roads will be restricted to 15 mph or less,
- Use alternative access roads, where feasible, to avoid nests along main access roads.
- Vehicles will not stop or idle along Project access roads within an active nest buffer if an access road gate lies within an active nest buffer then a brief stop will be allowed for gate opening/closing.
- Avian Biologists or Biological Monitors will place no parking/idling/stopping signs and ESA staking along the road at the limits of nest buffers to avoid impacts.
- Construction personnel will not loiter through or within an active nest buffer.
- Watering of access roads for dust control will be limited to prevent direct watering of an active nest within active nest buffers.

2.4.3. Active Substations and Yards

Once construction or clearance of vegetation for a yard or substation is complete and the yard or substation is established and is in active operation, buffers for non-special-status species' nests found inside or adjacent to the yard or substation will be determined by an Avian Biologist. The distance will generally be smaller than the default buffer for a given species, in consideration of the project-related disturbance present as the nest was being built. Reduced buffers for nests inside of yards and substations are acceptable for non-special-status species due to acclimation to the regular construction activities. Indirect impacts to the individual nests are not anticipated as work will occur within the yard or substation only. If the activity occurring in the yard may cause accidental nest damage due to the nest location or the nest was built on equipment/materials in the yard, then ESA signage will be erected to restrict workers from accidentally disturbing the nest or causing nest failure. However, if a major change in the activity level or activity type within the yard or substation will occur, there may be situations where appropriate nest buffers will be implemented within the yard or substation specific to that activity. Examples may include helicopter use or mobilization of a large piece of equipment, where the Avian Biologist determines it is not reasonable to assume the individual birds are acclimated to the activity. In these situations, these types of activities may occur within the yard or substation but outside the nest buffer. The CPUC, BLM, NPS, USFWS, and CDFW or NDOW will be notified of planned buffer changes and related activity.

2.4.4. Minimal Disturbance Activities

Certain minimal disturbance construction activities that may occur inside of nest buffers without going through the buffer reduction request process are listed below and in Table 1. During these minimal impact activities, crews and supplies would be transported to the construction site via pickup truck; where feasible, the truck will be parked outside the species-specific default buffers in Table 2. However, if necessary, crews would access the site on foot. All staking, creation or repair of divots, and removal/replacement of wattles or BMP fencing would be performed by hand using non-power hand tools if necessary; areas will be accessed on foot.

In some cases, these activities include some level of habitat disturbance (e.g., hand vegetation clearing). For those activities, an Avian Biologist will be present and record observations in the monitoring log. These activities include installation or Repair of Water Quality BMPs, Tower QA/QC Site Finalization Activities, Fiber Optic Splicing at Tower Splice Boxes, and Resistance Testing. Other activities have no ground disturbance or vegetation disturbance. For those activities, a Biological Monitor will be present and record observations in the monitoring log. These activities include Environmental Resource Studies, Civil Engineering Surveys, Site Visits, Site Staking/Flagging and Re-staking/Re-flagging. For all minimal disturbance activities, ongoing nest surveys would occur to update nests and identify new nests within and adjacent to these construction areas (see Section 3.3).

2.4.4.1. Environmental Resource Surveys

Environmental resource surveys include biologists walking transects in the field to collect biological resource information such as special-status plant and wildlife species, vegetation mapping, jurisdictional water mapping and surveys for other environmental resources within the project area.

- A pick-up truck will deliver supplies and the crew to the site, or access will be by foot.
- Where feasible, the truck will be parked outside of the species-specific default (Table 2) nest buffer.

2.4.4.2. Civil Engineering Surveys

Civil Engineering Surveys include marking engineering features in the field by a civil surveying crew. Crews may use GPS devices to mark out these features will wooden stakes.

- A pick-up truck will deliver supplies and the crew to the site, or access will be by foot.
- Where feasible, the truck will be parked outside of the species-specific default (Table 2) nest buffer.
- The work will be performed using non-power hand tools.

2.4.4.3. Site Visits

Site visits from SCE and agency personnel may occur for various reasons.

- A pick-up truck will deliver supplies and the crew to the site, or access will be by foot.
- Where feasible, the truck will be parked outside of the species-specific default (Table 2) nest buffer.

2.4.4.4. Site Staking/Flagging and Re-staking/Re-flagging

Site staking and re-staking consist of marking with wooden stakes the limits of an area and maintaining this staking over time. This includes staking of approved work sites, ESAs, and other areas where staking is required. In addition to stakes, this activity may consist of placing or replacing flags, signs, and rope as needed to indicate the boundary of an area that is not to be entered.

- A pick-up truck will deliver supplies and the crew to the site, or access will be by foot.
- Where feasible, the truck will be parked outside of the species-specific default (Table 2) buffer.
- The work will be performed using non-power hand tools.

2.4.4.5. Installation and Repair of Damaged Straw Wattles and BMP Fencing

Following installation, straw wattles (or similar product) and BMP fencing (e.g., slit fencing) around construction sites may require repair or replacement from time to time. This activity consists of installing, realigning, replacing, or re-staking wattles or BMP fencing as necessary.

- A pick-up truck will deliver supplies and the crew to the site, or access will be by foot.
- Where feasible, the truck will be parked outside of any established buffers.
- Installation, staking, creating or repairing divots, and removal/replacement of wattles or BMP fencing will be performed using non-power hand tools.

2.4.4.6. Resistance Testing

Following the assembly and erection of TSPs and metallic wood pole-equivalents, but prior to conductor installation, each TSP or metallic wood pole-equivalent requires resistance testing. Resistance testing involves the use of a low-voltage hand held resistance tester to measure a tower's resistance given the underlying soil conditions. Two small wires are spread out by a 2-man team on foot to a distance of 150 feet and 105 feet from the base of the pole, staying inside the approved work limits. Each wire is then attached to grounding probes that are inserted into the ground by hand using a hammer. Following the test, crews will remove the probe and wire and leave the site. This activity will take one hour or less per pole site. The test will determine the need for counterpoise installation, which requires the use of a skid steer with a trenching device or a mini excavator. A separate buffer reduction notification will be submitted for counterpoise installation where needed. Typical personnel/equipment include:

- A 2-person crew
- Pick-up truck for transport
- A low-voltage hand held resistance tester to measure soil resistance. Thin probes are driven into the ground using a hammer and removed after the test is complete.
- Activity Duration: Typically 30 minutes at the base of a structure.

The activities described above are intended to capture typical, representative activities to be performed in areas near active nests. In the event a BMP repair/installation activity requiring significantly different methods (e.g., power tools) or greater work duration within an active buffer, a normal nest buffer reduction notification would be submitted.

2.5. Nesting Bird Deterrent Methods

This section details nesting bird deterrent methods and examples that can be used for the EPL Project. These methods are considered already noticed to the agencies and only new deterrents not used before or netting on vegetation would need to be notified. SCE's nesting bird management plan includes methods that may deter nesting within and adjacent to (i.e., within 300 feet) active construction areas, including substations and yards. Implementation of deterrent methods within and adjacent to active construction areas may reduce the potential for an active nest to restrict EPL Project construction activities. Effective nesting bird deterrent methods within active construction areas will reduce the likelihood that construction will result in take of an active nest. Installation and maintenance of exclusionary devices by the construction team will be conducted following approval by SCE in accordance with this Plan.

SCE will implement the following types of nesting bird deterrents, as needed:

- Removal of vegetation from areas that would be directly disturbed by construction prior to the nesting season;
- Create disturbance by removing or moving equipment, vehicles, and materials on a daily basis within an active construction area;
- Installation of appropriate-sized mesh netting on construction equipment and materials in staging areas, helicopter assembly and support areas, and construction yards, or other project facilities or work areas;
- Use of bird spikes placed on towers, substations, or other facilities to discourage birds from perching and nesting on these structures;
- Installation of visual deterrents such as tangle guard bird repellent ribbon in active construction areas, yards, substations, and on materials and equipment;
- Covering straw wattle and other potential nesting materials in active construction areas, yards, and substations;
- Wrapping, stuffing, or covering ends of pipes or other materials within which birds could nest;
- Use of colored gravel, such as red or white, in active construction areas, yards, and substations; and/or
- Managing construction yard trash in a manner to reduce potential point food sources in active construction areas, yards, and substations.

Specific locations for the use of exclusionary or deterrent devices will be determined in coordination with the Avian Biologist, SCE EPM and the construction team. The construction manager is responsible to furnish labor and materials for bird exclusion or deterrent devices, unless otherwise directed by the SCE EPM. Bird exclusion or deterrent devices will be installed, maintained, and removed by the construction contractor according to product specifications, and as directed by the Avian Biologist, following SCE approval in accordance with this NBMP. These activities will be included in the weekly reports prepared by the Avian Biologist in FRED.

Nesting Habitat Reduction. Removing potential nesting habitat within approved work areas is the first component to effectively exclude nesting birds within a construction area. To the extent feasible, prior to the onset of the nesting bird season, construction areas may be cleared of

vegetation and grubbed, as appropriate to reduce potential conflicts between construction activities and nesting birds during the nesting season. Where possible, vegetation will be trimmed rather than removed or cut at ground level in lieu of grubbing. Vegetation removal will typically include removal of trees, shrubs, and herbaceous species. Prior to vegetation clearance, an Avian Biologist will conduct a preconstruction nest survey (see Section 3.3) to confirm the absence of nesting birds, including raptors, and year-round residents, such as burrowing owl, in the area planned for vegetation removal.

Mesh Netting. Use of mesh netting to cover equipment, stored materials and equipment, and partially constructed facilities can be a very effective means to exclude birds from suitable nesting sites within construction areas. Netting may be left in place year-around on facilities or equipment where it poses no undue hazard to wildlife. Netting will not be used outside of the nesting season in areas supporting special-status species. When not in use, netting will be stored where it is inaccessible to birds or other wildlife. By preventing birds from accessing potential nesting sites within the construction areas, conflicts between nesting activities and construction and yard operations can be reduced. Netting of vegetation would only be used under consultation with CPUC, USFWS, and CDFW or NDOW.

Netting can be specially ordered for this purpose from a number of companies including USA Bird Control (http://www.usabirdcontrol.com/), Nylon Net Co. (http://www.nylonnet.com/), and Nixalite http://www.nixalite.com/birdnetting.aspx). An example of a specification sheet for such netting (PollyNet™) is included as Appendix E.

The size of the mesh grid can vary depending on the size of birds that are being excluded. Given the diversity of birds that could nest within construction areas throughout the EPL Project, a 0.75-inch sized mesh may be suitable for excluding most birds, including small birds such as house finches and swallows. Selection of mesh size will be coordinated with the CDFW or NDOW and USFWS.

Mesh netting, if employed, must be installed and maintained according to manufacturer specifications to be provided by SCE for agency review prior to its use of any mesh netting. To increase the effectiveness of the mesh netting as a bird exclusion device, equipment or other objects should be completely covered leaving no gaps in the netting through which birds could enter and build a nest under the netting. Mesh netting shall also be inspected daily by the Biological Monitors to detect, document, and remove any trapped wildlife, and to identify and notify the construction contractor of any rips or gaps in the netting that could permit birds to pass through and to look for wildlife that have become trapped in the netting. Lizards and snakes are especially prone to becoming entangled in excessive netting draped along the ground. Therefore, installed mesh netting should not drape on the ground. Netting shall be monitored twice daily where netting is installed on vegetation. If the Construction Contractor observes wildlife inside or trapped in the mesh netting, the Biological Monitor will be contacted immediately. Any wildlife found trapped or entangled will be documented through FRED and reported to the CPUC, BLM, NPS, USFWS, and CDFW or NDOW through FRED daily and weekly monitoring reports. SCE will document and correct any non-compliance related to mesh netting. Additional measures such as personnel training or changes to netting use will be taken if re-occurrence is a problem. If properly installed netting results in recurring entrapment, alternative methods will be implemented.

Bird Spikes. Use of plastic or stainless-steel spikes can be effective in discouraging birds from landing on structures and to deter nest establishment. Bird spikes typically consist of groupings of stainless steel or UV-resistant polycarbonate spikes that are spaced in such a way as to prevent birds from landing and gaining a foothold on the surface to which the spikes are

adhered. As birds cannot comfortably land on surfaces covered with the spikes, the likelihood that birds will attempt to build nests in these areas is low.

Bird spikes can be specially ordered for this purpose from a number of companies including USA Bird Control (http://www.usabirdcontrol.com/) and Bird-B-Gone (http://birdbgone.com/). An example of a specification sheet for such bird spikes (Bird-B-Gone™) is included as Appendix F. Bird spikes, if employed, must be installed and maintained by the Construction Contractor according to manufacturer specifications.

Bird spikes are designed to be affixed to structures to provide longer-term deterrents to birds. Therefore, use of bird spikes may be more practical to deter nesting on structures like towers and substations. Such devices are not likely practical for use on equipment, material storage areas, or contractor yards. Installation of bird spikes on tower structures concurrent with structure construction may discourage birds from nesting on tower structures during construction. Because they are affixed to structures, maintenance of bird spikes is low; however, these devices must be replaced periodically per the product specifications to maintain effectiveness.

Visual Deterrents. There are a wide range of visual deterrents that can be used to discourage birds from nesting. These range from predator decoys (e.g., plastic owls) to reflective ribbon that provides visual and auditory discomfort to birds. Reflective ribbon such as Tangle Guard Bird Repeller Ribbon (http://www.nixalite.com/tangleguard.aspx; Appendix G) is a Mylar reflective ribbon that can be affixed to construction equipment, around the perimeter of storage yards, or on towers or other facilities, as appropriate, to scare birds from the area, thereby reducing the likelihood of nesting. Movement from wind action produces a metallic rattling sound and its holographic surface may be construed as menacing to birds. Use of reflective ribbons can be particularly effective in material storage yards and contractor yards that may be used for a long period of time. Holographic reflective ribbons can be specially ordered from a number of companies including US Bird Control.

Material and Pipe Covers. Sheltered spaces such as pipes or stacks of stored materials provide potential nesting sites for some birds. To reduce the likelihood that birds will build nests in these areas and therefore constrain the use of construction areas, substations and yards, such materials can be covered with mesh netting (discussed above) or other materials. Routinely covering equipment and stored materials will be used as a standard management practice to deter birds from nesting in these areas.

Yards often contain suitable nesting materials or opportunities for birds, especially for cavity nesting. For example, straw wattles can be attractive to birds as they provide excellent nesting material for a wide range of species. Birds attracted to this nest material may be more likely to build a nest in close proximity to these stored materials (e.g., within a yard), which can constrain work activities. To reduce the likelihood for nesting with yards where wattles are stored, such materials should be covered so birds cannot access the wattle material to use as nesting.

Colored Gravel. Use of colored gravel in graveled construction and facility areas can be effective in discouraging ground nesting birds. The eggs of ground nesting birds are colored in a manner to be camouflaged against naturally colored substrates such as soil or pebbles. By covering the ground surface with colored gravel that contrasts sharply with the color of the birds' eggs, ground nesting birds can be effectively discouraged from nesting in such locations. Colored gravel installation will be consistent with visual resource measures (if any are applied to the EPL Project) and will be removed, where required, following the completion of the EPL Project.

Trash Management. Although not a specific deterrent, management of trash on and around construction areas is important to reduce the potential for construction activities to attract birds. Trash from food waste can provide an attractive food source for birds thereby increasing the likelihood of them nesting within construction areas. Effective management of food waste and other trash will be important to avoid attracting birds to construction areas. Such management measures will include daily removal of trash from the site as well as covering trash bins with wildlife-proof lids.

These methods, either on their own or in combination with other measures discussed above, can be effectively employed to potentially discourage birds from nesting within and immediately adjacent to construction areas. However, there is no single practical method to permanently exclude birds from construction yards, staging areas, or transmission structures. Knowledge of bird behavior and interactions and adaptive management in collaboration with the Construction Contractor is essential in understanding the implementation and effectiveness of deterrents.

2.6. Inactive Nest Management

This section of the Plan discusses the protocol to remove inactive nests in and within 300 feet of active construction areas, including yards, substations, and materials and equipment to minimize opportunities for nesting birds. Based on the Migratory Bird Permit Memorandum (USFWS 2018), unoccupied nests (without birds or eggs) may be destroyed. This protocol does not cover listed species or bald or golden eagles. The purpose of inactive nest removal is to prevent or reduce the potential reuse of a currently inactive nest (e.g., return of a pair to the specific site) in a high-risk location. Nest removal as described in this Plan will only be applicable to removal for Project construction and post-construction site restoration or remediation. Nest removal for non-project activities, including routine operation and maintenance, would be conducted pursuant to existing permits or agreements with the resource agencies. At the end of each yearly nesting season SCE will inventory all nests proposed for mooring ball installation prior to the beginning of the following nesting season and prepare an installation schedule. To the extent feasible, inactive nest removal will take place prior to the onset of nesting bird season. However, there may be scenarios where SCE will need to remove inactive nests during nesting seasons.

The following sections describe inactive nest removal for raptors, colonial bird species, and other non-listed, non-game native birds. All inactive nest removals for the EPL Project will be documented in FRED.

2.6.1. Raptors

Raptors have additional protection under the CFGC. Since raptors exhibit nest site fidelity, inactive raptor nests may be protected even though no eggs or young are present. Inactive or partially built raptor nests will be mapped and documented by the Biological Monitor/Avian Biologist. Inactive raptor nests that will be impacted by EPL Project construction activities will be removed according to the following protocol. Removal of raptor nests is not proposed under any other circumstances.

- An email notification will be sent out to CDFW and CPUC providing details of the nest location, reason for nest removal, nest ID number, and nest removal schedule 24 hours prior to nest removal.
- An Avian Biologist or Biological Monitor under the direction of an Avian Biologist will observe the nest for four hours (breeding season) or one-hour (non-breeding season),

during favorable field conditions (good visibility, low wind) to determine whether there is any activity at the nest site.

- If an Avian Biologist determines that the nest is unlikely to be active based on these observations (e.g., absence from the nest site and no “nest decorating” observed), the construction team will provide personnel to inspect the nest if it is not accessible by a Biological Monitor or Avian Biologist due to safety concerns.
- For inaccessible nests (e.g., on transmission towers and poles), the construction team will take a photo of the nest contents and provide the photograph to a Biological Monitor/Avian Biologist.
- Once a Biological Monitor or Avian Biologist has confirmed from the photo that the nest is inactive, the construction contractor will remove the nest immediately following confirmation that it is inactive.

The agencies will receive notification of the nest removal through FRED and the weekly report. Nests will not be collected or taken off site.

If necessary and feasible, nest platforms may be constructed according to SCE-provided guidelines (see Appendix H).

Removal of all inactive raptor nests will be documented on a daily basis through a FRED daily monitoring report and summarized in weekly FRED monitoring reports that are sent via email to CPUC, BLM, NPS, USFWS, and CDFW or NDOW.

2.6.2. Burrowing Owl

Burrowing owls nest in burrows in the ground and are mostly non-migratory, meaning that burrows may be utilized (i.e., occupied) year-round as escape burrows. Additionally, because they nest in burrows in the ground, further surveys may be required (per the Staff Report on Burrowing Owl Mitigation; CDFW 2012) to determine whether or not their nest burrows are active, or their escape burrows are being used.

Preconstruction nest surveys will determine the presence/absence of suitable habitat (i.e., burrows) for burrowing owl occupation and/or nesting. Management of active burrowing owl nests are addressed in the species-specific Burrowing Owl Management and Passive Relocation Plan.

2.6.3. Colonial Birds

Based on the Migratory Bird Permit Memorandum (USFWS, 2018), colonial nesting birds (which include swifts and swallows) are highly vulnerable to disturbance. These birds may re-use nests in successive years. Destruction of unoccupied nests during or near the nesting season could result in take. Outside the species-specific nesting season, CDFW or NDOW staff and USFWS staff will be consulted regarding removal of colonial bird species’ inactive and partially built nests. Inactive nests of colonial bird species will be removed or collapsed only after review by CDFW or NDOW and USFWS staff. Currently, there are no known colonial nests within or near the ROW.

If a colonial nest is found, colonial bird nests that would be impacted directly by EPL Project construction activities will be removed according to the following protocol:

1. A Biological Monitor/Avian Biologist will determine whether the nests are active through observation of bird sign and behavior, as described in Section 3.3. The Construction

Contractor will provide personnel to inspect the nests and take a photograph of the contents if they are not accessible by the Biological Monitor/Avian Biologist.

2. If the Biological Monitor/Avian Biologist determines the nests are not active, CDFW or NDOW and USFWS will be consulted regarding removal of colonial bird species nests. Nests will be removed or collapsed immediately after they are confirmed to be inactive and following review with CDFW or NDOW and USFWS. CPUC, BLM, and NPS will be copied on any correspondence when CDFW or NDOW and USFWS are consulted.

Nest removals will be documented in FRED and summarized in the weekly reports. Nests will not be collected or taken off site by biologists.

2.6.4. Non-listed Special-Status, Non-Special-Status, Non-Game Bird Species Nest Removal

Removal/deterrence of non-special-status, non-game bird inactive nests, for species other than raptors, burrowing owl and colonial bird species will be completed as discussed below. For these species, nests being constructed, but not containing eggs or chicks, are considered inactive (see Section 2.2). For non-listed special-status species, nests are considered active during nest building; therefore, removal of non-listed special-status nests will only occur once the nest is confirmed inactive by this definition.

Inactive nests found within construction areas, including substations, yards, materials, and equipment, may either be removed and dropped to the ground, or have an in-nest deterrent (see Section 2.5) Mesh netting will not be installed in nests. The Construction Contractor will provide personnel to inspect the nest and take a photograph of the contents if it is not accessible by a Biological Monitor/Avian Biologist. Nests will not be collected or taken off site.

When construction takes place during the nesting season, inactive nests will be identified during preconstruction nest surveys and during construction monitoring, if not previously identified during earlier EPL Project or non-project SCE surveys or monitoring.

Non-listed special-status, non-special-status, non-game bird nests that would be impacted directly by EPL Project construction activities will be removed according to the following protocol:

1. To determine whether a nest is inactive, the Biological Monitor/Avian Biologist will conduct a minimum of one uninterrupted, consecutive hour of monitoring in suitable conditions for detecting nesting activity prior to removal, as described in Section 3.3.

2. The construction contractor will provide personnel to inspect the nest and take photographs of the contents if it is not accessible by a Biological Monitor/Avian Biologist. In rare circumstances, such as nests in substation equipment, it may not be possible to photograph a nest prior to removal.

3. After the Biological Monitor/Avian Biologist confirms the nest is inactive and that it does not belong to a listed species, it will be removed and left on site.

4. Implement some form of nesting deterrent, where feasible, so that the same bird will be less likely to try and rebuild the nest after its removal.

No nests will be taken off site or collected. The nest location will be subsequently monitored to detect any re-nesting attempts. Initial re-nesting attempts on EPL Project elements or equipment will be deterred until the bird selects an alternative nest site.

3. Field Approach

Nesting bird surveys will be carried out in several stages during the nesting season (typically February 1 through August 31, but will be based on seasonal variation). An Avian Biologist will conduct a preconstruction nest survey within ten days prior to the start of work at any given site. Preconstruction nest survey results are submitted to CPUC, BLM, and/or NPS, as appropriate, to obtain approval prior to beginning work at the site. The designated avian consultant will review the preconstruction nest surveys reports within two business days of submittal or may request additional information, as necessary. On the first day of construction at any given site, a qualified Avian Biologist will perform a pre-construction "sweep" to identify any bird nests or other resources that may have appeared since the preconstruction nest survey. On each subsequent day of construction during the nesting season, the Biological Monitor will first perform daily sweeps at each work site to look for resources, including nesting birds. The daily sweeps will be conducted to identify new nests (partially built, active, or inactive) not detected during the preconstruction survey or clearance sweep and to also document the status (active or inactive) of known nests in a construction area. The preconstruction nest survey, and daily sweeps will be conducted within suitable habitat for nesting birds within the construction areas and include a 300-foot survey area for non-raptors and 500-foot survey area for raptors, collectively referred to as the Biological Survey Area (BSA). Prior to scheduling a survey or determining a change in status of a nest, adverse weather conditions and time of day (surveys typically should be conducted in the early morning) will be considered because these conditions reduce the likelihood of detecting nesting birds and associated nesting behavior. Care will be taken to avoid potential take of a nest due to surveying and monitoring efforts. The status of all active nests within the BSA will be documented and summarized in weekly reports and the weekly nesting bird table. This information will be provided weekly to the CPUC, USFWS, BLM, NPS, and CDFW or NDOW via email summary reports (see Section 3.5, Reporting).

3.1. Survey Requirements

3.1.1. Survey Experience and Training

Avian Biologists and Biological Monitors, hereafter collectively referred to as surveyors, will meet the qualifications described below. As different species have different nesting niches and different breeding strategies, surveyors must be able to readily distinguish species that may breed locally from those that do not; they must have knowledge of habitat contexts and types of behaviors to look for when evaluating nesting potential.

Appendix A contains a list of the potential nesting bird species and relevant information on their nesting behaviors. This list draws on information presented in Baicich and Harrison (1997), Kiff and Irwin (1987), and the online Cornell Laboratory of Ornithology Birds of the World (https://birdsoftheworld.org), as well as SCE's Biological Consultants' extensive experience surveying for and studying nesting birds in southern California. All surveyors will receive training on the information and procedures detailed within this Plan.

3.1.2. Qualifications

3.1.2.1. Lead Avian Biologist

To be approved as a Lead Avian Biologist, an individual is expected to have the following average qualifications:

- Two or more years of focused experience with a range of bird species in Southern California performing nesting bird surveys or monitoring nests
- Worked on 10 or more substantial multi-season bird projects, or the equivalent, performing surveys, habitat assessments, etc. in the field. Of these, at least 8 must be in the Southwest, preferably in California

3.1.2.2. Avian Biologist

To be approved as an Avian Biologist, an individual is expected to have the following qualifications:

- Worked on 3 or more substantial multi-season bird projects or the equivalent, performing surveys, habitat assessments, etc. in the field. Of these, at least 2 must be in the Southwest, preferably in California

3.1.2.3. Biological Monitor

To be approved as a biological monitor, the recommended qualifications are listed below:

- Worked on construction monitoring of biological resources on 2 or more projects (6 months or more total)
- Avian experience on previous projects

3.2. Field Maps

All surveyors will be provided with maps that depict the project disturbance limits, ROW, access roads and other project features and current nest and buffer data. Surveyors will have access to the FRED database to view all previously collected data. The database and associated mapping interface will be regularly updated so real-time nest and other biological resource data will be available to the surveyors.

3.3. Nesting Season Survey Methodology

A survey will consist of a pedestrian search by an Avian Biologist for both direct and indirect evidence of bird nesting. Direct evidence will include the visual search of an actual nest location. Indirect evidence will include observing birds for nesting behavior, such as copulation, carrying food or nesting materials, nest building, adult agitation or feigning injury, feeding chicks, removal of fecal sacks, and other characteristic behaviors that indicate the presence of an active nest. Surveys will be conducted in accordance with the guidance in Martin and Guepel (1993).

The size of the survey area physically surveyed will vary according to site specific conditions and according to the prescriptions contained in applicable resource management plans, land use, plans, and mitigation measures. The amount of acreage covered by surveyors will be determined based upon the nesting bird activity encountered and the opinion of the qualified personnel conducting the surveys. The density and complexity of habitat type will be taken into account during survey planning to determine the field methods, number of qualified personnel, and the time needed to locate nests. Surveys located in riparian woodland habitats or riparian or wetland vegetation types as defined in the DRECP LUPA, found on the Project, may require observations from multiple vantage points due to the density and height of vegetation, as well as, additional search effort in trees and bushes in order to locate all potential nests prior to construction. Surveys located in shrubland habitats, found on the EPL Project, will require observations from less vantage points than woodlands but due to the considerably denser

vegetation may require extensive searching and longer behavior observations in order to detect all potential nests prior to construction. Surveys located in alluvial scrub and desert scrub habitats, found on the EPL Project, may be completed in less time, relative to woodland, shrubland, or due to lower vegetation density that would allow surveyors to spot nests and nesting activity. Surveys located in grassland and agriculture lands on the EPL Project would be expected to take less time and more area would be covered over a given period, relative to denser vegetation types due to the increased visibility and uniformity found in these vegetation communities.

Additional time or surveys will be conducted if the surveyor does not feel that the area has been adequately covered. A variety of survey approaches may be needed to locate nests depending on the species likely to be encountered at each BSA. Under some circumstances, the surveyor may be able to survey a substantial portion of the BSA from one (or more) inconspicuous location(s) to detect birds entering and leaving the BSA. Sitting quietly in inconspicuous locations when other types of disturbance are absent allows observers to intensively listen and observe bird behaviors for discernible direct and indirect evidence of nesting. When moving through vegetation, surveyors will watch for distraction displays, aggressive responses and interactions, and birds flushing suddenly from atypically close range (often an indicator of a nest site). If defensive or distraction displays from birds are observed, an active nest is likely to be nearby. Surveyors will utilize visual observations of nests and bird behavior as a method for detecting potential nests.

Nests that pose constraints to the EPL Project activities will be directly observed or inferred by behaviors such as feeding chicks or removing fecal sacs. If the presence of a potentially active nest is suspected but cannot be confirmed, additional surveys will be conducted. If construction is planned to occur in the area and additional surveys have not determined the precise location of a nest, a disturbance free buffer may be implemented that would protect the relative location until the biologist has located the precise location of a nest. The Avian Biologist will notify the SCE EPM of all active and potentially active nests detected during the preconstruction surveys and sweeps as well as report them in FRED and include in weekly reports to the agencies. Preconstruction and daily clearance sweeps during nesting bird season will follow the same methodology discussed in this section to ensure that all active nests are located prior to construction occurring in the vicinity. Prior to vegetation removal activities within the nesting bird season, a sweep will be conducted by an Avian Biologist preceding the scheduled construction activity to help document and protect nests have been built since the preconstruction survey.

Once a nest is found, it will be observed for activity, if no activity is observed within a minimum one-hour monitoring period (four hours for raptor nests), the nest would be approached to check the status. The Avian Biologists will use best professional judgement regarding the monitoring period and whether approaching the nest is appropriate. If no adult or juvenile bird activity is observed within one hour (four hours for raptor nests), the nest can be considered inactive. If an inactive nest will be directly impacted by the EPL Project activities due to the location of the nest in a tower, or vegetation in an approved project work area, then the removal procedures outlined in Section 2.6 of this plan will be implemented. If an Avian Biologist/Biological Monitor determines that an hour (or four hours for raptors) is not sufficient to make a determination on the nest status, then one-hour increments will be employed until a final determination regarding nesting status can be made. Every effort will be made as to not expose the nest to potential predation as a result of survey and/or monitoring activities. All nest visits will be conducted by a single surveyor and will last only as long as necessary to check the nesting stage or until circumstances necessitate departure (e.g., potential nest predator detected or sustained indications of stress by any protected bird).

When approaching a nest, surveyors will first determine whether there are any potential nest predators nearby (e.g., California scrub-jays [*Aphelocoma californica*], common raven [*Corvus corax*], cactus wren [*Campylorhynchus brunneicapillus*], and house wren [*Troglodytes aedon*]). If no predators are observed, the surveyor will approach the nest. Surveyors will be carefully aware of the possibility of additional, undetected nests nearby. They will avoid creating a scent or visual path that directs animals to the nest (e.g., leaving no trampled spot by the nest and continuing past the nest upon leaving it rather exiting on the entrance path). Surveyors will also briefly look in at least two empty potential host plants for bird nests before and after looking in the nest in an attempt to deter predators.

3.3.1. Active Nest Determination

When an active nest (defined in section 2.2) is confirmed, the default species-specific buffer will be implemented per this Plan (Table 2) and work within the new nest buffer will cease immediately. If a bird is seen carrying food or feeding nestlings, but the vegetation is too dense for the surveyor to visually locate the nest, the approximate nest location will be inferred by the surveyor based on observed bird behaviors. Surveyors are not to risk the failure of a nest in an effort to discern an exact location or exact status (e.g., number of eggs, size of nestlings, etc.). If a buffer reduction is requested by the contractor, the surveyor will then continue to observe the nest and parental behavior to determine whether a reduced buffer can be appropriately implemented. Active nests will be monitored before implementing a reduced buffer. Prior to implementation, all buffer reductions will follow the process outlined in Section 2.3.3.

A nest completion date can be estimated by combining the stage of nesting at discovery and the known typical nesting duration for the species. However, because the date will be estimated, it is important to note that a nest may be active for a shorter or longer period of time than that estimated. For altricial species, a time buffer from three days up to three weeks will be added to every nest to allow for post-fledging nest dependence.

3.4. Monitoring

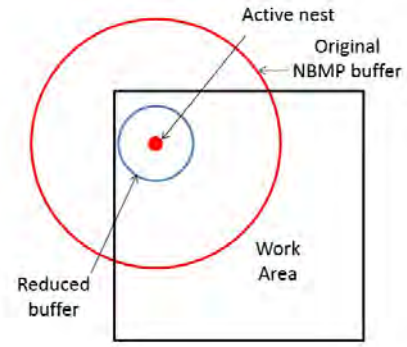
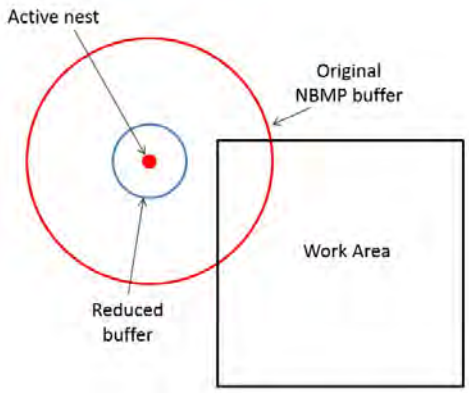
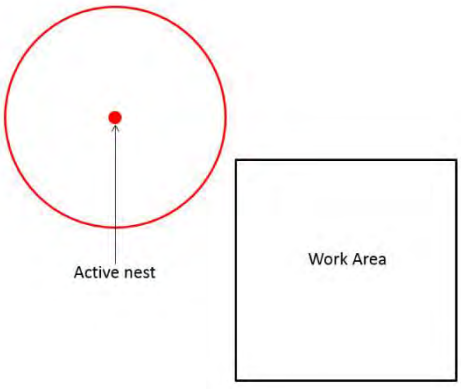
As a part of construction monitoring, Avian Biologists and Biological Monitors will check the status of any active nests within the BSA and update the nest monitoring database (Nest Event). This will ensure that nests around active construction areas are being given proper attention. The Biological Monitors will be responsible for monitoring the contractor's adherence to the established nest buffers, the contractor's adherence to the conditions of buffer reduction approvals and monitoring the nesting birds' behavioral reaction to construction throughout the day during active construction.

Both nests with default buffers and nests with reduced buffers will initially require frequent monitoring to establish if the buffer is sufficient to prevent impacts to the nests. Thereafter, for most species, active nests will be monitored on intervals no longer than every four days (weekly for birds with longer nesting periods, over two months, such as ravens, great horned owls and red-tailed hawks). Under the default buffers, active nests do not require further monitoring once work is completed in the area. For nests with reduced buffers, the same monitoring protocol will be followed until the nest is determined to be fledged or inactive. New nests discovered after work completion in an area would not require monitoring. Table 3 illustrates the monitoring frequency that SCE will utilize when an active nest is located.

Avian Biologists will be responsible for documenting new nests, providing status updates of previously identified active nests, and monitoring implemented buffers within and adjacent to construction areas. They will utilize construction maps, flagging, staking, and signage, and in-

field communication to monitor for compliance with plan requirements. Avian Biologists and Biological Monitors will utilize monitoring methods as described in Sections 2 and 3 to minimize disturbance to active nests while conducting updates and documenting behavioral reaction to construction. Nests updates may be modified to accommodate adverse weather conditions where flushing an adult off of the nest could threaten the nest outcome or to accommodate nests noted as being sensitive to human presence.

Table 3. Active Nest Monitoring Schedule

Work Location	Nest Location		Frequency
Between original buffer and reduced buffer	Inside work area		Max interval every 4 days (weekly for some large-bodied species) until nest fledges or declared inactive
	Not inside work area		Max interval every 4 days (weekly for some large-bodied species) until nest fledges or declared inactive
Not in nest buffer	N/A		Max interval every 4 days (weekly for some species) until completion of work

For some hazardous construction activities (i.e. wire stringing) it is unsafe for the biological monitor to be too close to construction. In these scenarios, the biological monitors will observe the activity from outside of the right-of-way at a safe distance. Where feasible and safe around these activities, the monitor will still perform a clearance sweep at the beginning and end of the

day to confirm the status of the active nests present in the BSA around the site. All nest visits will be documented in FRED (for biological resources), and reported to agencies, as requested.

In the case of precocial species such as killdeer, Biological Monitors will track broods after hatching to ensure chicks are not harmed by construction activities until chicks are capable of flying or are no longer found within active construction areas. Avian biologists may recommend chick fencing or other measures to prevent chicks from entering roads or work areas, as needed (see Section 2.3).

3.5. Reporting

Pre-construction nest survey reports will be submitted to the CPUC, BLM, and NPS electronically via FRED and will include the time, date, and duration of the survey; identity of the surveyor(s), a list of species observed, and electronic data and maps identifying nest locations and the boundaries of established buffer zones. The electronic data set will be updated following each pre-construction survey and will be accessible to CPUC, BLM, and NPS in the FRED Database. Regular calls will take place between SCE and the agencies to discuss the weekly reports.

The SCE EPM will receive the project plan of the day listing scheduled project activities for that day. Daily and weekly biological monitoring reports will be generated for the EPL Project and submitted in FRED. All data collected for the daily reporting will be input from the field via hardcopy forms or mobile smartphones using an offline form, and then entered/uploaded online into FRED. New nest events will be entered into FRED and agency biologists will be notified by automated email within 24 hours. A nesting bird table, updated weekly for submittal to the CPUC, BLM, NPS, CDFW or NDOW, and/or USFWS will show the current status of all active nests within the BSAs, distances of disturbance-free buffers that have been implemented to avoid nest failures, proximity to active construction activities, construction activities occurring, and estimated fledge date. Further detail on data collection and processing is provided in Section 3.5.1.

An annual report shall be submitted to the CPUC, USFWS, BLM, NPS, and CDFW or NDOW by November 30 for each year the EPL Project is under active construction or post-construction remediation or restoration providing a summary of the results of nest monitoring activities throughout the year, including reported nest success and failures. SCE will provide USFWS a summary spreadsheet of all nests tracked as a part of EPL Project for the previous nesting season. An annual meeting to review the annual report and “lessons learned” will occur prior to the start of the subsequent nesting season. The annual report will include sufficient substance and detail to provide the basis for the adaptive management and evaluation of lessons learned. Specific contents and format of the annual report will be reviewed and approved by the lead agencies in consultation with the resources agencies.

3.5.1. Data Sheets

All nesting bird data will be entered into the FRED Bird Nest Events (online forms). This will provide the SCE EPM, Avian Biologist, and Biological Monitor current information pertaining to a specific nest, as well as the ability to print maps with the nest data (nest location and buffers). The data fields that have been established in FRED are defined in Table 4. FRED fields represent the most current fields and may be subject to updates as improvements to the FRED Database are made.

Table 4. Field Definitions for Online Entry into FRED

Field	Explanation
Date	Use calendar icon to choose date.
Time	Time (defaults to time of data entry).
Nest number	A unique identifier entered by the surveyor. The name will consist of the surveyor's initials and a number. For example – KF1.
Lead Monitor / SME	Segment Lead's name
Surveyor	Your name.
Segment	Pull-down menu for the segment numbers.
GPS coordinates UTM (meters)	Collected in latitude and longitude. Make sure that measuring device (Garmin, etc.) is set to proper units. Zone:___ ; N or S ; _____mE and _____mN Ground Buffer Radius in feet. "O" for no buffer drawn Helicopter Buffer Radius: in feet.
Buffer Implemented	Yes or No
Device type	Pull-down menu choices are: "Garmin/Other-Recreational Grade (+/-40')", Smart Phone w/GPS-Advanced Recreation Grade (=/-10-15')", Trimble (Yuma)/Other-Professional Resource Grade (+/-1-3metter)", Trimble (GOXH)/Engineering Survey Grade (Sub Meter accuracy)", "Launched From Map", and "Device Unavailable"
Species	Pull-down menu based on the four-letter codes defined in Appendix A.
Offset	Check box for noting if the nest is offset from the GPS coordinates.
Direction	Pull-down menu of eight directions.
Distance in meters	How far the nest is from the GPS coordinates (in feet). In meters or feet?
Nest location description	Where is the nest (specific description)? Be specific…anything that can help another person finds the nest; i.e., nest within top half of the oak tree or nest is located within a rocky outcrop. Use descriptive words. TAKE A PICTURE of the nest, at least one overview, and one close-up.
Nest status	Active, Inactive, Inactive Vacant Raptor, Removed, Deterrent Installed. Active is a nest with eggs, nestlings, or recent fledglings. Inactive is a nest that no bird is currently using.
Number of eggs	If able to observe eggs, number of eggs observed.
Number of chicks	If applicable, number of chicks observed in nest.
Estimated fledge date	General estimate of how long before young fledge. Use Appendix A for reference.
Nest activity	Information on activity/behaviors observed. "Feeding Chicks", "Fledglings close to nest" (i.e. branching), "Incubation", "Nest Building", "No Activity Observed", Failed/Non-Project related, Failed/Project-related, Fledged, or Unknown Outcome.
Height from ground in feet	How high the nest is from the ground measured in feet.
Distance from work area in feet	Approximate distance from nest to the active work area in feet.
Distance from access road in feet.	Approximate distance from the nest to the access road in feet.
Substrate/species	What is the nest in (e.g., plant species, structure, bridge, and ground)? TAKE PICTURES from at least three directions.
Nest name	A unique identifier entered by the surveyor. The name will consist of the surveyor's initials and a number. For example – KF1.
Location description/habitat	General area of the nest in relation to the surrounding vegetation/unique features. Be specific…anything that can help another person find the nest. i.e.: nest is located x-feet north/northwest of access road. Or, nearest street address, cross streets etc. TAKE A PICTURE.
Is there an offset?	Are the measurements skewed from the actual location of the nest?
Offset directions	Pull-down menu options are: "N," "NE," "NW," "S," "SE," "SW", "E," OR "W."
Offset distance in feet	0.000
Descriptions of existing work activities.	Describe work activities currently occurring at nest site and adjacent to the nest site. Be sure to cover all directions (i.e. N/S/E/W). Note which activity is highest disturbance.
Environmentally Sensitive Area	Yes or No

Field	Explanation
established?	
ESA type	Two options: ground or helicopter
Work area affected?	Yes or No.
Name of road affected?	Access Road or Named Road.
SCE Notes	Record of agency engagement for the nest event.
Agency-reduced buffer in feet	Current Ground/Helicopter Buffer Radius
Tower or Work Area ID	Tower X or Construct X

4. Plan Approval and Amendment

This Plan will be implemented following approval or review by the CPUC, BLM, NPS, CDFW or NDOW and/or USFWS. Any proposed revision or amendment must be reviewed by BLM, NPS, and CPUC to confirm consistency with any mitigation measures identified for the EPL Project by the BLM, NPS, or CPUC, and by CDFW or NDOW and/or USFWS for consistency with the respective state and federal wildlife statutes.

Minor amendments or clarifications to the Plan will be implemented following coordination with the USFWS and CDFW or NDOW, and concurrence from CPUC, BLM, and/or NPS staff. Minor amendments or clarifications may include, but are not necessarily limited to, additional blanket or programmatic buffer reductions/exemptions, additional construction activities and disturbance levels not already included in Table 1. Major amendments to this plan that may result from changes in applicable regulations, which alter the procedures outlined in this plan, will be developed in coordination with the USFWS and CDFW or NDOW and submitted to the CPUC, BLM, and/or NPS for concurrence prior to implementation. Following concurrence of minor or major amendments, a revised version of the plan with date of revision will be provided to USFWS, CPUC, BLM, NPS, and/or CDFW or NDOW.

5. References

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6. Revisions

Date	Description of Revision	Contact

APPENDIX A

Appendix A. Species Information
Nesting Bird Management Plan
Eldorado - Pisgah - Lugo Project
Southern California Edison

Banding Laboratory (BBL) 4-letter Code	Scientific Name	Common Name	Regulatory Status (Federal/ California/ Nevada/ BLM)	Previously Observed within Project area	Potential to Occur within Project Area	Nest Habitat	Breeding and Nesting Season. Nest Cycle	Potential for Nesting on EPL Project alignment by Segment, if any
WTSW	*Aeronautes saxatalis*	white-throated swift	none	yes	high	Breeds and nests in crevices on vertical surfaces, including canyons and cliffs	May through August. Male and females incubate eggs. Incubation period 20-27 days. Chicks: altricial and fed by both parents for about 6 weeks before first flight.	Likely to nest within all segments of the EPL Project alignment where canyons and cliffs are present.
RCSP	*Aimophila ruficeps canescens*	southern rufous-crowned sparrow	none	no	low	Nests on the ground, either flush with the ground or in natural depressions or holes (sometime in low bushes) at the base of shrubs or in low vegetation.	March through September; double brood. Female (only) incubates eggs for 11-13 days. Chicks: altricial and fledge in 8-9 days.	Unlikely to nest in suitable habitat in Segments 5 and 6, but potentially possible; does not nest in other segments.
BTSP	*Amphispiza bilineata*	black-throated sparrow	none	yes	high	Nests in creosote bush, juniper, cholla, and other desert shrubs	February to early August; double brood. Female (only) incubates eggs. Incubation period 12-13 days. Chicks: altricial and fly at 10 days but fed by both parents for at least 2 weeks after nest departure.	Moderate potential to occur and nest in suitable habitat in Segments 3, 4, 5, and 6 of the EPL Project alignment.
CASJ	*Aphelocoma californica*	California scrub-jay	none	no	low	Nests in oaks, chaparral, other shrublands	March to June; often with single brood. Female (only) incubates eggs. Incubation period 12-13 days. Chicks: altricial and fly at 20 days but fed by both parents for at least 2 weeks after nest departure.	Low potential to nest within Segments 1 and 2 of the EPL Project alignment in suitable habitat such as California juniper woodland, but unlikely to occur and nest further east, where this species is replaced by Woodhouse's scrub-jay.

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WOSJ	*Aphelocoma woodhouseii*	Woodhouse's scrub-jay	none	no	moderate	Occurs in pinyon, juniper, oak, and riparian woodlands and scrub, orchards and backyards gardens.	March through early July; likely single brooded (no information). Female (only) incubates eggs. Incubation period 17-19 days. Chicks: altricial and fledge at 16-26 days (no information under new species name, using California scrub jay information).	Moderate potential to occur and nest in suitable habitat in Segments 3, 4, 5, and 6 of the EPL Project alignment.
GOEA	*Aquila chrysaetos*	golden eagle	CDFW:FP, BLM:S (Nesting and Wintering)	yes	moderate	Occurs in cliff-walled canyons that provide suitable nesting habitat and in large trees and open areas within foothills, mountain areas, sage-juniper flats, and deserts.	December to March; single brood. Both females and males incubate eggs, with females incubating the majority of the time. Incubation period 43-45 days. Chicks: altricial and may leave nest between 45 and 81 days of age.	Moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
BCHU	*Archilochus alexandri*	black-chinned hummingbird	none	no	low to moderate	Nests relatively low on horizontal or diagonal branches of trees or shrubs.	April to September; one to three broods. Only female incubates eggs. Incubation period 13-16 days. Chicks: altricial and leaves nest around 20-21 days of age.	Low to moderate potential to occur and nest where suitable habitat is present within all segments of the EPL Project alignment.
BESP	*Artemisiospiza belli*	Bell's sparrow	CDFW: WL	no	low to moderate	Nests in and under dense stands of shrubs.	February through July; single brood. Only female incubates eggs. Incubation period 10-16 days. Chicks: altricial and fledge at 10-11 days old.	Low to moderate potential to occur and nest where suitable habitat is present within all segments of the EPL Project alignment.
SABS	*Artemisiospiza nevadensis*	sagebrush sparrow	none	no	low to moderate	Nests in shrubs, bunchgrasses, and occasionally on the ground under shrubs.	April through August; one to three broods. Typically only female incubates eggs. Sometimes male remains nearby and occasionally helps incubate. Incubation period 10-16 days after completion of clutch. Chicks: altricial and fledge at 9-10 days old.	Low to moderate potential to occur within Segments 3, 4, 5, and 6 but does not nest within the EPL Project alignment.

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LEOW	*Asio otus*	long-eared owl	CDFW: CSC (Nesting)	no	low to moderate	Creates or uses old stick nests in tree platforms and sometimes cavities.	April through August; single brood. Female (only) incubates eggs. Incubation period 26-28 days. Chicks: semialtricial and leave nest to 'branch' at 21 days and flight at 35 days.	Low to moderate potential to occur within Segments 3, 4, 5, and 6 but does not nest within the EPL Project alignment.
BUOW	*Athene cunicularia*	burrowing owl	CDFW:SSC, BLM:S (Burrow Sites and some Wintering Sites)	yes	moderate	Nests in burrows in open grassy places or at the edge of agriculture.	February through August; single brood. Only female incubates eggs. Incubation period 27-30 days. Male stays nearby and brings food. Chicks: altricial and fledge at 40-45 days old.	Moderate potential to occur and nest within suitable habitat in Segments 1, 2, 3, and 4, where it has been observed in the Apple Valley and near the Bristol Mountains. Low potential to occur and nest elsewhere within the EPL Project alignment.
VERD	*Auriparus flaviceps*	verdin	none	yes	high	Nests in thorny shrubs, trees, or cholla cactus.	March to August; one to two broods. Only female incubates eggs. Incubation period 10 days. Both parents feed the nestlings and continue to return to nest to roost after fledging. Chicks: altricial and fledge at 21 days old.	Likely to nest in suitable habitat within all segments of the EPL Project alignment.
JUTI	*Baeolophus ridgwayi*	juniper titmouse	none	no	low	Nests in tree cavities, including woodpecker holes and holes in stumps. Woody species include oak, juniper, pinyon pine, and others.	Mid-March to July; single brood. Only female incubates egg. Incubation period 14-16 days Chicks: altricial and leave nest in 16-21 days.	Low potential to occur and nest in Segments 3, 4, 5, and 6 in suitable habitat within the EPL Project alignment.
GHOW	*Bubo virginianus*	great horned owl	none	yes	high	Typically nest in trees such as cottonwood, juniper, beech, and pine but occasionally nest on the ground.	January through May; single brood. Mostly female incubates eggs. Incubation period 26-35 days. Chicks: altricial and leave the nest at 4-5 weeks	Likely to nest in suitable habitat within all segments of the EPL Project alignment.

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RTHA	*Buteo jamaicensis*	red-tailed hawk	none	yes	high	Nests in trees or tall structures adjacent to openings, shrublands, grasslands, or agricultural sites.	February through September; single brood. Both sexes incubate eggs. Incubation period for 28-32 days. Chicks: semi-altricial and fly at 6 weeks old.	Likely to nest in suitable habitat within all segments of the EPL Project alignment.
SWHA	*Buteo swainsoni*	Swainson's hawk	CA Threatened; BLM:S (Nesting)	yes	low	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	March through May; single brood. Female does almost all incubation. Incubation period 34-35 days. Chicks: altricial and fly at 38 to 46 days old but remain near nest for up to 10 more days.	Low potential to forage within the EPL Project alignment but unlikely to nest due to lack of suitable nesting habitat.
CAQU	*Callipepla californica*	California quail	none	yes	moderate	Nests on the ground in a variety of habitats, excluding deserts each of the Lucerne Valley	March through July; single brood. Female incubates eggs. Incubation period 21-23 days. Male stays nearby. Chicks: precocial and very active soon after hatching.	Moderately likely to nest in suitable habitat in Segments 1 and 2 and does not occur in other segments within the EPL Project alignment.
GAQU	*Callipepla gambelii*	Gambel's quail	none	yes	high	Nests on the ground beneath shrubs, cacti, or other protective vegetation.	April to July; single to double broods. Female incubates eggs. Incubation period 21-24 days. Male stays nearby. Chicks: precocial and leave nest after one day with parents.	Likely to nest in suitable habitat within all segments of the EPL Project alignment, especially Segments 3, 4, 5, and 6.
ANHU	*Calypte anna*	Anna's hummingbird	none	no	moderate	Nests in trees such as oak and sycamore but may also nest on vines and in shrubs.	December to June; two to three broods. Female incubates eggs. Incubation period 14-19 days. Female feeds the young. Chicks: altricial and fledge after 18-23 days.	Likely to nest within Segments 1 and 2 in suitable habitat and with low to moderate potential to occur and nest in suitable habitat in all other areas within the EPL Project alignment.

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COHU	*Calypte costae*	Costa's hummingbird	none	no	moderate	Nests in cholla, shrubs, and desert-willow.	March through May; single brood usually. Female incubates eggs and feeds young. Incubation period 15-18 days. Chicks: altricial and fly at 20-23 days.	Moderate potential to occur and nest in suitable habitat within all segments of the EPL Project alignment.
CACW	*Campylorhynchus brunneicapillus*	cactus wren	none	no	high	Mostly nests in cacti, sometimes in often spiny shrubs or trees or artificial structure.	March to July. Both parents build the nest and feed the young. Female incubates eggs. Incubation period 16 days. Chicks: altricial and flies at 19-23 days.	Likely to nest in suitable habitat within all segments of the EPL Project alignment.
WIWA	*Cardellina pusilla*	Wilson's warbler	none	yes	moderate	Nests in shrub thickets in mesic areas including riparian habitats, lakes, bogs, and ponds.	June to early August; one to two broods. Female incubates eggs. Incubation period 10-15 days. Chicks: altricial and fledge in about 9-11 days and will fly within a day of nest departure.	Moderate potential to occur as a migrant in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
CANW	*Catherpes mexicanus*	canyon wren	none	no	high	Nests in rock caverns, cliffs, and crevices.	March to June. Both parents build the nest and feed the young. Two broods. Female incubates eggs. Incubation period 12-18 days. Chicks: altricial and leaves nest in 12-17 days.	Likely to nest in suitable habitat within all segments of the EPL Project alignment.
TUVU	*Cathartes aura*	turkey vulture	none	yes	high	Nests in dark recesses such as caves, crevices, among boulders, in burrows, in tree hollows, etc.	February to July. Both parents incubate the eggs. Incubation period is 34-41 days, with an additional 9-10 weeks to fledging once hatched	Likely to nest in suitable habitat within all segments of the EPL Project alignment.
HETH	*Catharus guttatus*	hermit thrush	none	yes	low to moderate	Nests in trees of coniferous, deciduous, and mixed forests. In California, tends to nest nears streams.	May through August; up to 3 broods. Female incubates eggs. Incubation period 11-13 days. Chicks: altricial and fledge at 10-15 days.	Low to moderate potential to occur in suitable habitat while migrating in all segments of the EPL Project alignment, but does not nest within the alignment.

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SWTH	*Catharus ustulatus*	Swainson's thrush	none	no	low	Nests in deciduous riparian woodlands, wet montane meadows, aspen groves, and coniferous forests.	June through August; single brood (may renest). Female (only) incubates eggs. Incubation period 10-14 days. Chicks: altricial and fledge at 12-14 days.	Low potential to occur in suitable habitat while migrating in all segments of the EPL Project alignment, but does not nest within the alignment.
VASW	*Chaetura vauxi*	Vaux's swift	CDFW:SSC (Nesting)	no	moderate	Nests in hollows of trees, usually conifers, and rarely under roofs or in chimneys.	May through June; multiple broods. Both sexes incubate eggs. Incubation period 18-19 days. Chicks: altricial and fledge at 20-22 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment during migration but does not nest within the alignment.
KILL	*Charadrius vociferus*	killdeer	none	no	high	Nests are in open habitats as simple scrapes (shallow depressions) on bare ground.	March through June; several broods. Both sexes incubate eggs. Incubation period 22-28 days. Chicks: precocial and fledge immediately.	Likely to occur and nest in suitable habitat in Segments 1 and 2, low potential to occur in other segments of the alignment.
LASP	*Chondestes grammacus*	lark sparrow	none	yes	moderate	Structurally open habitats or ecotones; grass/herbaceous ground covering containing or adjoining scattered trees or shrubs, i.e., cultivated habitats, orchards or other open or parklike woodlands, grasslands and savanna, shrub-steppe, mesquite grasslands, and fallow fields with brushy edges.	Mid-April through mid-August. Two broods are common. Incubation period 11-12 days. Nestling period approximately 9 days.	Moderate potential to occur in all segments of the EPL Project alignment, but does not nest within the alignment.

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LENI	*Chordeiles acutipennis*	lesser nighthawk	none	no	moderate	Typically nests on the ground near trees and shrubs. Sometimes nest on rooftops.	April to August; single to double broods. Female (only) incubate eggs. Incubation period 18-19 days. Both parents feed young. Chicks: semi-precocial and fledge at about 21 days.	Moderate potential to occur and nest within suitable habitat in all segments of the EPL Project alignment.
NOHA	*Circus hudsonius*	northern harrier	CDFW:SSC (Nesting)	yes	high	Nests on ground in open (treeless), vegetated habitats, including wetlands as well as uplands.	April through September; single brood. Only female incubates eggs. Incubation period 30-32 days. Chicks: semi-altricial and fly at 29-35 days. Young may roost in vicinity of nest for 2-4 weeks after flying.	Unlikely to occur or nest in suitable habitat within all segments of the EPL Project alignment, reported to be a rare breeder in desert regions of California.
NOFL	*Colaptes auratus*	northern flicker	none	no	high	Nests in nest cavities in dead or living trees in open or sparsely wooded areas.	April through June; single brood. Both sexes incubate eggs. Incubation period 11-13 days. Chicks: altricial and fledge at 25-28 days.	Likely to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest in within the alignment.
GIFL	*Colaptes chrysoides*	gilded flicker	CA Endangered; CDFW:FP; BLM:S	no	low to moderate	Nests in saguaro and cardon cacti primarily, as well as cottonwoods and willows.	April through June or July; single brood. Both sexes incubate eggs. Incubation period about 12 days. Chicks: altricial and fledge at 25-27 days.	Low to moderate potential to occur in suitable habitat in Segments 3, 4, 5, and 6, where it is unlikely to nest.
CGDO	*Columbina passerina*	common ground dove	none	no	low	Nests on ground (fields) and above ground (bushes, low tree branches).	April through August; multiple broods, up to four per year. Both sexes incubate eggs. Incubation period 12-14 days. Chicks: altricial and fledge at 11 - 14 days.	Low potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
OSFL	*Contopus cooperi*	olive-sided flycatcher	CDFW:SSC (Nesting)	yes	low to moderate	Nests in trees from sea level to 9,000 feet in openings and edges of montane and northern coniferous forests.	Late May through August; single brood. Female (only) incubates eggs. Incubation period 14-19 days. Chicks: altricial. Fledging range unknown, as young return to branches and nests after flying. Nestling period is 17-23 days.	Low to moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.

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WEWP	*Contopus sordidulus*	western wood-pewee	none	no	low to moderate	Nests in trees in riparian zones in a variety of forests and woodland types.	May through August; single brood. Female (only) incubates eggs. Incubation period 14-19 days. Chicks: altricial. Fledge at 14-18 days.	Low to moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
RCKI	*Corthylio (Regulus) calendula*	ruby-crowned kinglet	none	no	moderate	Nests in trees, often conifers.	May through August; single brood. Female only incubates eggs. Incubation period 12-14 days. Chicks: altricial, fledge at 17-18 days.	Moderate potential to occur in suitable habitat within the EPL Project alignment, but does not nest within the alignment.
AMCR	*Corvus brachyrhynchos*	American crow	none	no	low to moderate	Nests in primarily evergreen trees, but will nest in deciduous trees in both natural habitats and human created.	February through March; single brood. Both sexes incubate eggs. Incubation period 16-18 days. Chicks: altricial and fledge at 20-40 days.	Moderately likely to occur in suitable habitat in Segments 1 and 2 within the EPL Project alignment, with low likelihood of occurring in other segments. Does not nest within the alignment.
CORA	*Corvus corax*	common raven	none	yes	high	Nests in a variety of habitats such as sheltered rock ledges or in the fork of trees, or on utility poles and transmission towers	March through May; single brood. Only female incubates, male feeds female. Incubation period about 20-21 days. Chicks: altricial and fledge at 5-6 weeks.	Likely to nest within suitable habitat in all segments of the EPL Project alignment.
LBWO	*Dryobates scalaris*	ladder-backed woodpecker	none	no	moderate to high	Nests in excavated limbs, stumps, yuccas, agaves, and large cacti.	April through July; single brood. Both sexes incubate the eggs. Incubation period 13 days. Both parents feed the young. Chicks: altricial; age when young leave nest not well known.	Moderate to high potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.

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WIFL	*Empidonax traillii*	willow flycatcher	none	no	low	Occurs in dense riparian forest and woodlands associated with rivers, swamps, lakes, reservoirs, and other wetlands. In most instances, nests occur in dense vegetation within the first 10 to 13 feet above ground, with suitable habitat. It may also nest in thickets dominated by non-native tamarisk and Russian-olive, or in mixed native/non-native stands.	Late May through early September; single brood. Only female incubates eggs. Incubation period 12-15 days. Chicks: altricial and leave nest at 11-14 days, remain near nest for 3-4 days and can make short flights at 14 days.	Low potential to occur on occasion in suitable habitat in all segments of the EPL Project alignment during migration but does not nest within the alignment.
HOLA	*Eremophila alpestris*	horned lark	CDFW: WL	no	moderate	Nests on bare ground in a depression or cavity.	February through August; two or three broods. Only female incubates eggs. Incubation period about 10-14 days. Chicks: altricial and fledge by 9-12 days old.	Moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
BRBL	*Euphagus cyanocephalus*	Brewer's blackbird	none	no	moderate	Nests in a variety of places including shrubs, treetops, cattails, and occasionally on the ground or in tree cavities.	March through July; double brood. Only female incubates eggs. Incubation period 12-13 days. Chicks: altricial and fledge at 13 days old.	Moderately potential to nest in suitable habitat within some areas of Segments 1 and 2 of the EPL Project alignment, with moderate potential to occur but not nest in other segments within the EPL Project alignment.

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MERL	*Falco columbarius*	merlin	CDFW:WL (Wintering)	no	low	Nests in deciduous and conifer trees in semi open habitats, and utilizes the nest of other birds.	March through early September; single brood. Both sexes incubate. Incubation period 28-32 days. Chicks: semi-altricial, leave nest at 28-32 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment, which is outside the breeding range for the species.
PRFA	*Falco mexicanus*	prairie falcon	CDFW:WL (Nesting)	yes	moderate	Nests in crevices or ledges on cliffs with an overhang to protect the nest and occasionally in trees and on man-made structures	Late February or March through July. Female incubates the eggs while the male brings food. Both parents feed the young. Incubation period 31 days, with an additional 5-6 weeks to fledging once hatched.	Moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
PEFA	*Falco peregrinus*	peregrine falcon	CDFW:WL (Nesting)	no	low	Nests in very shallow scrapes on cliff ledges or on tall manmade structures including skyscrapers, transmission towers, and quarries.	Late February through August; single brood. Both sexes incubate. Incubation period 33-35 days. Chicks: semi-altricial, leave nest at 35-42 days.	Low potential to occur and nest within all segments of the EPL
AMKE	*Falco sparverius*	American kestrel	none	yes	high	Nests in cavity in trees or other structures such as building or towers.	March through June; may double brood. Mostly the female incubates; male stays nearby and brings food. Incubation period is 29-30 days. Chicks: semi-altricial, leave nest at 30 days.	Likely to nest within suitable habitat in all segments of the EPL Project alignment.
GRRO	*Geococcyx californianus*	greater roadrunner	none	yes	high	Nests in thorny shrubs, small trees, and cacti.	March through October; double brood. Both sexes incubate eggs. Incubation period 19-20 days. Chicks: altricial and leave the nest at 14-25 days old.	Likely to nest within suitable habitat in all segments of the EPL Project alignment.

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MGWA	*Geothlypis tolmiei*	MacGillivray's warbler	none	no	low to moderate	Nests in dense shrubs, firs, scrub oaks, alders, salal, chokecherry or Spiraea.	May to June; singe brood. Female incubates the eggs. Incubation period 11-13 days. Both parents feed young. Chicks: altricial and leave nest about 8-9 days after hatching.	Does not nest within the EPL Project alignment, which is outside the breeding range for the species.
COYE	*Geothlypis trichas*	common yellowthroat	none	yes	low	Nests above the ground over water in reeds.	April through July; double brood. Only female incubates eggs. Incubation period 12 days. Chicks: altricial and fledge at 9-10 days old.	Low potential to occur within the EPL Project alignment in suitable habitat, but does not nest within the alignment.
PIJA	*Gymnorhinus cyanocephalus*	pinyon jay	none	no	moderate	Nests in pinyon-juniper and pine woodlands, chaparral, and sagebrush and scrub oak shrublands.	April through July; single brood. Female (only) incubates eggs. Incubation period is 17 days. Chicks: altricial and fledge at 21-22 days old.	Moderate potential to occur and nest in Segments 3, 4, 5, and 6 within the EPL Project alignment, but does not occur elsewhere in the alignment.
HOFI	*Haemorhous mexicanus*	house finch	none	yes	high	Nests in range of habitats from shrubs and trees to structures.	March through July; two or three broods. Only female incubates eggs. Incubation period 12-14 days. Males feed females. Chicks: altricial and fledge at 14-16 days old.	Likely to nest within suitable habitat in all segments of the EPL Project alignment.
BAEA	*Haliaeetus leucocephalus*	bald eagle	CA Endangered; CDFW:FP; BLM:S (Nesting and Wintering)	no	low	Typically nests in trees adjacent to large bodies of water and away from heavily developed areas.	October through May; single brood. Both sexes incubate eggs. Incubation period 34-36 days. Both parents feed young. Chicks: semi-altricial and takes first flight at 10-12 weeks of age.	Low potential to occur as a transient within the EPL Project alignment but does not nest in the alignment, which is outside the breeding range for the species.
BARS	*Hirundo rustica*	barn swallow	none	no	low	Nests in colonies near water in open country; typically 6 to 40 ft up in buildings and bridges.	April through July; double brood. Both sexes incubate eggs. Incubation period 14-16 days. Chicks: altricial, fledge at 17-24 days.	Low potential to occur as a transient within the EPL Project alignment but does not nest in the alignment, which is outside the breeding range for the species.

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BUOR	*Icterus bullockii*	Bullock's oriole	none	yes	low to moderate	Nests in isolated trees, edges of riparian woodlands (sometimes at edges of water).	Late-April through mid-August; Up to two broods. Female (only) incubates eggs. Incubation period unknown. Chicks: altricial and leaves nest in 7-10 days.	Low to moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
HOOR	*Icterus cucullatus*	hooded oriole	none	no	low to moderate	Nests in trees (in California especially in native and planted palms) in riparian woodlands, parks, gardens, desert oases, and residential areas.	May through mid-August; at least two broods. Female (only) incubates eggs. Incubation period 11-12 days. Chicks: altricial and leaves nest in 14-16 days.	Low to moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
SCOR	*Icterus parisorum*	Scott's oriole	none	no	moderate	Breeds in arid habitats, especially desert-facing slopes at a wide range of elevations in yucca, juniper, and desert scrub.	Late May through mid-August; Up to two broods. Female (only) incubates eggs. Incubation period 11-15 days. Chicks: altricial and leaves nest 9-15 days.	Moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
DEJU	*Junco hyemalis*	dark-eyed junco	none	no	low to moderate	Typically nests in a depression on sloping ground, rock face, or amid tangled roots of a fallen tree.	March through August; one to three broods. Female incubates eggs. Incubation period 11-13 days. Both parents feed young. Chicks: altricial and fledge 9-13 days after hatching.	Low to moderate potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
LOSH	*Lanius ludovicianus*	loggerhead shrike	CDFW:SSC (Nesting); NRS: SB	yes	high	Nests in dense shrub cover near open country.	February through June; two or three broods. Only female incubates eggs. Incubation period 14-16 days. Male stays nearby and brings food. Chicks: altricial and fledge at 17-21 days old.	Likely to nest within suitable habitat in all segments of the EPL Project alignment.

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OCWA	*Leiothlypis (Vermivora) celata*	orange-crowned warbler	none	no	low to moderate	Nest is well-concealed in shrubs, trees, ferns, and vines as well as in small crevices or depressions on steep banks, in the ground, or between rocks.	April through July; single brood. Females (only) incubates eggs. Incubation period 12-14 days. Chicks altricial and fledge at 12-13 days.	Low to moderate potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
NAWA	*Leiothlypis ruficapilla*	Nashville warbler	none	yes	low to moderate	Nests in trees of open deciduous and mixed-deciduous forests, sometimes in riparian habitats of conifer forests.	Mid-May through July; single brood. Female (only) incubates eggs. Incubation period 11-12 days. Chicks: altricial and fledge at 9-11 days.	Low to moderate potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
LISP	*Melospiza lincolnii*	Lincoln's sparrow	none	no	low to moderate	Nests on ground or just above ground inside a willow or birch shrub surround by thick cover.	April through July; single to double broods. Females incubate eggs. Incubation period 12-14 days. Both parents feed young. Chicks: altricial and fledge 9-12 days after hatching but may be tended by parents for another 2-3 weeks.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
SOSP	*Melospiza melodia*	song sparrow	none	no	low	Nests in low shrubby growth and thickets in a variety of habitats.	March through July. Only female incubates eggs. Incubation period 12-14 days. Chicks: altricial and fledge at 10 days old.	Low to moderate potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
NOMO	*Mimus polyglottos*	northern mockingbird	none	no	high	Nests in shrublands, open woodlands, and in shrubs and trees in developed areas.	March through July; two or three broods. Only females incubate. Incubation period 11-14 days. Chicks: altricial and fledge at 12-14 days.	Likely to nest within suitable habitat in all segments of the EPL Project alignment.

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BHCO	*Molothrus ater*	brown-headed cowbird	none	no	low to moderate	Brood parasite in nests of other birds in riparian woodland, meadows, pastures, parks, residential areas; doesn't build nests.	April through August. Incubation is dependent on host species (over 220 species), but generally 10-12 days. Chicks: altricial and leave nest at 8-13 days.	Low to moderate potential to occur and but unlikely to nest in suitable habitat in all segments of the EPL Project alignment.
ATFL	*Myiarchus cinerascens*	ash-throated flycatcher	none	yes	high	Nests in cavities in shrubs or trees in arid and semiarid scrub, open woodland, and riparian woodland in arid and semiarid regions.	May through July; single brood. Only female incubates eggs. Incubation period 15 days. Chicks: altricial and fledge at 16-17 days old.	Likely to nest within suitable habitat in all segments of the EPL Project alignment.
SATH	*Oreoscoptes montanus*	sage thrasher	none	no	low to moderate	Nests predominantly in shrublands dominated by big sagebrush (*Artemisia tridentata*), but also found in black greasewood (*Sarcobatus vermiculatus*) and bitterbrush (*Purshia tridentata*).	Mid-April through early August; one to two broods. Both sexes incubate eggs. Incubation period 13-17 days. Chicks: altricial and fledge 8-14 days.	Low to moderate potential to occur and but unlikely to nest in suitable habitat in all segments of the EPL Project alignment.
SAVS	*Passerculus sandwichensis*	savannah sparrow	none	no	low to moderate	Nests in dense ground vegetation of grassy meadows, cultivated fields, pastures, roadsides, salt marsh edges, and sedge dominated bogs.	June through August; double brood. Female (only) incubates eggs. Incubation period 9-15 days. Chicks: altricial and fledge 7-13 days.	Low to moderate potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.

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LAZB	*Passerina amoena*	lazuli bunting	none	no	low	Nests in shrubs including willow, wild rose, ninebark, snowberry, blackberry, or Oregon grape.	May through August; double broods. Females incubate eggs. Incubation period about 12 days. Males sometimes are present nearby and assist with feeding young. Chicks: altricial and fledge 10-12 days after hatching.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
BLGR	*Passerina caerulea*	blue grosbeak	none	no	low	Nests in small trees, shrubs, or dense vegetation.	Late April through mid-September; double broods. Females incubate eggs. Incubation period about 12-13 days. Chicks: altricial and fledge 9-10 days after hatching.	Low potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
BTPI	*Patagioenas fasciata*	band-tailed pigeon	none	no	low	Nests in trees in mixed conifer and redwood forests, oak woodlands,, chaparral, and desert scrub.	February through late October; double broods. Both sexes incubate eggs. Incubation period about 16-22 days. Chicks: altricial and leave nest 22-29 days after hatching, flight at 19-31 days.	Low potential to occur in all segments of the EPL Project alignment, does not nest within the alignment.
CLSW	*Petrochelidon pyrrhonota*	cliff swallow	none	no	low	Nests in colonies along waterways in natural, urban and suburban landscapes. Nests are constructed from mud attached to structures (bridges, culverts) or natural overhangs.	April through May; single brood. Female (only) incubates eggs. Incubation period 11-16 days. Chicks: altricial and fledge at 20-26 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.

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PHAI	*Phainopepla nitens*	phainopepla	none	yes	high	Nests in fork of a tree or inside a mistletoe plant.	May nest twice a year. March and April in drier, open desert. May through August in arid, woodlands. Males do most of incubation. Incubation period 14-16 days. Both parents feed young. Chicks: altricial and fledge about 19-20 days after hatching.	Likely to nest within suitable habitat in all segments of the EPL Project alignment.
COPO	*Phalaenoptilus nuttallii*	common poorwill	none	no	low	Nests laid on bare ground or on gravel, litter, etc., often near the shade of a shrub or small tree.	May to August; may have double brood. Both sexes incubate eggs. Incubation period 20-21 days, with an additional 20-23 days to fledging once hatched.	Low potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
BHGR	*Pheucticus melanocephalus*	black-headed grosbeak	none	no	low	Nests in small trees or bushes in multiple habitats including cottonwood/willow groves riparian areas, mature pine forests, aspen groves, deciduous forests/woodlands in mountain valleys, and orchards.	Mid-April through June, sometimes to July, single brood. Both sexes incubate eggs. Incubation period 12-14 days. Chicks: altricial and fledge 10-14 days, and are able to fly 15 days later.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
SPTO	*Pipilo maculatus*	spotted towhee	none	no	low	Nests on ground within shrubby thickets in pine forests and oak woodlands.	May through August; single brood. Female (only) incubates. Incubation period 12-14 days. Chicks: altricial and leave nest 9-12 days, and fly after another 7 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
SUTA	*Piranga rubra*	summer tanager	CDFW:SSC (Nesting)	no	low	Nests in riparian trees and shrubs, often with canopy over nest.	May through August; single or double broods. Female only incubates eggs. Incubation period 11-12 days. Chicks: altricial, fledge at 9-10 days.	Low potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.

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WETA	*Piranga ludoviciana*	western tanager	none	yes	low to moderate	Nests in trees in open coniferous and mixed coniferous-deciduous woodlands.	Mid-May through August; single brood. Female (only) incubates eggs. Incubation period 13 days. Chicks: altricial and fledge 11-15 days.	Low to moderate potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
WFIB	*Plegadis chihi*	white-faced ibis	CDFW:WL (Nesting Colony)	yes	low	Nests made primarily of sticks and placed in trees or in dense reed beds in close proximity to water. Colonial nester.	April through July; may double brood. Both sexes incubate. Incubation period 17-21 days. Chicks: semi-altricial, leave nest early but remain in vicinity of colony for several weeks.	Low potential to occur in suitable habitat in Segments 1 and 2 of the EPL Project alignment, but does not nest within the alignment.
MOCH	*Poecile gambeli*	mountain chickadee	none	no	low	Nests in cavities or nest boxes in montane coniferous forests and mixed coniferous-deciduous forests and riparian areas.	April through August; one or two broods. Female (only) incubates eggs. Incubation period 12-23 days. Chicks: altricial and leave nest at 18-26 days old.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
BGGN	*Polioptila caerulea*	blue-gray gnatcatcher	none	no	low to moderate	Nests in broadleaf trees well out on side limbs, often saddled against a side branch, twig, or knot	April through August; single to double broods. Both sexes incubate for 11-15 days after completion of clutch. Chicks: altricial and fledge at 10-15 days.	Low to moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
BTGN	*Polioptila melanura*	black-tailed gnatcatcher	CDFW:WL	yes	low to moderate	Nests in trees or shrubs in scrub, wash, and woodland habitats.	March through July. mid-April through mid-July; double brood. Both sexes incubate eggs. Incubation period 15 days. Chicks: altricial and fledge at 15 days.	Low to moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
BUSH	*Psaltriparus minimus*	bushtit	none	no	low	Nests in trees and shrubs in shrubland, woodland, and forest habitats.	February through June; probably double brood. Both sexes incubate eggs. Incubation period 12-13 days. Chicks: altricial and fledge by 14-15 days old.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but unlikely to nest within the alignment.

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VEFL	*Pyrocephalus rubinus*	vermilion flycatcher	CDFW:SSC (Nesting)	yes	low	Occurs in cottonwood, willow, mesquite, and other large desert riparian trees within marsh and swamp, riparian forest, riparian scrub, riparian woodland, and wetland communities. Nests in desert riparian habitat adjacent to irrigated fields, irrigation ditches, pastures, and other open, mesic areas.	February through June; probably double brood, potentially treble-brooding. Female (only) incubates eggs. Incubation period 13-15 days. Chicks: altricial and fledge in 14-16 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but unlikely to nest within the alignment.
GTGR	*Quiscalus mexicanus*	great-tailed grackle	none	no	low	Nests in areas of open vegetation with water close by including marshes, pastures, and forests.	March through July; single brood. Female (only) incubates eggs. Incubation period 13-14 days. Chicks: altricial and fledge by 12 days old at the earliest.	Low potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
BANS	*Riparia riparia*	bank swallow	CA Threatened; BLM:S (Nesting)	no	low	Nests in vertical banks and bluffs near large bodies of water.	March through July; single to double broods. Both sexes incubate eggs. Incubate 14-16 days. Both parents feed young. Chicks: altricial and fledge 18-24 after hatching.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
MOBL	*Sialia currucoides*	mountain bluebird	none	no	low	Nest in trees at high elevation in montane meadows, aspen 'parkland,' and post-burned coniferous forests.	April through early September; possibly double brood. Female (only) incubates eggs. Male feeds female. Incubation period 12-18 days. Chicks: altricial and fledge at 19-23 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.

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ARCADIS

Banding Laboratory (BBL) 4-letter Code	Scientific Name	Common Name	Regulatory Status (Federal/ California/ Nevada/ BLM)	Previously Observed within Project area	Potential to Occur within Project Area	Nest Habitat	Breeding and Nesting Season. Nest Cycle	Potential for Nesting on EPL Project alignment by Segment, if any
WEBL	*Sialia mexicana*	western bluebird	none	no	low	Nests in trees and snags in open coniferous forests and deciduous woodlands, riparian areas, and farmlands.	Mid-April through early August; single to double brood. Female (only) incubates eggs. Incubation period 12-17 days. Chicks: altricial and fledge at 18-15 days old.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
ROWR	*Salpinctes obsoletus*	rock wren	none	no	high	Nests in cavities and crevices between rocks and on cliff faces.	March through June; may have 3 broods in some years. The female incubates the eggs. Incubation period 12-14 days. Chicks: altricial and fledge by 16 days.	Likely to nest within suitable habitat in all segments of the EPL Project alignment.
BLPH	*Sayornis nigricans*	black phoebe	none	yes	low	Nests on ledges, pockets, under trees and ledges. Nest sites have a ceiling the protects the nest from weather near or directly over water and near construction materials and suitable foraging areas.	March through late June; double brood. Typically only female incubates eggs. Incubation period 15-18 days. Chicks: altricial and fledge at 21 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
SAPH	*Sayornis saya*	Say's phoebe	none	yes	high	Nests in protected ledges or pockets in caves, cliff faces, banks, or man-made structures.	March through August; single to double broods. Females incubate eggs for 12-14 days. Both parents bring food to young. Chicks: altricial and fledge 14-16 days after hatching.	Likely to nest within suitable habitat in all segments of the EPL Project alignment.
YRWA	*Setophaga coronata*	yellow-rumped warbler	none	no	moderate	Nests in mature conifer and mixed coniferous-deciduous woodlands	April through August; single to double broods. Female (only) incubates eggs. Incubation period 12-13 days. Occasionally males will incubate eggs. Both parents feed young. Altricial and fledge 10-12 after hatching.	Moderate potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.

Banding Laboratory (BBL) 4-letter Code	Scientific Name	Common Name	Regulatory Status (Federal/ California/ Nevada/ BLM)	Previously Observed within Project area	Potential to Occur within Project Area	Nest Habitat	Breeding and Nesting Season. Nest Cycle	Potential for Nesting on EPL Project alignment by Segment, if any
YEWA	*Setophaga petechia*	yellow warbler	CDFW:SSC (Nesting)	yes	low	Nests in forks of riparian trees.	March through July; sometimes double brood. Only female incubates eggs. Incubation period 11 days. Chicks: altricial and fledge at 9-12 days old.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
BTYW	*Setophaga nigrescens*	black-throated gray warbler	none	no	low	Nests on horizontal branches or forks in firs, oaks, or pinyon pines in coniferous and mixed forests.	May through July; single to double broods. Female (only) incubates eggs. Incubation periods aren't well known. Chicks: altricial and fledgling period is unknown.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
MOBL	*Sialia currucoides*	mountain bluebird	none	no	low	Nest in trees at high elevation in montane meadows, aspen 'parkland,' and post-burned coniferous forests.	April through early September; possibly double brood. Female (only) incubates eggs. Male feeds female. Incubation period 12-18 days. Chicks: altricial and fledge at 19-23 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
WEBL	*Sialia mexicana*	western bluebird	none	no	low	Nests in trees and snags in open coniferous forests and deciduous woodlands, riparian areas, and farmlands.	Mid-April through early August; single to double brood. Female (only) incubates eggs. Incubation period 12-17 days. Chicks: altricial and fledge at 18-15 days old.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.

Banding Laboratory (BBL) 4-letter Code	Scientific Name	Common Name	Regulatory Status (Federal/ California/ Nevada/ BLM)	Previously Observed within Project area	Potential to Occur within Project Area	Nest Habitat	Breeding and Nesting Season. Nest Cycle	Potential for Nesting on EPL Project alignment by Segment, if any
LAGO	*Spinus lawrencei*	Lawrence's goldfinch	none	no	low	Typically occupies arid and open woodlands within the near chaparral or other brushy areas; tall annual weed fields; and a water source such as a stream, small lake, or farm pond. Live oaks (*Quercus* spp.) and blue oaks (*Q. douglasii*) are predominant trees where this species nests.	April through September. Single brood. Incubation period lasts 12-13 days. Nestling period lasts 9 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
LEGO	*Spinus psaltria*	lesser goldfinch	none	yes	moderate	Nests in trees and shrubs.	April through mid-July; two or three broods. Female (only) incubates eggs. Incubation period 12 days. Chicks: altricial and fledge at 11 days.	Moderate potential to occur and nest in suitable habitat in Segments 1 and 2 of the EPL Project alignment, and low potential to occur and nest in Segments 3, 4, 5, and 6.
AMGO	*Spinus tristis*	American goldfinch	none	no	low to moderate	Nests in shrubs, especially deciduous shrubs in shrublands and open woodlands.	April through August, two to three broods. Female (only) incubates eggs. Incubation period 12-14 days. Chicks: altricial and fledge at 11-17 days old.	Moderate potential to occur in suitable habitat in Segments 1 and 2 of the EPL Project alignment, and low potential to occur in Segments 3, 4, 5, and 6, but does not nest within the alignment.
BCSP	*Spizella atrogularis*	black-chinned sparrow	none	no	low	Nests in shrubs and small trees in open sagebrush scrub, other desert shrublands, and chaparral.	Mid-April through July, single brood. Female (only) incubates eggs. Incubation period 12-13 days. Chicks: altricial, nest departure mostly unknown, likely within 10 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.

Appendix A. Species Information
Nesting Bird Management Plan
Eldorado - Pisgah - Lugo Project
Southern California Edison

Banding Laboratory (BBL) 4-letter Code	Scientific Name	Common Name	Regulatory Status (Federal/ California/ Nevada/ BLM)	Previously Observed within Project area	Potential to Occur within Project Area	Nest Habitat	Breeding and Nesting Season. Nest Cycle	Potential for Nesting on EPL Project alignment by Segment, if any
BRSP	*Spizella breweri*	Brewer's sparrow	NRS: SB	yes	moderate	Nests in Great Basin sagebrush, antelope brush, spiny hopsage, and green rabbitbrush.	April through August, two broods. Female (only) incubates eggs. Incubation period 10-12 days. Chicks: altricial and fledge at 6-9 days old.	Moderate potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
CHSP	*Spizella passerina*	chipping sparrow	none	no	moderate	Nests in trees and shrubs in open coniferous forests and grassy areas of deciduous woodlands.	Late March through early September; single brood (may renest). Female (only) incubates. Incubation period 7-15 days. Chicks: altricial and fledge as early as 8 days old.	Moderate potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
NRWS	*Stelgidopteryx serripennis*	northern rough-winged swallow	none	no	low	Nests in previously dug burrows in open woodlands near rocky, gravelly exposed sites - gorges, banks, eroded stream margins.	May through July, single brood. Female (only) incubates eggs. Incubation period 15-17 days. Chicks: altricial and fled+H148ge at 17-22 days old.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
WEME	*Sturnella neglecta*	western meadowlark	none	no	low to moderate	Nests in grassland, prairie, and pasture habitats.	March through June; double brood. Female (only) incubates eggs. Incubation period 13-15 days. Chicks: altricial and fledge at 10 -12 days.	Low to moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
TRES	*Tachycineta bicolor*	tree swallow	none	no	low	Nests in trees near bodies of water. Commonly in fields, marshes, swaps with snags. Colonial nesters.	Early May to early July; 1 to 2 broods. Females (only) incubate eggs. Incubation period 11-20 days. Chicks: altricial and fledge at 15-25 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
VGSW	*Tachycineta thalassina*	violet-green swallow	none	no	low to moderate	Nests in cavities in trees and cliffs.	May through July; single brood usually. Both parents build the nest and feed the nestlings. The female incubates the eggs. Incubation period 13-18 days, with an additional 22-24 days to fledging once hatched.	Low to moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.

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BEWR	*Thryomanes bewickii*	Bewick's wren	none	no	low to moderate	Nests in open woodlands and shrublands in tree cavities or on the ground between rocks or brush.	March through July; two or three broods. Female (only) incubates eggs. Incubation period 14 days. Chicks: altricial and fledge at 14 days	Low to moderate potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
LCTH	*Toxostoma lecontei*	LeConte's thrasher	CDFW:SSC, BLM:S	yes	low to moderate	Nests in cacti or often thorny shrubs in locations with shade above the nest.	February through June; two or three broods. Both sexes incubate eggs. Incubation period 14-20 days. Chicks: altricial, fledge at 14-17 days.	Low to moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
BETH	*Toxostoma bendirei*	Bendire's thrasher	CDFW: SSC BLM: S	no	low to moderate	Nests in trees, shrubs, and cacti in open desert scrub habitats.	February through July; double brood. Female only incubates eggs. Incubation period 14 days. Chicks altricial and fledge at 11-12 days.	Low to moderate potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.
CRTH	*Toxostoma crissale*	Crissal thrasher	CDFW: SSC BLM: S	no	moderate	Nests in trees in dense canopy in pinyon-juniper, grassland, and low dense desert scrub habitats.	February through July; double brood. No information on egg incubation. Chicks altricial and fledge at 12 days.	Moderate potential to occur and nest in Segments 3, 4, 5, and 6 within the EPL Project alignment, but does not occur elsewhere in the alignment.
HOWR	*Troglodytes aedon*	house wren	none	yes	low	Nests in shrubs and woody thickets, as well as in cavities and structures or machinery.	April through July; double brood. Female only incubates eggs. Incubation period 13-15 days. Chicks altricial and fledge at 12-18 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
AMRO	*Turdus migratorius*	American robin	none	no	low	Nests in trees in forest, woodlands, urban and suburban gardens and parks.	April through August; double brood. Female only incubates eggs. Incubation period 12-13 days. Chicks altricial and fledge at 9-16 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
WEKI	*Tyrannus verticalis*	western kingbird	none	yes	moderate	Nests in trees and shrubs as well as on utility structures and other structures.	April through June; double brood. Both sexes incubate eggs. Incubation period 12-14 days. Chicks: altricial and fledge at 13-19 days.	Moderate potential to occur in suitable habitat in all segments of the EPL Project alignment, but unlikely to nest within the alignment.

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CAKI	*Tyrannus vociferans*	Cassin's kingbird	none	no	low	Nests in tall trees in dense canopy in riparian, pinyon-juniper, grassland, and desert scrub habitats.	April through August; single brood. Female only incubates eggs. Incubation period 14-16 days. Chicks: altricial and fledge at 12-14 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
BANO	*Tyto alba*	barn owl	none	no	low	Nests in existing cavities in a wide variety of habitats where small mammal prey is available including trees, cliffs, and human structures.	April through August; single brood. Female only incubates eggs. Incubation period 29-34 days. Chicks: altricial and fledge at around 64 days old.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, and unlikely to nest within the alignment.
LBVI	*Vireo bellii*	Bell's vireo	none	no	low	Occurs as a summer resident of southern California in willow riparian areas below 2,000 feet. Nests are placed along margins of bushes or on twigs projecting into pathways, usually willow, mulefat, and mesquite.	April through July; multiple broods possible. Both sexes incubate eggs. Incubation period approximately 14 days. Chicks altricial and fledge 10-12 days.	Low potential to occur in suitable habitat in Segments 3 and 4 of the EPL Project alignment, and does not nest within the alignment.
CAVI	*Vireo cassinii*	Cassin's vireo	none	no	low	Nests in trees in montane deciduous, coniferous, and mixed coniferous-deciduous forests.	May to early August; single brood. Both sexes incubate eggs. Incubation period 13-14 days. Chicks: altricial and fledge 13-15 days old.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, and unlikely to nest within the alignment.
WAVI	*Vireo gilvus*	warbling vireo	none	no	low	Nests in trees in riparian areas of mature mixed deciduous woodlands.	Late April to mid-August; 1 to 2 broods. Both sexes incubate eggs. Incubation period 11-16 days. Chicks: altricial and fledge 11-19 days.	Low potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.

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WWDO	*Zenaida asiatica*	white-winged dove	none	no	low	Nests in the trees in dense, interior areas of thorny woodlands, cactus palo-verde deserts, riparian woodlands and urban and agricultural (orchard) areas.	March - September; double brood. Both sexes incubate eggs. Incubation period 15-17 days. Chicks altricial and fledge at 13-18 days.	Low to occur and nest in suitable habitat in Segments 3, 4, 5, and 6 of the EPL Project alignment, but absent from other segments.
MODO	*Zenaida macroura*	mourning dove	none	yes	moderate to high	Nests in trees, shrubs, structures, and on the ground.	March through September; several broods. Both sexes incubate eggs. Incubation period 14-15 days. Chicks: altricial and fledge at 13-15 days.	Moderate to high potential to occur in suitable habitat in all segments of the EPL Project alignment, but does not nest within the alignment.
WCSP	*Zonotrichia leucophrys*	white-crowned sparrow	none	yes	moderate to high	Nests in dense shrubby areas with grassy and bare ground patches in a wide range of habitats.	Variable depending on habitat. In western US late April- mid June; multiple broods (up to 4). Female (only) incubates eggs. Incubation period 12-15 days. Chicks: altricial and fledge at 8-10 days.	Moderate to high potential to occur and nest in suitable habitat in all segments of the EPL Project alignment.

Status Codes

United States Fish and Wildlife Service
FE Federal Endangered
FT Federal Threatened

Bureau of Land Management (BLM)
BLM S BLM Sensitive

California Department of Fish and Wildlife (CDFW)
CE California Endangered
CT California Threatened
FP California Fully Protected
CSC California Species of Concern
CC California Candidate (Threatened or Endangered)

Nevada Revised Statutes (NRS: 305.050)
SB - State Sensitive Bird

APPENDIX B

Sensitivity to Disturbance of Species Nesting or Potentially Nesting near the EPL Project

The information in the species accounts in Appendix B was used to establish the initial minimum-distance bufferzones presented in Table 4 of the Plan. These accounts should be referred to when making any determination to modify these minimum-distance buffers as conditions in the field may dictate. Species-specific information on nest placement and type should serve as an aid in finding nests, and information on incubation periods and time to fledging can be used to estimate when the nest cycle will be completed and any project-related activity that may have been disruptedby the nest can resume. All avian nest monitors must have this plan in their possession when conducting pre-construction surveys or otherwise searching for or monitoring nests. The species presented in this list are those considered to have the potential to nest in the project area. Isolated and extreme nest dates are excluded in the nesting season provided in Appendix B. In the event that a species not included in this list is found nesting in the project area, it must be evaluated separately.

Breeding season, nesting, incubation, and nestling information was obtained from *A Guide to the Nests, Eggs, and Nestlings of North American Birds*, 2nd edition (Baicich, P.J. and C.J.O. Harrison 1997) and the Cornell Laboratory or Ornithology online Birds of the World (https://birdsoftheworld.org).

Although active nest searches and monitoring may take place only during the optimal time of year for nesting, all construction monitors should be aware that some species may be nesting at other times. If an active nest is found outside the periods when monitors are actively searching for nests, it should be treated no differently than a nest found during the “typical” breeding season. In these rare instances, the same buffer requirements and nestmonitoring protocols should be followed.

Species that are not native to California (Eurasian collared-doves,house sparrows, etc.) and not protected by the Migratory Bird Treaty Act are not addressed in this Plan.

The information provided below should be viewed along with *Table 4, Buffers for Horizontal and Vertical Ground and Helicopter Construction* in the main NBMP narrative.

QUAIL

Sensitivity to disturbance: Due to ground nesting behavior, quail are probably more sensitive to heavy equipment operating in the vicinity and vibrations produced by those vehicles. Once hatched, precocial young move quickly away from the nest with the adults.

Minimum Buffers:

- 150-ft horizontal buffer for ground construction
- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction

BIRDS OF PREY (CATEGORY 1)

Sensitivity to disturbance: Not easily disturbed unless very direct. As cavity nesters these species seem to adapt well to the proximity of people unless the direct nest structure (tree, building, cliff, bridge, nest box) is disturbed. All species are sensitive to heavy equipment operations at < 100 feet.

Minimum Buffers:

- 300-ft horizontal buffer for ground construction
- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction

BIRDS OF PREY (CATEGORY 2)

Sensitivity to disturbance: These species all acclimate to the presence of people, depending upon the type and duration of activity. Cooper's hawks, red-shouldered hawks, and great horned owls nestingin southern California include numerous successful urban pairs as well as the pairs nesting in natural areas. Urban red-tailed hawk pairs tolerate small buffers while natural pairs need greater distances between their nest and human activity. Burrowing owls tend to be very tolerant unless their foraging habitat is eliminated or their nest burrow and escape burrows are chronically disturbed. Specific buffers that apply to burrowing owls are detailed in the Burrowing Owl Management Plan.

Minimum Buffers:

- 300-ft horizontal buffer for ground construction
- 200-ft to 300-ft horizontal buffer for helicopter construction
- 200-ft vertical buffer for helicopter construction

BIRDS OF PREY (CATEGORY 3)

Sensitivity to disturbance: Urban nesting red-tailed hawks are often tolerant of human activity, but pairs nesting in more natural areas will predictably need larger buffers than the minimum prescribed here. For example, wild pairs are often sensitive to climbers on adjacent towers so, as arule, major construction or climbing should take place at least two towers away from an active tower nest. The long-eared owl tends not to nest any closer than one-quarter mile from people.

Exceptions exist but as a rule long-eared owls (and northern harriers) are intolerant of people and should be given conservative buffers whenever possible.

Minimum Buffers:

- 500-ft horizontal buffer for ground construction, depending on the

species and setting (urban vs. remote) – see paragraph above

- 500-ft horizontal buffer for helicopter construction, depending on the species and setting (urban vs. remote) – see paragraph above
- 300-ft vertical buffer for helicopter construction

BIRDS OF PREY (CATEGORY 4)

Sensitivity to disturbance: Swainson's hawks, prairie falcons, and peregrine falcons are more sensitive to disturbance than the birds in Category 3. Swainson's hawks are also listed as California threatened, warranting extra caution to avoid any reasonable chance of spooking birds at their nest.

Minimum Buffers:

- 1320-ft to 2640-ft horizontal buffer for ground construction
- 1320-ft to 2640-ft horizontal buffer for helicopter construction
- 1320-ft to 5280-ft vertical buffer for helicopter construction

EAGLES

Sensitivity to disturbance: Both bald and golden eagles are highly sensitive to human disturbance near their nest, golden eagles generally more so than bald. Both tend to be less sensitive to machinery (e.g., helicopters) than human foot traffic.

Minimum Buffers:

- 2640-ft to 5280-ft horizontal buffer for ground construction
- 2640-ft to 5280-ft horizontal buffer for helicopter construction
- 2640-ft to 5280-ft vertical buffer for helicopter construction

SHOREBIRDS

Sensitivity to disturbance: Killdeer commonly nest near construction yards, probably attracted by the presence of gravel on the roads and puddles from water trucks. They usually become agitated by approaching humans in cars or on foot when about 100 feet out from their ground nest, typically performing distraction displays. When this happens, one should assume that a nest is in the immediate vicinity, leave the area, and observe from a distance to identify the location of the eggs.

Minimum Buffers:

- 200-ft (killdeer) horizontal buffer for ground construction
- 200-ft horizontal buffer for helicopter construction
- 200-ft vertical buffer for helicopter construction

DOVES

Sensitivity to disturbance: Urban nesting mourning doves are tolerant of human disturbance of mostany kind, but pairs nesting in natural areas can be much more sensitive to disturbance, especially ground-nesting pairs, when they are subjected to human activity for extended periods or to heavy equipment moving earth. The nests of non-native rock pigeons and Eurasian collared-doves are notprotected and hence not mentioned below.

Minimum Buffers:

- 150-ft horizontal buffer for ground construction
- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction

ROADRUNNERS

Sensitivity to disturbance: Roadrunners are very intolerant of close or continuous human disturbance involving frequent visits to the nest vicinity, many people in the area, or operation of heavy equipment. Habitat removal and earth moving tend to provide an initial pulse of abundant food followed by a dearth of food. Steps should be taken to assure that the buffer contains adequate prey resources or that the surrounding intact natural landscape is readily and safely accessed.

Minimum Buffers:

- 300-ft horizontal buffer for ground construction
- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction

NIGHTJARS

Sensitivity to disturbance: As nocturnal aerial foragers these ground nesters are relatively intolerant of human disturbance, and nests often fail if “bumped” from their nests during diurnal hours and the adults are not allowed to return quickly. A substantial buffer or continuous monitoring of nests from a distance is important to ensure successful nesting.

Minimum Buffers:

- 150-ft horizontal buffer for ground construction
- 200-ft horizontal buffer for helicopter construction
- 150-ft to 200-ft vertical buffer for helicopter construction

SWIFTS

Sensitivity to disturbance: Because of their aerial foraging habits and inaccessible nesting sites on cliffs and concrete highway bridges, white-throated swifts are not vulnerable to human disturbance that does not directly intrude on their nest.

Minimum Buffers:

- 200-ft horizontal buffer for ground construction
- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction

HUMMINGBIRDS

Sensitivity to disturbance: As a group, hummingbirds are generally tolerant of close human activity, even at less than 25 feet; however, flowering plants whose flowers attract hummingbirds should beleft intact within 200 yards of the nest, wherever possible.

Minimum Buffers:

- 100-ft horizontal buffer for ground construction

- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction

WOODPECKERS

Sensitivity to disturbance: All woodpeckers are cavity nesters, and as such, are somewhat more secluded and protected than open cup-nesting birds that use stick nests. Unless the nest tree or adjacent trees are physically disturbed, woodpeckers are tolerant of temporary human disturbance. Importantly, the live trees and snags that woodpeckers forage in and that surround the nest tree need to be protected through the nesting season.

Minimum Buffers:

- 150-ft horizontal buffer for ground construction
- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction

PASSERINES (CAVITY AND CREVICE NESTERS)

Sensitivity to disturbance: The largest group of North American birds, Passerines, are extremely variable in terms of nesting preferences and tolerance to human disturbance. Many species have adapted well to human-created habitats while those preferring more natural areas (both individual pairs and species) are generally less tolerant. Due to the protected nature of cavity nests, the speciesthat build them seem more tolerant than most open-cup nesting species. If closely monitored in terms of incubation and feeding bouts, all species in this group tolerate significant reductions in buffer width from the standard of 300 feet if the habitat, terrain, nesting status, and the distance andform of disturbance are carefully evaluated.

Minimum Buffers:

- 100-ft horizontal buffer for ground construction
- 150-ft horizontal buffer for helicopter construction
- 100-ft vertical buffer for helicopter construction

PASSERINES (BRIDGE, CULVERT, AND BUILDING NESTERS)

Sensitivity to disturbance: Generally, this group of passerines is more tolerant than the preceding group because of their practice of nesting near people; however, since they often build their nest onor in a human-created structure, access to their nesting area must remain unobstructed.

Minimum Buffers:

- 100-ft horizontal buffer for ground construction, depending on degree of nest exposure and thedegree to which the nesting pair is accustomed to nearby human activity
- 150-ft horizontal buffer for helicopter construction
- 100-ft vertical buffer for helicopter construction

PASSERINES (GROUND NESTERS, OPEN HABITATS)

Sensitivity to disturbance: These species are especially vulnerable because their nest site, if not thenest itself, is exposed to surrounding activity and subject to easy predation by both ground and aerial

predators. In addition, because they are ground nesters and are acutely aware of visual and auditory stimuli in the area surrounding the nest site, they may take flight as a result of vibrations produced by vehicles at significant distances from the nest. If the adult is flushed off its nest on hotdays, the few minutes away can result in nest failure due to heat stress (eggs and young) and dehydration (young) from high ambient air and ground temperatures.

Minimum Buffers:

- 150-ft horizontal buffer for ground construction
- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction

PASSERINES (UNDERSTORY AND THICKET NESTERS)

Sensitivity to disturbance: Members of this passerine group nest in fairly secluded wooded areas or very dense, shrubby habitats. As such, they can tolerate human disturbance at fairly close range, buttheir nests should nevertheless be carefully monitored for signs of disturbance.

Minimum Buffers:

- 150-ft horizontal buffer for ground construction
- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction

PASSERINES (SHRUB AND TREE NESTERS)

Sensitivity to disturbance: These species nest relatively high off the ground, and even though theirnest site may be more exposed to nearby construction-related activity, they generally maintain a greater vertical distance from most types of disturbance. Therefore, most can tolerate human disturbance relatively close to their nest sites as measured from the ground.

Minimum Buffers:

- 150-ft to 300-ft horizontal buffer for ground construction, depending on the height of the nestoff the ground
- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction

PASSERINES (OPEN SCRUB NESTERS)

Sensitivity to Disturbance: This group of passerines is fairly vulnerable to nest predation due to the low elevation of their nest above the ground and relatively high visibility of the adults moving backand forth with food to the shrub containing the nest. Several species also nest in arid locations making their nest contents vulnerable to heat. For loggerhead shrikes minimum horizontal buffer for ground construction may be larger than other species.

Minimum Buffers:

- 150-ft to 300-ft horizontal buffer for ground construction
- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction

PASSERINES (TOWER NESTERS)

Sensitivity to disturbance: Some species such as common raven often nest on utility poles and electrical transmission towers in the open. These species need close evaluation, as some pairs byvirtue of their acceptance of existing human activity are well adjusted; whereas pairs nesting ontowers in remote areas are often skittish and prone to nest failure early if frequently flushed off eggs.

Minimum Buffers:

- 150-ft horizontal buffer for ground construction under most circumstances, but up to 300 ft forsome ravens
- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction under most circumstances, but up to 300 ft forsome ravens

PASSERINES (MARSH NESTERS)

Sensitivity to disturbance: In many respects the pairs and their nests are protected by the water that surrounds their supporting emergent vegetation and nests. As a result, many marshland nesting birds have a natural buffer that provides a large level of protection. All three species are tolerant of modest levels of human activity. Pairs nesting on wetland edges can be further protected by adding additional terrestrial buffers.

Minimum Buffers:

- 150-ft horizontal buffer for ground construction
- 200-ft horizontal buffer for helicopter construction
- 150-ft vertical buffer for helicopter construction

APPENDIX C

County	City	Wildlife Rehabilitation Facility	Phone	Specializations
Riverside	Indio	Coachella Valley Wild Bird Center	(760) 347-2647	Birds only
San Bernardino	Big Bear	Big Bear Alpine Zoo	(909) 584-1299	Birds and small mammals
San Bernardino	San Bernardino	Joseph and Linda Chalk	(909) 887-8267	Birds and small mammals
San Bernardino	Redlands	Orangewood Wildlife	(909) 809-0989	Hummingbirds only

Facility information is from the CDFW website accessed April 12, 2022 (https://wildlife.ca.gov/Conservation/Laboratories/Wildlife-Health/Rehab/Facilities)

APPENDIX D

1. Public Health and Safety

1.1. Grading/Slope Stabilization

It is critical to the safety of the construction crews and public that slope stabilization on slopes that are 2:1 or greater be completed prior to construction activities ceasing in the event of discovering an active nest. The following includes the sequence of critical construction activities that must occur at a site that has a significant change in grade:

1. The construction crews will cut in a keyway at the toe of the slope (to retain the slope at the base that is being constructed).
2. Following the installation of the keyway grading crews will fill the slope in lifts ensuring proper compaction as the slope is constructed.
3. Once the design elevation has been achieved the grading crews will tie the daylight line of the slope into the existing contours.
4. To ensure the stabilization of the constructed slope all fill slopes will be either jute netted and/or have soil stabilizer applied to its surfaces.
5. Once slopes have been stabilized the final critical step in the process is to ensure that water drainage is diverted from the slope face per the engineered design (i.e., water bars, McCarthy Drains etc.).
6. Equipment moved off site.

1.2 TSP/Wood Pole Equivalent Assembly

This process can be interrupted once the TSP or wood pole equivalent has been safely secured on the ground.

1.4 Drilling

Remove drill bit from drill hole, secure hole, and remove drill rig. Activity will take approximately 1-2 hours and 5 crewmembers.

1.5 TSP/ Wood Pole Equivalent Erection

This activity can be stopped as long as any portion of the TSP or wood pole equivalent (e.g., the base section or subsequently-installed sections) is secured for public safety. If more than one section of a TSP or wood pole equivalent has been erected, these sections must be hydraulically jacked together. Activity will take approximately 1-8 hours and 5 crewmembers. This process can be interrupted once the TSP or wood pole equivalent has been safely secured and the crane removed so the TSP or wood pole equivalent can support itself.

1.6 Flying Sockline

Once sockline is threaded through the first traveler (on a structure), the helicopter must complete flying sockline to the end of the wire pull so that the sockline can be secured. Once threading the sockline has been completed, it must be secured on both ends and can then hang in the air for an undetermined amount of time. Activity will take approximately 1-8 hours and up to 20 crewmembers. Sockline needs to be secured for public safety.

1.7 Pulling Conductor

Once pulling conductor has been initiated and it has passed through the first traveler, the conductor pull must be completed through the last structure of the pull, the sockline removed, and the

conductor sagged and deadended. Once started, the process must be completed (the whole length of the conductor from the tensioner site to the puller site) and the conductor deadended. Activity will take approximately 1-8 hours and up to 20 crewmembers. The conductor pulling rope and/or cable that connects to the conductor is not made for long-term suspension, and therefore if left in the air, the conductor pulling rope and/or cable could fail and cause the conductor to drop. IEEE also states that conductor cannot sit in travelers longer than 72 hours. This activity poses public health and safety concern as well as a threat to integrity of infrastructure.

1.8 Wire Drop

Once conductor has been cut for removal and the rewind process has begun, the single conductor must be completely removed, which is the whole length of conductor from the tensioner site to the puller site. Activity will take approximately 1-4 hours and up to 20 crewmembers until the conductor is rewound and the let-down rope is retrieved. Wire should never be left suspended by rope in the air because the rope could break, causing the wire to drop, endangering the public or anyone on the ROW.

1.9 Freeway Crossings

When stringing or removing conductor over freeways, all activities for each conductor phase need to be completed during the period of the roadway closure to protect the public.

2. Integrity

2.1 Concrete Pour for Foundations

The pouring of concrete for a TSP foundation may take up to 10 hours to complete and utilize up to 5 crewmembers. Once a concrete pour has started, the pour must be finished and the foundation completed. Activities can be stopped once the concrete pour has been completed and the concrete ‘finished’. If a concrete pour is stopped at any time before completion, it would result in a cold joint. Specifications state that construction joints shall be used only as a last resort.

2.2 Drilling Foundations

Drilling foundation holes is an activity that needs to continue once the hole exceeds 6 feet. If the foundation has been drilled to depth, the hole needs to be cased to keep it open until concrete can be poured, or concrete pouring would need to be started immediately. A hole can typically be left open for 24 hours. Activities can be stopped if the hole is less than 6 feet deep. If the hole exceeds 6 feet, drilling would need to be continued until depth is reached and the hole cased or filled with slurry to keep it from caving. The integrity of the hole may be compromised if left open for more than 24 hours and not supported.

2.3 Clipping Conductor

Once conductor is deadended, clipping must be completed. This consists of attaching (clipping in) the conductor in its permanent position. Clipping in the conductor must be completed. The conductor must be clipped in within 72 hours per IEEE specifications.

APPENDIX E

PollyNet™ BIRD NETTING PREMIUM

Don't go away mad, just go away!

Economical bird exclusion netting that can be installed under, over, on and around an endless list of objects, spaces and structures. Simple, humane bird exclusion.

PollyNet Premium Bird Exclusion Netting

Flexible and easy to cut, PollyNet Premium is an extruded, knotless, seamless and UV stabilized black polypropylene bird exclusion netting. It is easy to handle, cuts with scissors, installs quickly and is one of the most economical bird netting systems available. PollyNet Premium has a 5 year UV degradation product warranty.

PollyNet Premium Applications

With a 1/2" (14 mm) pre-stretched square mesh, the PollyNet Premium excludes all types of pest birds and bat species. This includes pest birds like sparrows, starlings, waxwings, pigeons and seagulls. Prevent bats from roosting in unwanted spaces safely and humanely. Made to withstand the rigors of exterior architectural, agricultural and aquacultural applications. See the sidebar for more installation examples.

PollyNet Premium Sizes

Premium PollyNet comes in convenient precut roll sizes. Net roll sizes are subject to change depending on availability at the time of order.

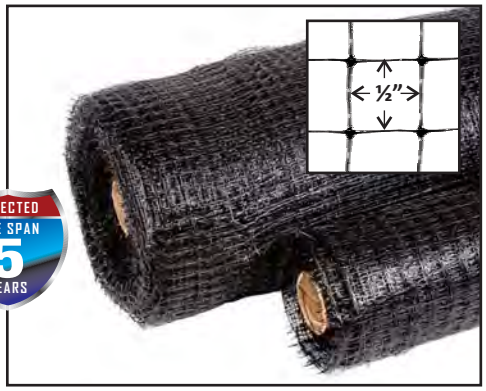
Item#	Description
Netting 50	14' wide and 50' long Premium PollyNet
Netting 100	14' wide and 100' long Premium PollyNet
Netting 200	14' wide and 200' long Premium PollyNet
Netting 3000	14' wide and 3,000' long **bulk roll** Premium PollyNet*

*Allow additional shipping time for bulk roll freight delivery

Installation Hardware

Nixalite offers a huge selection of netting installation hardware, tools and accessories. To keep the costs low and maintain ease of installation, we suggest using the **Poly Hardware** to install your PollyNet Premium bird exclusion netting. For more information on the Netting Hardware, contact Nixalite of America Inc or visit www.nixalite.com.

Questions? Contact us by phone or visit our website



PollyNet Premium Applications

Installs over, under and around an **endless list** of objects, areas, structures. Here are just a few examples.

Windows	Bell Towers	Canopies
Gazebos	Roof Eaves	Dormers
Louvers	Columns	Truck Docks
Bridges	Garages	Boat Docks
Fish Ponds	Gardens	Exhaust Vents
Balconies	Vineyards	Barns/Sheds
Storeroom	Crawlspace	Pet Runs
Aviaries	Fruit Trees	Open Doorway

PollyNet Premium Bird Exclusion Net is **Made in the USA**

PollyNet bird netting is one of the very few bird exclusion nets to be **Made in the USA**. Perfect for projects and bids that require Made in the USA products.

Nixalite® of America Inc
1025 16th Avenue, East Moline, IL. 61244
Experts In Architectural Bird Control Since 1950

P 309.755.8771
E birdcontrol@nixalite.com
www.nixalite.com

PollyNet™ BIRD NETTING LIGHTWEIGHT

Lightweight, inexpensive and disposable bird exclusion netting for short term bird netting enclosures.

PollyNet Lightweight Bird Exclusion Netting

Flexible and easy to cut, PollyNet Lightweight is an extruded, knotless, seamless and UV stabilized black polypropylene bird exclusion netting. It is easy to handle, cuts with scissors, installs quickly and is one of the most economical bird netting systems available. Made of very thin polypropylene strands, the PollyNet Lightweight is a disposable netting used for short term bird exclusion applications. It can be recycled after use.

PollyNet Lightweight Applications

With a 13/16" (20 mm) pre-stretched square mesh, the PollyNet Lightweight excludes all types of pest bird species. This includes sparrows, starlings, waxwings, grackles and pigeons. Common uses are gardens, berry patches, vine arbors, dwarf fruit trees and any application that can benefit from temporary protection from hungry birds. Use for structures and objects that require temporary exclusion or where low visibility and economy are more important than product longevity.

PollyNet Lightweight Sizes

PollyNet Lightweight comes in precut sizes. Net sizes are subject to change depending on availability at the time of order. Larger bulk sizes are available.

Item#	Description
Lnet 28	28' wide and 28' long Lightweight PollyNet
Lnet 45	14' wide and 45' long Lightweight PollyNet
Lnet 100	14' wide and 100' long Lightweight PollyNet
Lnet 500	14' wide and 500' long Lightweight PollyNet
Lnet 700	15.5' wide and 700' long Lightweight PollyNet*
Lnet 1000	14' wide and 1,000' long roll Lightweight PollyNet*
Lnet 5000	14' wide and 5,000' long roll Lightweight PollyNet*

*Allow additional shipping time for bulk roll freight delivery

Installation Hardware

Nixalite offers a huge selection of netting installation hardware, tools and accessories. We recommend that you use the **Poly Hardware** to install or fasten your PollyNet Lightweight bird netting. We DO NOT recommend the use of any metal netting hardware to fasten the Lightweight Netting. If you have any questions, please contact Nixalite of America Inc.

PollyNet Lightweight Applications

For use on objects or areas that will benefit from temporary protection or where low visibility and economy are more important than product longevity. Examples:

Gardens	Vine Arbors	Berry Crops
Fruit Trees	Potted Plants	Aquascapes
Garages	Balconies	Storage
Turf Seed	Bushes	Barns/Sheds
Nurseries	Fruit Trees	Greenhouses

Use for indoor or protected areas that would benefit from temporary bird exclusion. Just for birds - not intended to deter animals such as squirrels or raccoons.

PollyNet Lightweight Bird Exclusion Netting is **Made in the USA**

PollyNet bird netting is one of the very few bird exclusion nets to be **Made in the USA**. Perfect for projects and bids that require Made in the USA products.

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APPENDIX F

Bird Spike 2000™ Polycarbonate Bird Spikes

Bird Species	Pigeons, seagulls or larger birds
Where to Use	Ledges, I-beams, parapet walls, conduits, signs, flat or curved surfaces
Material	UV protected polycarbonate plastic one-piece rigid construction
Bird Pressure	Light to Heavy
Warranty	5 years

Bird Spike 2001™ creates an uneven surface preventing birds from landing on flat or curved surface areas encouraging them to fly to a different spot.

Polycarbonate bird spikes installed on ledge.

Advantages & Benefits

- Lowest cost bird spike.
- Will not harm birds.
- Virtually invisible.
- Non-conductive. Will not interfere with electrical or communication transmissions.
- Rigid, super strong, and unbreakable.
- UV protected and weatherproof. Won't be affected by extreme temperatures -200° F to 310° F (-129° C to 154° C).
- 2' (60.96 cm) lengths. Cuts labor time in half.
- Easy to install. No maintenance. Can be glued, screwed, or tied down.
- Manufactured by Bird•B•Gone® in the USA.

Available in 7 colors!

Brown Brick Red Gray Black White Tan Clear

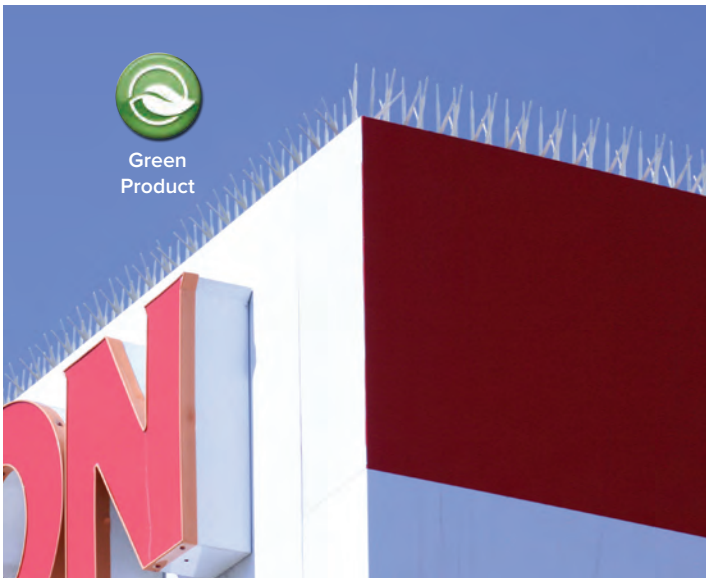
To install: Surface should be clean and dry before installation. Select width of bird spike based on the surface to be covered leaving no more than 1" on either side. Glue, screw or tie down to the surface.

Glue troughs along the base make for easy installation. Bird•B•Gone® offers construction grade adhesives.

BIRD•B•GONE® Inc.

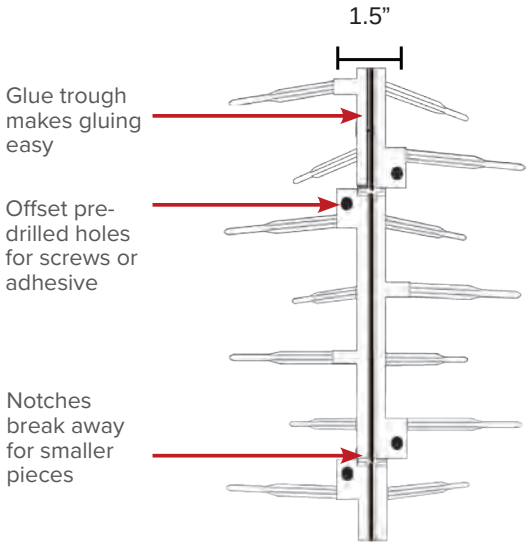
800.392.6915 | www.birdbgone.com

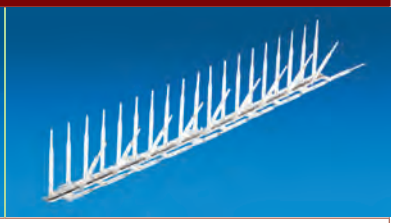
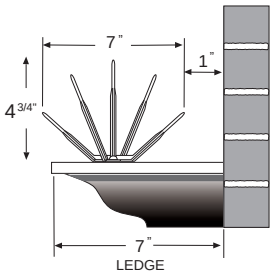
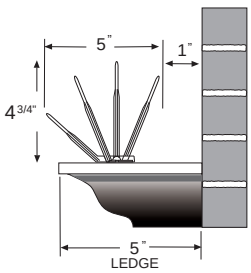
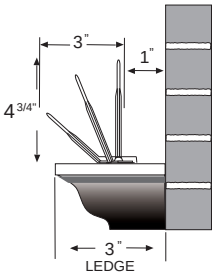
Bird Spike 2000™ Polycarbonate Bird Spikes



Spikes installed along roof lines and ledges will prevent birds from landing.

Underside View



Width	7”	5”	3”
			
Part #	BBG2000-7	BBG2000-5	BBG2000-3
Area of Coverage	6”- 8” (15.24 cm - 20.32 cm)	4”- 6” (10.16 cm -15.24 cm)	1”- 4” (2.54 cm -10.16 cm)
Pack Size	2’ (61 cm) sections 50’ (15.24 m) per box	2’ (61 cm) sections 50’ (15.24 m) per box	2’ (61 cm) sections 50’ (15.24 m) per box
			

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APPENDIX G

Tangle Guard Repeller Ribbon

A holographic foil ribbon that provides economical and humane spot control for nuisance birds and animals.

Repeller Ribbon is a safe, non-toxic and humane method for discouraging nuisance birds from roosting in gardens, home orchards, berry patches, trees, and structures.

Made in 25 and 100 foot long rolls, the 2" wide Repeller Ribbon is a holographic Mylar foil that provides temporary spot control for nuisance birds by producing visual and audible discomfort zones. A light breeze can produce bright reflections, movement and a metallic rattle which encourages pest birds and nuisance animals to away.

For simple spot control, installation is easy. With scissors, cut several pieces of Repeller Ribbon 2 to 3 foot long. Position these pieces of ribbon where nuisance birds and animals will see its flash and hear its metallic rattle. Fasten each piece at one end using velcro, string, twine, staples, etc. Make sure the Repeller Ribbon can move freely.

Use with Nixalite's Deer Blocker Deer Fence as Avoidance Flagging ! This is required for the first few months of the installation to ensure an effective deer barrier. Cut the ribbon into 16" to 24" lengths. Position each ribbon 4 feet up from the ground, every 10 feet of fence.

Use with simple garden poles to create a quick barrier fence to keep geese and other waterfowl from walking out of the water and into your yard. Run two rows of ribbon tied to simple posts or poles along the water's edge.

For more uses and applications, contact Nixalite.

Spot Control:

- Gardens
- Small Orchards
- Hobby Vineyards
- Trees, Shrubs
- Parking Areas
- Garage, Storage
- Boat Slips
- Gazebos, Sheds
- Small Ponds
- Barns, Stables
- Many More!

Use with other Nixalite products:

- Bird Scare Predator Eyes
- Scarecrow Motion Activated Sprinkler
- Deer Blocker Deer Fencing Systems
- Simple Barrier Fencing for Geese

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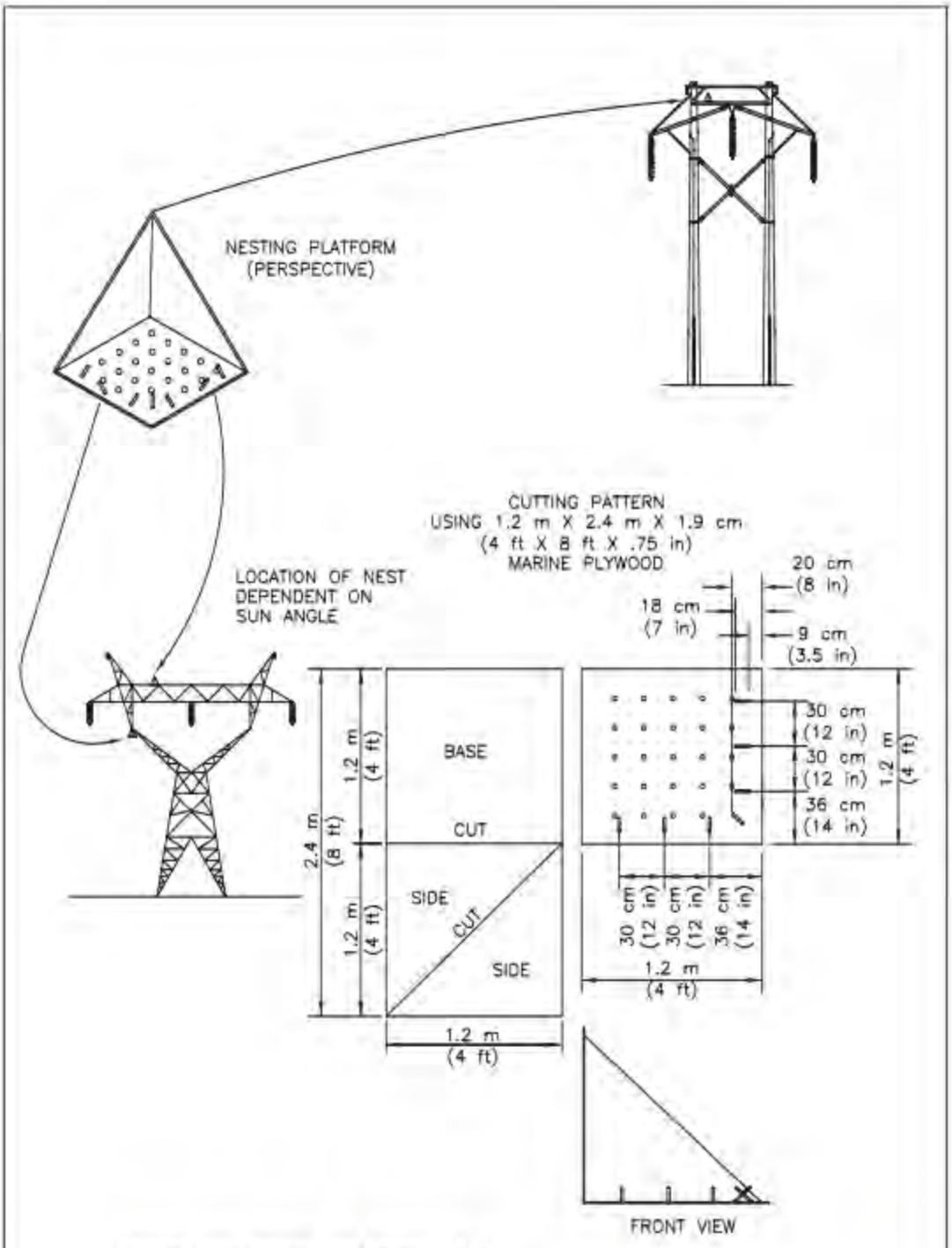
Where the World Shops for Humane Bird and Animal Control.

APPENDIX H



Adapted from Nelson and Nelson (1977).

FIGURE 6.4: The Morley Nelson raptor nest platform.

APPENDIX T

Habitat Restoration Plan

TLRR: Eldorado - Pisgah - Lugo Project

Habitat Restoration Plan

Prepared for
Southern California Edison

December 2022

Prepared by
Arcadis U.S., Inc.

Applicable Agencies

Bureau of Land Management ☒
National Park Service ☒
California Public Utilities Commission ☒

Contents

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Figures

Acronyms and Abbreviations

amsl	above mean sea level
APM	Applicant Proposed Measure
BLM	Bureau of Land Management
BLM S	BLM Sensitive species
BMP	best management practice
Cal-IPC	California Invasive Plant Council
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CMA	Conservation and Management Action
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CPUC	California Public Utilities Commission
CRPR	California Rare Plant Rank
DRECP	Desert Renewable Energy Conservation Plan
EPL	Eldorado-Pisgah-Lugo
ESA	Environmentally Sensitive Area
FESA	Federal Endangered Species Act
HRP	Habitat Restoration Plan
IPMP	Invasive Plant Management Plan
kV	kilovolt
LUPA	Land Use Plan Amendment
NEPA	National Environmental Policy Act
OHGW	overhead groundwire
OHV	off-highway vehicle
PCA	Pest Control Advisor
PEA	Proponent's Environmental Assessment
ROW	Right-of-Way
SCE	Southern California Edison Company
SWPPP	Storm Water Pollution Prevention Plan
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program

1. Introduction

The purpose of this Habitat Restoration Plan (HRP) is to comply with the habitat restoration requirements for Southern California Edison's (SCE) Eldorado – Pisgah – Lugo (EPL) Project as described in the Proponent's Environmental Assessment (PEA; SCE 2023). This Plan describes the restoration methods to be implemented on areas temporarily disturbed during execution of the EPL Project.

1.1 Project Overview

Through the EPL Project, SCE proposes to remediate physical clearance discrepancies on six existing 220 kilovolt (kV) transmission circuits. The EPL Project includes the following components to remediate the identified discrepancies.

1.1.1 Segment 1

Segment 1 is located between the existing Lugo Substation (adjacent to the City of Hesperia) and the existing Pisgah Switchyard. In this Segment portions of the Lugo-Pisgah No. 1 220 kV transmission line will be reconductored, inter-set structures will be installed, and shorter insulator assemblies will be installed. Segment 1 is located on lands administered by the United States Bureau of Land Management (BLM) and on private lands.

1.1.2 Segment 2

Segment 2 is located between the existing Lugo Substation (adjacent to the City of Hesperia) and the existing Pisgah Switchyard. In this Segment portions of the Lugo-Pisgah No. 2 220 kV transmission line will be reconductored, inter-set structures will be installed, and shorter insulator assemblies will be installed. Segment 2 is located on lands administered by the BLM, on lands owned by the State of California, and on private lands.

1.1.3 Segment 3

Segment 3 is located between the existing Pisgah Switchyard and the California/Nevada Stateline. In this Segment portions of the Cima-Eldorado-Pisgah No. 1 220 kV transmission line will be reconductored and shorter insulator assemblies will be installed. Segment 3 is located on lands administered by the BLM, on lands managed by the National Park Service (NPS), lands owned by the State of California, and on private lands.

1.1.4 Segment 4

Segment 4 is located between the existing Pisgah Switchyard and the California/Nevada Stateline. In this Segment portions of the Cima-Eldorado-Pisgah No. 2 220 kV transmission line will be reconductored and shorter insulator assemblies will be installed. Segment 4 is located on lands administered by the BLM, on lands managed by the NPS, lands owned by the State of California, and on private lands.

1.1.5 Segment 5

Segment 5 is located between the California/Nevada Stateline and the existing Eldorado Substation. This Segment contains portions of the Cima-Eldorado-Pisgah No. 1 220 kV transmission line. No work will occur in this Segment.

1.1.6 Segment 6

Segment 6 is located between the California/Nevada Stateline and the existing Eldorado Substation. In this Segment portions of the Cima-Eldorado-Pisgah No. 2 220 kV transmission line will be reconductored and shorter insulator assemblies will be installed. Segment 6 is located on lands administered by the BLM, on lands owned by the State of California, on lands owned by the City of Boulder City, and on private lands.

1.1.7 Lugo Substation

Lugo Substation is located at the western most end of the alignment and is adjacent to the City of Hesperia. Work at the Lugo Substation will consist of updating, as necessary, relay settings. Lugo Substation is located on private land.

1.1.8 Pisgah Switchyard

Pisgah Switchyard is located approximately 2.5 miles north of the Pisgah Crater just northeast of Interstate 40. Work at the Pisgah Switchyard will consist of replacing dead-end hardware on rack attachments; disconnect existing conductor from existing positions and connect newly installed conductors to existing substation positions; remove existing OHGW and install new OHGW; and update, as necessary, relay settings. Work at the existing Pisgah Switchyard would be performed on lands managed by the BLM.

1.1.9 Cima Substation

Cima Substation is located within the Mojave National Preserve approximately 1.5 miles northwest of the unincorporated community of Cima. Work at the Cima Substation will consist of replacing the tap attachments within the substation; disconnect existing conductor from existing positions and connect newly installed conductors to existing substation positions; remove existing OHGW and install new OHGW; and update, as necessary, relay settings. Cima Substation would be performed on private land.

1.1.10 Eldorado Substation

Eldorado Substation is located in the Eldorado Valley, Nevada approximately 15.5 miles southwest of the City of Boulder City. Work at the Eldorado Substation will consist of updating, as necessary, relay settings. Eldorado Substation is located on non-Federal lands.

1.2 Project Location

The EPL Project alignment is located in unincorporated San Bernardino County and in the City of Hesperia, in the State of California and in the unincorporated Clark County and in the City of Boulder City in the State of Nevada (Figure 1). The EPL Project is located on federal lands administered by the BLM and the NPS - Mojave National Preserve (MNP), on State Lands, and on private property.

1.3 Measures and Conditions from Environmental Documents

As addressed in the EPL Project PEA, SCE is not proposing any Applicant Proposed Measures (APMs). APMs are properly included in a proposed project to mitigate potential significant impacts to a less-than-significant level. As presented in the EPL PEA (SCE 2023), no significant impacts have been identified for the EPL Project, and thus no APMs are proposed.

2. Summary of Maximum Potential Impacts to Vegetation Communities, Special-status Plants, Wetlands and Jurisdictional Features

Project impacts are classified as temporary or permanent. Temporary impacts result from the installation of inter-set structures and the establishment of temporary construction areas such as pulling and tensioning sites. Permanent impacts result from the installation of inter-set structures, including the development of new, or rehabilitation/upgrading of existing, access and spur roads. “Drive and crush” methods will be implemented to the extent feasible to preserve native vegetation and native seed banks. “Drive and crush” may include overland travel over existing low-lying vegetation, but may also incorporate trimming vegetation to ground level with root systems intact to facilitate vehicular access and flagging of special-status plant species and cacti for avoidance.

Biological surveys of the EPL Project alignment were conducted in 2017, 2018, as well as surveys conducted in 2022 to characterize vegetation and document the presence or absence of special-status species within potential laydown yards (Arcadis 2020a, SCE 2023). The survey area covered approximately 6,822 acres.

The EPL Project will potentially affect approximately 219 acres of vegetation and other land uses resulting from maximum anticipated temporary and permanent impacts. A maximum of 197 acres of native vegetation and 21 acres of other land uses (developed, active agriculture, open water, disturbed, etc.) will be subject to temporary impacts, for a total of 218 acres of temporary impacts. Anticipated maximum permanent impacts include approximately 0.85 acres of native vegetation and 0.04 acres of other land uses, for a total of 0.89 acres of permanent impacts. The exact acreage of impacts will be recalculated once construction activities have been completed.

Summaries of the potential disturbances to vegetation communities, special status natural communities, native trees, special status plants and wildlife, critical habitat, regulated waters of the US, waters of the state, jurisdictional streambeds, and wetlands are provided in Tables 2-1 through 2-6. Each table consists of a set of several sub-tables, with the total numbers for the Project presented first, followed by numbers that apply to each of seven land ownership categories. The seven land ownership categories include the following:

- BLM Needles Field Office
- BLM Barstow Field Office
- BLM Las Vegas Field Office
- NPS - Mojave National Preserve
- State of California
- City of Boulder City, Nevada
- Private lands

In all cases, the listed acres of impacts or numbers representing potential loss within potential Project work areas represent the maximum possible extent of Project work. In practice, due to a combination of impact avoidance methods, helicopter use, and careful siting of Project work activities, actual potential impacts or loss will be greatly reduced, as discussed in Section 3.

2.1 Maximum Potential Impacts to Vegetation Communities

During the 2017, 2018, and 2022 surveys, 28 alliances and 56 associations were identified within the EPL Project alignment; the identified alliances include 3 woodland alliances, 18 shrubland alliances, and 7 herbaceous alliances.

Tables 2-1a through Tables 2-1h summarize the mapped acreage of each alliance and association on the EPL Project alignment; the anticipated maximum temporary and permanent impacts for each alliance and association in proposed Project work areas; and the CDFW California State Rarity Ranking for each alliance and association (CDFW 2022). Sensitive natural communities are treated by CDFW as alliances or associations with "threat" ranks of S3 or higher (S1, S2, S3), whereas S4 and S5 rankings are not designated as sensitive or threatened (CDFW 2022). In addition, the updated California Natural Communities List (CDFW 2022) designates sensitive associations without always assigning a threat ranking. Four additional land use types were also mapped that address agricultural plantings, unvegetated wash or river bottom, developed areas, and disturbed areas. The acreage of these four land use types are treated separately from vegetation alliances and associations.

Table 2-1a provides a summary of mapped acreage of each alliance and association on all lands within the EPL Project alignment. Furthermore, this table includes the anticipated maximum temporary and permanent impacts for each alliance and association in total proposed Project work areas and within California and Nevada.

Table 2-1b summarizes the mapped acreage of each alliance and association on lands managed by the BLM Barstow Field Office within the EPL Project alignment and the associated anticipated maximum temporary and permanent impacts for each alliance and association in proposed Project work areas.

Table 2-1c summarizes the mapped acreage of each alliance and association on lands managed by the BLM Needles Field Office within the EPL Project alignment and the associated anticipated maximum temporary and permanent impacts for each alliance and association in proposed Project work areas.

Table 2-1d summarizes the mapped acreage of each alliance and association on lands managed by the BLM Las Vegas Field Office within the EPL Project alignment and the associated anticipated maximum temporary and permanent impacts for each alliance and association in proposed Project work areas.

Table 2-1e summarizes the mapped acreage of each alliance and association on lands managed by the NPS within the EPL Project alignment and the associated anticipated maximum temporary and permanent impacts for each alliance and association in proposed Project work areas.

Table 2-1f summarizes the mapped acreage of each alliance and association on lands managed by the State of California within the EPL Project alignment and the associated anticipated maximum temporary and permanent impacts for each alliance and association in proposed Project work areas.

Table 2-1g summarizes the mapped acreage of each alliance and association on lands managed by the City of Boulder City, Nevada within the EPL Project alignment and the associated anticipated maximum temporary and permanent impacts for each alliance and association in proposed Project work areas.

Table 2-1h summarizes the mapped acreage of each alliance and association on private lands within the EPL Project alignment and the associated anticipated maximum temporary and

permanent impacts for each alliance and association in proposed Project work areas. There are no private lands in Nevada within the EPL Project alignment.

In all cases the listed impacts within potential Project work areas represent the maximum possible extent of Project work. In practice, due to a combination of impact avoidance methods, helicopter use, and careful siting of Project work activities, actual potential impacts will be greatly reduced.

Table 2-1a Summary of Maximum Potential Impacts to Vegetation Communities on all Lands within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Area Mapped on EPL Project Alignment in California	Area Mapped on EPL Project Alignment in Nevada	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1] in California	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1] in Nevada	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1] in California	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1] in Nevada	California State Rarity Ranking
Woodland Vegetation												
Joshua tree woodland	*Yucca brevifolia* Woodland Alliance	*Yucca brevifolia / Juniperus californica / Ephedra nevadensis* Association	9.4	9.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**S3.2**
		Yucca brevifolia / Larrea tridentata – Yucca schidigera / Pleuraphis rigida Association	1,204.1	907.4	290.2	31.6	31.6	0.0	0.0	0.0	0.0	**S3.2**
		Yucca brevifolia / Cylindropuntia acanthocarpa Association	166.5	166.5	0.0	21.5	21.5	0.0	0.0	0.0	0.0	**S3.2**

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Desert-willow - smoketree wash woodland	*Chilopsis linearis - Psorothamnus spinosus* Woodland Alliance	*Psorothamnus spinosus* Association	9.5	9.5	0.0	0.04	0.04	0.0	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Ambrosia salsola – (*Bebbia juncea* – *Ephedra californica*) Association	2.8	2.8	0.0	0.1	0.1	0.0	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Senegalia greggii (*Hyptis emoryi*) Association	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**S3**
California juniper woodland	*Juniperus californica* Woodland Alliance	*Juniperus californica / herbaceous Association*	23.6	23.6	0.0	0.02	0.02	0.0	0.0	0.0	0.0	S4, **Yes**[2]
		Juniperus californica / Ericameria	18.9	18.9	0.0	0.0	0.0	0.0	0.00	0.0	0.0	S4

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		nauseosa Provisional Association										
Total Acres Woodland Vegetation[3]			***1,436.5***	***1,146.3***	***290.2***	***53.3***	***53.3***	***0.0***	***0.0***	***0.0***	***0.0***	
Shrubland Vegetation												
Acton's and Virgin River brittle brush - net-veined goldeneye scrub	*Encelia* (*actonii, virginensis*) - *Viguiera reticulata* Shrubland Alliance	*Encelia actonii* Association	9.6	9.6	0.0	0.1	0.1	0.0	0.0	0.0	0.0	**S3**
Black-stem rabbitbrush scrub	*Ericameria paniculata* Shrubland Alliance	*Ericameria paniculata - Ambrosia salsola* Association	51.5	11.7	39.9	0.4	0.4	0.0	0.0	0.0	0.0	**S3**
Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub	*Ephedra nevadensis - Lycium andersonii - Grayia spinosa* Shrubland Alliance	*Ephedra nevadensis - Ericameria cooperi* Association	12.7	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**S3S4, Yes[2]**
Desert almond – Mexican	*Prunus fasciculata - Salazaria*	*Salazaria mexicana* Association	21.0	21.0	0.0	0.9	0.9	0.0	0.0	0.0	0.0	S4, **Yes[2]**

Table 2-1a Summary of Maximum Potential Impacts to Vegetation Communities on all Lands within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Area Mapped on EPL Project Alignment in California	Area Mapped on EPL Project Alignment in Nevada	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1] in California	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1] in Nevada	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1] in California	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1] in Nevada	California State Rarity Ranking
bladdersage scrub	*mexicana* Shrubland Alliance											
Shadscale scrub	*Atriplex confertifolia* Shrubland Alliance	*Atriplex confertifolia - Atriplex polycarpa* Association	62.1	62.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S4.2
Allscale scrub	*Atriplex polycarpa* Shrubland Alliance	*Atriplex polycarpa* Association	89.4	89.4	0.0	0.5	0.5	0.0	0.0	0.0	0.0	S4
		Atriplex polycarpa Sparse Playa Association	27.4	27.4	0.0	0.3	0.3	0.0	0.0	0.0	0.0	S4
		Atriplex polycarpa / Annual Herbaceous Association	54.4	54.4	0.0	5.9	5.9	0.0	0.0	0.0	0.0	S4
Catclaw acacia - desert lavender -	*Senegalia greggii - Hyptis emoryi - Justicia californica*	*Senegalia greggii - Ambrosia salsola* Association	2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S4

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chuparosa scrub	Shrubland Alliance	*Senegalia greggii* Wash Association	35.3	35.3	0.0	0.6	0.6	0.0	0.0	0.0	0.0	S4
Cheesebush - sweetbush scrub	*Ambrosia salsola - Bebbia juncea* Shrubland Alliance	*Ambrosia salsola* Association	76.9	76.9	0.0	3.1	3.1	0.0	0.0	0.0	0.0	S4
		Bebbia juncea Association	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S4
		Ambrosia salsola - Larrea tridentata Association	7.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S4
		Ambrosia salsola – (*Ambrosia eriocentra* – *Brickellia incana*) Association	2.6	2.6	0.0	0.02	0.0	0.0	0.0	0.0	0.0	S4, **Yes**[2]
		Senna armata - Ambrosia salsola Association	23.5	23.5	0.0	0.2	0.2	0.0	0.0	0.0	0.0	S4

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Mojave yucca scrub	*Yucca schidigera* Shrubland Alliance	*Yucca schidigera - Coleogyne ramosissima* Association	107.9	0.0	107.9	0.0	0.0	0.0	0.0	0.0	0.0	S4
		Yucca schidigera - Cylindropuntia acanthocarpa Association	12.2	12.2	0.0	0.3	0.3	0.0	0.0	0.0	0.0	S4, **Yes**[2]
		Yucca schidigera - Larrea tridentata - Ambrosia dumosa Association	179.2	159.1	20.1	3.7	3.7	0.0	0.0	0.0	0.0	S4
		Yucca schidigera - Larrea tridentata - Ephedra nevadensis Association	95.1	90.8	4.3	1.4	1.4	0.0	0.0	0.0	0.0	S4

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Mulefat thickets	*Baccharis salicifolia* Shrubland Alliance	*Baccharis salicifolia* Association	5.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S5
Creosote bush - brittle bush scrub	*Larrea tridentata - Encelia farinosa* Shrubland Alliance	*Larrea tridentata - Encelia farinosa - Ambrosia dumosa* Association	14.1	14.1	0.0	0.4	0.4	0.0	0.0	0.0	0.0	S4
Big sagebrush scrub	*Artemisia tridentata* Shrubland Alliance	*Artemisia tridentata - Ephedra nevadensis* Association	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S5
		Artemisia tridentata - Ericameria nauseosa Association	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S5
Creosote bush scrub	*Larrea tridentata* Shrubland Alliance	*Larrea tridentata* Association	97.0	97.0	0.0	5.3	5.3	0.0	0.002	0.0	0.0	S5
		Larrea tridentata -	104.2	104.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	S5

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		Atriplex polycarpa Association										
		Larrea tridentata - Ephedra nevadensis Association	4.6	4.6	0.0	0.1	0.1	0.0	0.0	0.0	0.0	S5
		Larrea tridentata / wash Association	3.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S5
Creosote bush - white bursage scrub	*Larrea tridentata - Ambrosia dumosa* Shrubland Alliance	*Larrea tridentata - Ambrosia dumosa* Association	2,619.6	2,181.5	438.1	90.5	90.3	0.2	0.7	0.7	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Ambrosia salsola Association	168.6	168.6	0.0	3.9	3.9	0.0	0.0	0.0	0.0	S5
		Larrea tridentata -	28.9	28.9	0.0	0.6	0.6	0.0	0.0	0.0	0.0	S5

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		Ambrosia dumosa - Encelia farinosa Association										
		Larrea tridentata - Ambrosia dumosa - Salazaria mexicana Association	14.9	14.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Senna armata Association	17.6	17.6	0.0	0.3	0.3	0.0	0.0	0.0	0.0	S5, **Yes**[2]
		Larrea tridentata - Ambrosia dumosa - Yucca schidigera Association	252.7	252.7	0.0	3.7	3.7	0.0	0.1	0.1	0.0	S5

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		Larrea tridentata – Ambrosia dumosa / Pleuraphis rigida Association	262.0	230.3	31.7	10.6	9.0	1.6	0.0	0.0	0.0	S5, **Yes**[2]
White bursage scrub	*Ambrosia dumosa* Shrubland Alliance	*Ambrosia dumosa* Association	22.6	22.6	0.0	1.0	1.0	0.0	0.0	0.0	0.0	S5
Rubber rabbitbrush scrub	*Ericameria nauseosa* Shrubland Alliance	*Ericameria nauseosa* Association	143.6	143.6	0.0	0.9	0.9	0.0	0.1	0.1	0.0	S5
		Ericameria nauseosa - Juniperus californica / herb Association	4.2	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S5
California buckwheat scrub	*Eriogonum fasciculatum* Shrubland Alliance	*Eriogonum fasciculatum* Association	14.2	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S5

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Tamarisk thickets	*Tamarix* spp. Semi-natural Alliance	*Tamarix* spp. Association	9.2	9.2	0.0	0.4	0.4	0.0	0.0	0.0	0.0	NA
Total Acres Shrubland Vegetation[3]			***4,664.9***	***4,023.1***	***641.8***	***135.3***	***133.4***	***1.9***	***0.9***	***0.9***	***0.0***	
Herbaceous Vegetation												
Big galleta shrub-steppe	*Pleuraphis rigida* Herbaceous Alliance	*Pleuraphis rigida* Association	68.3	68.3	0.0	5.0	5.0	0.0	0.0	0.0	0.0	**S2.2**
		Pleuraphis rigida / Ambrosia dumosa Association	5.9	5.9	0.0	0.0	0.0	0.0	0.00	0.0	0.0	**S2.2**
Desert needlegrass grassland	*Achnatherum speciosum* Herbaceous Alliance	*Achnatherum speciosum* Shrub Association	1.7	1.7	0.0	0.1	0.1	0.0	0.0	0.0	0.0	**S2.2**
Mojave-Sonoran desert dunes	*Dicoria canescens - Abronia villosa - Panicum urvilleanum* Sparsely Vegetated Alliance	*Panicum urvilleanum* Association	29.8	29.8	0.0	1.1	1.1	0.0	0.0	0.0	0.0	**S3.2**

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Alkali-heath marsh	*Frankenia salina* Herbaceous Alliance	*Frankenia salina* Association	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**S3**
Rigid spineflower – hairy desert sunflower desert pavement	*Chorizanthe rigida – Geraea canescens* Desert Pavement Sparsely Vegetated Alliance	*Chorizanthe rigida – Geraea canescens* Desert Pavement Association	1.3	1.3	0.0	0.2	0.2	0.0	0.0	0.0	0.0	S4, **Yes**[2]
Red brome or Mediterranean grass grasslands	*Bromus rubens - Schismus* (*arabicus, barbatus*) Semi-natural Herbaceous Stands	*Bromus rubens* - mixed herbs Association	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
		Schismus (*arabicus, barbatus*) Association	23.4	23.4	0.0	2.1	2.1	0.0	0.0	0.0	0.0	NA
Cheatgrass - medusahead grassland	*Bromus tectorum - Taeniatherum caput-medusae* Semi-natural Alliance	*Bromus tectorum* Association	6.7	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA

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Total Acres Herbaceous Vegetation[3]			***140.1***	***140.1***	***0.0***	***8.5***	***8.5***	***0.0***	***0.0***	***0.0***	***0.0***	
Total Acres Native Vegetation[3]			***6,200.5***	***5,254.3***	***932.0***	***194.6***	***192.7***	***1.9***	***0.9***	***0.9***	***0.0***	
Total Acres Non-native Vegetation[3]			***41.0***	***41.0***	***0.0***	***2.5***	***2.5***	***0.0***	***0.0***	***0.0***	***0.0***	
Total Acres All Vegetation[3]			***6,241.6***	***5,295.3***	***932.0***	***197.1***	***195.2***	***1.9***	***0.9***	***0.9***	***0.0***	
Total Acres of Sensitive Vegetation[3]			***2,094.0***	***1,732,3***	***361.7***	***72.3***	***70.7***	***1.6***	***0.0***	***0.0***	***0.0***	
Active Agriculture			20.3	20.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Disturbed (ruderal vegetation)			32.8	32.8	0.0	3.5	3.5	0.0	0.0	0.0	0.0	
Developed (towers, roads, etc.)			524.9	460.9	64.0	17.1	17.0	0.04	0.03	0.02	0.01	
Sparsely Vegetated Wash or River Bottom - Streambed			2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Acres All Areas[3]			***6,822.0***	***5,825.9***	***996.1***	***217.7***	***215.8***	***1.9***	***0.9***	***0.9***	***0.0***	

Notes:
1. As of July 2022
2. Included as Sensitive on 2022 CDFW California Sensitive Natural Communities list
3. Total mapped acres between sub-tables may not sum to grand total on Table 2-1a due to rounding errors

Alliance Rarity Rankings (CDFW 2022, https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background):
S1: Fewer than 6 viable occurrences statewide and/or up to 518 hectares
S2: 6-20 viable occurrences statewide and/or 518-2,590 hectares
S3: 21-100 viable occurrences statewide and/or 2,590-12,950 hectares

Additional Threat Ranks:
0.1: Very threatened 0.2: Threatened 0.3: No current threat known

Table 2-1b Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Barstow Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Woodland Forest Vegetation						
Joshua tree woodland	*Yucca brevifolia* Woodland Alliance	*Yucca brevifolia / Juniperus californica / Ephedra nevadensis* Association	0.0	0.0	0.0	**S3.2**
		Yucca brevifolia / Larrea tridentata – Yucca schidigera / Pleuraphis rigida Association	0.0	0.0	0.0	**S3.2**
		Yucca brevifolia / Cylindropuntia acanthocarpa Association	0.0	0.0	0.0	**S3.2**
Desert-willow - smoketree wash woodland	*Chilopsis linearis - Psorothamnus spinosus* Woodland Alliance	*Psorothamnus spinosus* Association	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Ambrosia salsola – (*Bebbia juncea – Ephedra californica*) Association	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Senegalia greggii (*Hyptis emoryi*) Association	1.6	0.0	0.0	**S3**
California juniper woodland	*Juniperus californica* Woodland Alliance	*Juniperus californica / herbaceous Association*	0.0	0.0	0.0	S4, **Yes**[2]
		Juniperus californica / Ericameria nauseosa Provisional Association	0.0	0.0	0.0	S4

Table 2-1b Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Barstow Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Total Acres Woodland Vegetation[3]	**1.6**	**0.0**	**0.0**	
Shrubland Vegetation						
Acton's and Virgin River brittle brush - net-veined goldeneye scrub	*Encelia* (*actonii, virginensis*) - *Viguiera reticulata* Shrubland Alliance	*Encelia actonii* Association	0.0	0.0	0.0	**S3**
Black-stem rabbitbrush scrub	*Ericameria paniculata* Shrubland Alliance	*Ericameria paniculata - Ambrosia salsola* Association	0.0	0.0	0.0	**S3**
Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub	*Ephedra nevadensis - Lycium andersonii - Grayia spinosa* Shrubland Alliance	*Ephedra nevadensis - Ericameria cooperi* Association	0.0	0.0	0.0	**S3S4, Yes**[2]
Desert almond – Mexican bladdersage scrub	*Prunus fasciculata - Salazaria mexicana* Shrubland Alliance	*Salazaria mexicana* Association	0.0	0.0	0.0	S4, **Yes**[2]
Shadscale scrub	*Atriplex confertifolia* Shrubland Alliance	*Atriplex confertifolia - Atriplex polycarpa* Association	0.0	0.0	0.0	S4.2
Allscale scrub	*Atriplex polycarpa* Shrubland Alliance	*Atriplex polycarpa* Association	0.0	0.0	0.0	S4
		Atriplex polycarpa Sparse Playa Association	4.3	0.1	0.0	S4
		Atriplex polycarpa / Annual Herbaceous Association	0.0	0.0	0.0	S4

Table 2-1b Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Barstow Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Catclaw acacia - desert lavender - chuparosa scrub	*Senegalia greggii - Hyptis emoryi - Justicia californica* Shrubland Alliance	*Senegalia greggii - Ambrosia salsola* Association	2.4	0.0	0.0	S4
		Senegalia greggii Wash Association	7.0	0.4	0.0	S4
Cheesebush - sweetbush scrub	*Ambrosia salsola - Bebbia juncea* Shrubland Alliance	*Ambrosia salsola* Association	24.4	1.7	0.0	S4
		Bebbia juncea Association	2.9	0.0	0.0	S4
		Ambrosia salsola - Larrea tridentata Association	7.5	0.0	0.0	S4
		Ambrosia salsola – (*Ambrosia eriocentra – Brickellia incana*) Association	0.0	0.0	0.0	S4, **Yes**[2]
		Senna armata - Ambrosia salsola Association	14.9	0.03	0.0	S4
Mojave yucca scrub	*Yucca schidigera* Shrubland Alliance	*Yucca schidigera - Coleogyne ramosissima* Association	0.0	0.0	0.0	S4
		Yucca schidigera - Cylindropuntia acanthocarpa Association	0.0	0.0	0.0	S4, **Yes**[2]
		Yucca schidigera - Larrea tridentata - Ambrosia dumosa Association	22.5	0.03	0.0	S4
		Yucca schidigera - Larrea tridentata - Ephedra nevadensis Association	72.7	1.0	0.0	S4

Table 2-1b Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Barstow Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Mulefat thickets	*Baccharis salicifolia* Shrubland Alliance	*Baccharis salicifolia* Association	0.0	0.0	0.0	S5
Creosote bush - brittle bush scrub	*Larrea tridentata - Encelia farinosa* Shrubland Alliance	*Larrea tridentata - Encelia farinosa - Ambrosia dumosa* Association	14.1	0.4	0.0	S4
Big sagebrush scrub	*Artemisia tridentata* Shrubland Alliance	*Artemisia tridentata - Ephedra nevadensis* Association	0.0	0.0	0.0	S5
		Artemisia tridentata - Ericameria nauseosa Association	0.0	0.0	0.0	S5
Creosote bush scrub	*Larrea tridentata* Shrubland Alliance	*Larrea tridentata* Association	0.0	0.0	0.0	S5
		Larrea tridentata - Atriplex polycarpa Association	29.4	0.0	0.0	S5
		Larrea tridentata - Ephedra nevadensis Association	0.0	0.0	0.0	S5
		Larrea tridentata / wash Association	3.6	0.0	0.0	S5
Creosote bush - white bursage scrub	*Larrea tridentata - Ambrosia dumosa* Shrubland Alliance	*Larrea tridentata - Ambrosia dumosa* Association	1,004.9	49.9	0.54	S5
		Larrea tridentata - Ambrosia dumosa - Ambrosia salsola Association	47.6	1.1	0.0	S5

Table 2-1b Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Barstow Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Larrea tridentata - Ambrosia dumosa - Encelia farinosa Association	9.2	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Salazaria mexicana Association	0.3	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Senna armata Association	17.6	0.3	0.0	S5, **Yes[2]**
		Larrea tridentata - Ambrosia dumosa - Yucca schidigera Association	146.6	0.0	0.0	S5
		Larrea tridentata – Ambrosia dumosa / Pleuraphis rigida Association	25.2	0.3	0.0	S5, **Yes[2]**
White bursage scrub	*Ambrosia dumosa* Shrubland Alliance	*Ambrosia dumosa* Association	22.6	1.0	0.0	S5
Rubber rabbitbrush scrub	*Ericameria nauseosa* Shrubland Alliance	*Ericameria nauseosa* Association	1.6	0.0	0.0	S5
		Ericameria nauseosa - Juniperus californica / herb Association	0.0	0.0	0.0	S5
California buckwheat scrub	*Eriogonum fasciculatum* Shrubland Alliance	*Eriogonum fasciculatum* Association	0.0	0.0	0.0	S5

Table 2-1b Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Barstow Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Tamarisk thickets	*Tamarix* spp. Semi-natural Alliance	*Tamarix* spp. Association	0.0	0.0	0.0	NA
		Total Acres Shrubland Vegetation[3]	**1,481.4**	**56.4**	**0.54**	
Herbaceous Vegetation						
Big galleta shrub-steppe	*Pleuraphis rigida* Herbaceous Alliance	*Pleuraphis rigida* Association	0.0	0.0	0.0	**S2.2**
		Pleuraphis rigida / Ambrosia dumosa Association	0.0	0.0	0.0	**S2.2**
Desert needlegrass grassland	*Achnatherum speciosum* Herbaceous Alliance	*Achnatherum speciosum* Shrub Association	0.0	0.0	0.0	**S2.2**
Mojave-Sonoran desert dunes	*Dicoria canescens - Abronia villosa - Panicum urvilleanum* Sparsely Vegetated Alliance	*Panicum urvilleanum* Association	0.0	0.0	0.0	**S3.2**
Alkali-heath marsh	*Frankenia salina* Herbaceous Alliance	*Frankenia salina* Association	0.0	0.0	0.0	**S3**

Table 2-1b Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Barstow Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Rigid spineflower – hairy desert sunflower desert pavement	*Chorizanthe rigida – Geraea canescens* Desert Pavement Sparsely Vegetated Alliance	*Chorizanthe rigida – Geraea canescens* Desert Pavement Association	1.3	0.2	0.0	S4, **Yes**[2]
Red brome or Mediterranean grass grasslands	*Bromus rubens - Schismus* (*arabicus, barbatus*) Semi-natural Herbaceous Stands	*Bromus rubens* - mixed herbs Association	0.0	0.0	0.0	NA
		Schismus (*arabicus, barbatus*) Association	0.0	0.0	0.0	NA
Cheatgrass - medusahead grassland	*Bromus tectorum - Taeniatherum caput-medusae* Semi-natural Alliance	*Bromus tectorum* Association	0.0	0.0	0.0	NA
		Total Acres Herbaceous Vegetation[3]	**1.3**	**0.2**	**0.0**	
		Total Acres Native Vegetation[3]	**1,484.3**	**56.6**	**0.54**	
		Total Acres Non-native Vegetation[3]	**0.0**	**0.0**	**0.0**	
		Total Acres All Vegetation[3]	**1,484.3**	**56.6**	**0.54**	
		Total Acres of Sensitive Vegetation[3]	**45.7**	**0.8**	**0.0**	
Active Agriculture			0.0	0.0	0.0	
Disturbed			0.3	0.0	0.0	
Developed (towers, roads, etc)			123.3	4.4	0.01	
Streambed			0.0	0.0	0.0	
		Total Mapped Acres[3]	**1,607.9**	**61.0**	**0.55**	

Notes:

Table 2-1b Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Barstow Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking

1. As of July 2022
2. Included as Sensitive on 2022 CDFW California Sensitive Natural Communities list
3. Total mapped acres between sub-tables may not sum to grand total on Table 2-1a due to rounding errors

Alliance Rarity Rankings (CDFW 2022, https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background):
S1: Fewer than 6 viable occurrences statewide and/or up to 518 hectares
S2: 6-20 viable occurrences statewide and/or 518-2,590 hectares
S3: 21-100 viable occurrences statewide and/or 2,590-12,950 hectares

Additional Threat Ranks:
0.1: Very threatened 0.2: Threatened 0.3: No current threat known

Table 2-1c Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Needles Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Woodland Forest Vegetation						
Joshua tree woodland	*Yucca brevifolia* Woodland Alliance	*Yucca brevifolia / Juniperus californica / Ephedra nevadensis* Association	0.0	0.0	0.0	**S3.2**
		Yucca brevifolia / Larrea tridentata – Yucca schidigera / Pleuraphis rigida Association	0.0	0.0	0.0	**S3.2**
		Yucca brevifolia / Cylindropuntia acanthocarpa Association	0.0	0.0	0.0	**S3.2**
Desert-willow - smoketree wash woodland	*Chilopsis linearis - Psorothamnus spinosus* Woodland Alliance	*Psorothamnus spinosus* Association	9.5	0.04	0.0	**S3**
		Psorothamnus spinosus / Ambrosia salsola – (*Bebbia juncea – Ephedra californica*) Association	2.8	0.06	0.0	**S3**
		Psorothamnus spinosus / Senegalia greggii (*Hyptis emoryi*) Association	0.0	0.0	0.0	**S3**
California juniper woodland	*Juniperus californica* Woodland Alliance	*Juniperus californica / herbaceous Association*	0.0	0.0	0.0	S4, **Yes[2]**

Table 2-1c Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Needles Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Juniperus californica / Ericameria nauseosa Provisional Association	0.0	0.0	0.0	S4
		Total Acres Woodland Vegetation[3]	**12.3**	**0.1**	**0.0**	
Shrubland Vegetation						
Acton's and Virgin River brittle brush - net-veined goldeneye scrub	*Encelia* (*actonii, virginensis*) - *Viguiera reticulata* Shrubland Alliance	*Encelia actonii* Association	0.0	0.0	0.0	**S3**
Black-stem rabbitbrush scrub	*Ericameria paniculata* Shrubland Alliance	*Ericameria paniculata - Ambrosia salsola* Association	0.0	0.0	0.0	**S3**
Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub	*Ephedra nevadensis - Lycium andersonii - Grayia spinosa* Shrubland Alliance	*Ephedra nevadensis - Ericameria cooperi* Association	0.0	0.0	0.0	**S3S4, Yes**[2]
Desert almond – Mexican bladdersage scrub	*Prunus fasciculata - Salazaria mexicana* Shrubland Alliance	*Salazaria mexicana* Association	0.0	0.0	0.0	S4, **Yes**[2]
Shadscale scrub	*Atriplex confertifolia* Shrubland Alliance	*Atriplex confertifolia - Atriplex polycarpa* Association	0.0	0.0	0.0	S4.2
Allscale scrub		*Atriplex polycarpa* Association	0.0	0.0	0.0	S4

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	Atriplex polycarpa Shrubland Alliance	*Atriplex polycarpa* Sparse Playa Association	0.0	0.0	0.0	S4
		Atriplex polycarpa / Annual Herbaceous Association	0.0	0.0	0.0	S4
Catclaw acacia - desert lavender - chuparosa scrub	*Senegalia greggii - Hyptis emoryi - Justicia californica* Shrubland Alliance	*Senegalia greggii - Ambrosia salsola* Association	0.0	0.0	0.0	S4
		Senegalia greggii Wash Association	0.0	0.0	0.0	S4
Cheesebush - sweetbush scrub	*Ambrosia salsola - Bebbia juncea* Shrubland Alliance	*Ambrosia salsola* Association	22.2	0.4	0.0	S4
		Bebbia juncea Association	0.0	0.0	0.0	S4
		Ambrosia salsola - Larrea tridentata Association	0.0	0.0	0.0	S4
		Ambrosia salsola – (*Ambrosia eriocentra – Brickellia incana*) Association	0.0	0.0	0.0	S4, **Yes[2]**
		Senna armata - Ambrosia salsola Association	1.0	0.0	0.0	S4
Mojave yucca scrub	*Yucca schidigera* Shrubland Alliance	*Yucca schidigera - Coleogyne ramosissima* Association	0.0	0.0	0.0	S4
		Yucca schidigera - Cylindropuntia acanthocarpa Association	0.0	0.0	0.0	S4, **Yes[2]**
		Yucca schidigera - Larrea tridentata - Ambrosia dumosa Association	0.0	0.0	0.0	S4

Table 2-1c Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Needles Field Office within the EPL Project Alignment

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		Yucca schidigera - Larrea tridentata - Ephedra nevadensis Association	0.0	0.0	0.0	S4
Mulefat thickets	*Baccharis salicifolia* Shrubland Alliance	*Baccharis salicifolia* Association	0.0	0.0	0.0	S5
Creosote bush - brittle bush scrub	*Larrea tridentata - Encelia farinosa* Shrubland Alliance	*Larrea tridentata - Encelia farinosa - Ambrosia dumosa* Association	0.0	0.0	0.0	S4
Big sagebrush scrub	*Artemisia tridentata* Shrubland Alliance	*Artemisia tridentata - Ephedra nevadensis* Association	0.0	0.0	0.0	S5
		Artemisia tridentata - Ericameria nauseosa Association	0.0	0.0	0.0	S5
Creosote bush scrub	*Larrea tridentata* Shrubland Alliance	*Larrea tridentata* Association	0.0	0.0	0.0	S5
		Larrea tridentata - Atriplex polycarpa Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ephedra nevadensis Association	0.0	0.0	0.0	S5
		Larrea tridentata / wash Association	0.0	0.0	0.0	S5
Creosote bush - white bursage scrub		*Larrea tridentata - Ambrosia dumosa* Association	270.6	12.5	0.0	S5

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	Larrea tridentata - Ambrosia dumosa Shrubland Alliance	*Larrea tridentata - Ambrosia dumosa - Ambrosia salsola* Association	43.6	1.8	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Encelia farinosa Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Salazaria mexicana Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Senna armata Association	0.0	0.0	0.0	S5, **Yes**[2]
		Larrea tridentata - Ambrosia dumosa - Yucca schidigera Association	0.0	0.0	0.0	S5
		Larrea tridentata – Ambrosia dumosa / Pleuraphis rigida Association	98.9	4.0	0.0	S5, **Yes**[2]
White bursage scrub	*Ambrosia dumosa* Shrubland Alliance	*Ambrosia dumosa* Association	0.0	0.0	0.0	S5
Rubber rabbitbrush scrub	*Ericameria nauseosa* Shrubland Alliance	*Ericameria nauseosa* Association	0.0	0.0	0.0	S5
		Ericameria nauseosa - Juniperus californica / herb Association	0.0	0.0	0.0	S5

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California buckwheat scrub	*Eriogonum fasciculatum* Shrubland Alliance	*Eriogonum fasciculatum* Association	0.0	0.0	0.0	S5
Tamarisk thickets	*Tamarix* spp. Semi-natural Alliance	*Tamarix* spp. Association	0.0	0.0	0.0	NA
		Total Acres Shrubland Vegetation[3]	**436.3**	**18.7**	**0.0**	
Herbaceous Vegetation						
Big galleta shrub-steppe	*Pleuraphis rigida* Herbaceous Alliance	*Pleuraphis rigida* Association	0.0	0.0	0.0	**S2.2**
		Pleuraphis rigida / Ambrosia dumosa Association	5.9	0.0	0.0	**S2.2**
Desert needlegrass grassland	*Achnatherum speciosum* Herbaceous Alliance	*Achnatherum speciosum* Shrub Association	0.0	0.0	0.0	**S2.2**
Mojave-Sonoran desert dunes	*Dicoria canescens - Abronia villosa - Panicum urvilleanum* Sparsely Vegetated Alliance	*Panicum urvilleanum* Association	0.0	0.0	0.0	**S3.2**
Alkali-heath marsh	*Frankenia salina* Herbaceous Alliance	*Frankenia salina* Association	0.0	0.0	0.0	**S3**

Table 2-1c Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Needles Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Rigid spineflower – hairy desert sunflower desert pavement	*Chorizanthe rigida – Geraea canescens* Desert Pavement Sparsely Vegetated Alliance	*Chorizanthe rigida – Geraea canescens* Desert Pavement Association	0.0	0.0	0.0	S4, **Yes**[2]
Red brome or Mediterranean grass grasslands	*Bromus rubens - Schismus* (*arabicus, barbatus*) Semi-natural Herbaceous Stands	*Bromus rubens* - mixed herbs Association	0.0	0.0	0.0	NA
		Schismus (*arabicus, barbatus*) Association	0.0	0.0	0.0	NA
Cheatgrass - medusahead grassland	*Bromus tectorum - Taeniatherum caput-medusae* Semi-natural Alliance	*Bromus tectorum* Association	0.0	0.0	0.0	NA
		Total Acres Herbaceous Vegetation	**5.9**	**0.0**	**0.0**	
		Total Acres Native Vegetation[3]	**454.5**	**18.8**	**0.**	
		Total Acres Non-native Vegetation[3]	**0.0**	**0.0**	**0.0**	
		Total Acres All Vegetation[3]	**454.5**	**18.8**	**0.0**	
		Total Acres of Sensitive Vegetation[3]	**117.1**	**4.1**	**0.0**	
Active Agriculture			0.0	0.0	0.0	
Disturbed			0.0	0.0	0.0	
Developed (towers, roads, etc)			27.7	1.0	0.0	
Streambed			0.0	0.0	0.0	
		Total Mapped Acres[3]	**482.1**	**19.8**	**0.0**	

Table 2-1c Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Needles Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking

Notes:
1. As of July 2022
2. Included as Sensitive on 2022 CDFW California Sensitive Natural Communities list
3. Total mapped acres between sub-tables may not sum to grand total on Table 2-1a due to rounding errors

Alliance Rarity Rankings (CDFW 2022, https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background):
S1: Fewer than 6 viable occurrences statewide and/or up to 518 hectares
S2: 6-20 viable occurrences statewide and/or 518-2,590 hectares
S3: 21-100 viable occurrences statewide and/or 2,590-12,950 hectares

Additional Threat Ranks:
0.1: Very threatened 0.2: Threatened 0.3: No current threat known

Table 2-1d Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Las Vegas Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Woodland Forest Vegetation						
Joshua tree woodland	*Yucca brevifolia* Woodland Alliance	*Yucca brevifolia / Juniperus californica / Ephedra nevadensis* Association	0.0	0.0	0.0	**S3.2**
		Yucca brevifolia / Larrea tridentata – Yucca schidigera / Pleuraphis rigida Association	290.2	0.0	0.0	**S3.2**
		Yucca brevifolia / Cylindropuntia acanthocarpa Association	0.0	0.0	0.0	**S3.2**
Desert-willow - smoketree wash woodland	*Chilopsis linearis - Psorothamnus spinosus* Woodland Alliance	*Psorothamnus spinosus* Association	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Ambrosia salsola – (*Bebbia juncea – Ephedra californica*) Association	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Senegalia greggii (*Hyptis emoryi*) Association	0.0	0.0	0.0	**S3**
California juniper woodland	*Juniperus californica* Woodland Alliance	*Juniperus californica / herbaceous Association*	0.0	0.0	0.0	S4, **Yes[2]**
		Juniperus californica / Ericameria nauseosa Provisional Association	0.0	0.0	0.0	S4
		Total Acres Woodland Vegetation[3]	**290.2**	**0.0**	**0.0**	

Table 2-1d Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Las Vegas Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Shrubland Vegetation						
Acton's and Virgin River brittle brush - net-veined goldeneye scrub	*Encelia* (*actonii, virginensis*) - *Viguiera reticulata* Shrubland Alliance	*Encelia actonii* Association	0.0	0.0	0.0	**S3**
Black-stem rabbitbrush scrub	*Ericameria paniculata* Shrubland Alliance	*Ericameria paniculata - Ambrosia salsola* Association	39.8	0.0	0.0	**S3**
Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub	*Ephedra nevadensis - Lycium andersonii - Grayia spinosa* Shrubland Alliance	*Ephedra nevadensis - Ericameria cooperi* Association	0.0	0.0	0.0	**S3S4, Yes[2]**
Desert almond – Mexican bladdersage scrub	*Prunus fasciculata - Salazaria mexicana* Shrubland Alliance	*Salazaria mexicana* Association	0.0	0.0	0.0	S4, **Yes[2]**
Shadscale scrub	*Atriplex confertifolia* Shrubland Alliance	*Atriplex confertifolia - Atriplex polycarpa* Association	0.0	0.0	0.0	S4.2
Allscale scrub	*Atriplex polycarpa* Shrubland Alliance	*Atriplex polycarpa* Association	0.0	0.0	0.0	S4
		Atriplex polycarpa Sparse Playa Association	0.0	0.0	0.0	S4
		Atriplex polycarpa / Annual Herbaceous Association	0.0	0.0	0.0	S4

Table 2-1d Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Las Vegas Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Catclaw acacia - desert lavender - chuparosa scrub	*Senegalia greggii - Hyptis emoryi - Justicia californica* Shrubland Alliance	*Senegalia greggii - Ambrosia salsola* Association	0.0	0.0	0.0	S4
		Senegalia greggii Wash Association	0.0	0.0	0.0	S4
Cheesebush - sweetbush scrub	*Ambrosia salsola - Bebbia juncea* Shrubland Alliance	*Ambrosia salsola* Association	0.0	0.0	0.0	S4
		Bebbia juncea Association	0.0	0.0	0.0	S4
		Ambrosia salsola - Larrea tridentata Association	0.0	0.0	0.0	S4
		Ambrosia salsola – (*Ambrosia eriocentra – Brickellia incana*) Association	0.0	0.0	0.0	S4, **Yes**[2]
		Senna armata - Ambrosia salsola Association	0.0	0.0	0.0	S4
Mojave yucca scrub	*Yucca schidigera* Shrubland Alliance	*Yucca schidigera - Coleogyne ramosissima* Association	0.0	0.0	0.0	S4
		Yucca schidigera - Cylindropuntia acanthocarpa Association	0.0	0.0	0.0	S4, **Yes**[2]
		Yucca schidigera - Larrea tridentata - Ambrosia dumosa Association	132.3	0.0	0.0	S4

Table 2-1d Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Las Vegas Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Yucca schidigera - Larrea tridentata - Ephedra nevadensis Association	0.0	0.0	0.0	S4
Mulefat thickets	*Baccharis salicifolia* Shrubland Alliance	*Baccharis salicifolia* Association	0.0	0.0	0.0	S5
Creosote bush - brittle bush scrub	*Larrea tridentata - Encelia farinosa* Shrubland Alliance	*Larrea tridentata - Encelia farinosa - Ambrosia dumosa* Association	0.0	0.0	0.0	S4
Big sagebrush scrub	*Artemisia tridentata* Shrubland Alliance	*Artemisia tridentata - Ephedra nevadensis* Association	0.0	0.0	0.0	S5
		Artemisia tridentata - Ericameria nauseosa Association	0.0	0.0	0.0	S5
Creosote bush scrub	*Larrea tridentata* Shrubland Alliance	*Larrea tridentata* Association	0.0	0.0	0.0	S5
		Larrea tridentata - Atriplex polycarpa Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ephedra nevadensis Association	0.0	0.0	0.0	S5
		Larrea tridentata / wash Association	0.0	0.0	0.0	S5
Creosote bush - white bursage scrub		*Larrea tridentata - Ambrosia dumosa* Association	225.6	0.0	0.0	S5

Table 2-1d Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Las Vegas Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
	Larrea tridentata - Ambrosia dumosa Shrubland Alliance	*Larrea tridentata - Ambrosia dumosa - Ambrosia salsola* Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Encelia farinosa Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Salazaria mexicana Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Senna armata Association	0.0	0.0	0.0	S5, **Yes[2]**
		Larrea tridentata - Ambrosia dumosa - Yucca schidigera Association	0.0	0.0	0.0	S5
		Larrea tridentata – Ambrosia dumosa / Pleuraphis rigida Association	31.7	1.63	0.0	S5, **Yes[2]**
White bursage scrub	*Ambrosia dumosa* Shrubland Alliance	*Ambrosia dumosa* Association	0.0	0.0	0.0	S5
Rubber rabbitbrush scrub	*Ericameria nauseosa* Shrubland Alliance	*Ericameria nauseosa* Association	0.0	0.0	0.0	S5
		Ericameria nauseosa - Juniperus californica / herb Association	0.0	0.0	0.0	S5

Table 2-1d Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Las Vegas Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
California buckwheat scrub	*Eriogonum fasciculatum* Shrubland Alliance	*Eriogonum fasciculatum* Association	0.0	0.0	0.0	S5
Tamarisk thickets	*Tamarix* spp. Semi-natural Alliance	*Tamarix* spp. Association	0.0	0.0	0.0	NA
		Total Acres Shrubland Vegetation[3]	**429.3**	**1.63**	**0.0**	
Herbaceous Vegetation						
Big galleta shrub-steppe	*Pleuraphis rigida* Herbaceous Alliance	*Pleuraphis rigida* Association	0.0	0.0	0.0	**S2.2**
		Pleuraphis rigida / Ambrosia dumosa Association	0.0	0.0	0.0	**S2.2**
Desert needlegrass grassland	*Achnatherum speciosum* Herbaceous Alliance	*Achnatherum speciosum* Shrub Association	0.0	0.0	0.0	**S2.2**
Mojave-Sonoran desert dunes	*Dicoria canescens - Abronia villosa - Panicum urvilleanum* Sparsely Vegetated Alliance	*Panicum urvilleanum* Association	0.0	0.0	0.0	**S3.2**
Alkali-heath marsh	*Frankenia salina* Herbaceous Alliance	*Frankenia salina* Association	0.0	0.0	0.0	**S3**

Table 2-1d Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Las Vegas Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Rigid spineflower – hairy desert sunflower desert pavement	*Chorizanthe rigida – Geraea canescens* Desert Pavement Sparsely Vegetated Alliance	*Chorizanthe rigida – Geraea canescens* Desert Pavement Association	0.0	0.0	0.0	S4, **Yes**[2]
Red brome or Mediterranean grass grasslands	*Bromus rubens - Schismus* (*arabicus, barbatus*) Semi-natural Herbaceous Stands	*Bromus rubens* - mixed herbs Association	0.0	0.0	0.0	NA
		Schismus (*arabicus, barbatus*) Association	0.0	0.0	0.0	NA
Cheatgrass - medusahead grassland	*Bromus tectorum - Taeniatherum caput-medusae* Semi-natural Alliance	*Bromus tectorum* Association	0.0	0.0	0.0	NA
Total Acres Herbaceous Vegetation[3]			**0.0**	**0.0**	**0.0**	
Total Acres Native Vegetation[3]			**719.5**	**1.63**	**0.0**	
Total Acres Non-native Vegetation[3]			**0.0**	**0.0**	**0.0**	
Total Acres All Vegetation[3]			**719.5**	**1.63**	**0.0**	
Total Acres of Sensitive Vegetation[3]			**361.7**	**1.6**	**0.0**	
Active Agriculture			0.0	0.0	0.0	
Disturbed			0.0	0.0	0.0	
Developed (towers, roads, etc)			43.9	0.01	0.0	
Streambed			0.0	0.0	0.0	
Total Mapped Acres[3]			**763.5**	**1.64**	**0.0**	

Table 2-1d Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the BLM Las Vegas Field Office within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking

Notes:
1. As of July 2022
2. Included as Sensitive on 2022 CDFW California Sensitive Natural Communities list
3. Total mapped acres between sub-tables may not sum to grand total on Table 2-1a due to rounding errors

Alliance Rarity Rankings (CDFW 2022, https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background):
S1: Fewer than 6 viable occurrences statewide and/or up to 518 hectares
S2: 6-20 viable occurrences statewide and/or 518-2,590 hectares
S3: 21-100 viable occurrences statewide and/or 2,590-12,950 hectares

Additional Threat Ranks:
0.1: Very threatened 0.2: Threatened 0.3: No current threat known:

Table 2-1e Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the National Parks Service within the Mojave National Preserve within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Woodland Forest Vegetation						
Joshua tree woodland	*Yucca brevifolia* Woodland Alliance	*Yucca brevifolia / Juniperus californica / Ephedra nevadensis* Association	0.0	0.0	0.0	**S3.2**
		Yucca brevifolia / Larrea tridentata – Yucca schidigera / Pleuraphis rigida Association	689.5	31.6	0.0	**S3.2**
		Yucca brevifolia / Cylindropuntia acanthocarpa Association	98.2	21.3	0.0	**S3.2**
Desert-willow - smoketree wash woodland	*Chilopsis linearis - Psorothamnus spinosus* Woodland Alliance	*Psorothamnus spinosus* Association	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Ambrosia salsola – (*Bebbia juncea – Ephedra californica*) Association	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Senegalia greggii (*Hyptis emoryi*) Association	0.0	0.0	0.0	**S3**
California juniper woodland	*Juniperus californica* Woodland Alliance	*Juniperus californica / herbaceous Association*	0.0	0.0	0.0	S4, **Yes**[2]
		Juniperus californica / Ericameria nauseosa Provisional Association	0.0	0.0	0.0	S4
		Total Acres Woodland Vegetation[3]	**787.7.0**	**52.9**	**0.0**	

Table 2-1e Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the National Parks Service within the Mojave National Preserve within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Shrubland Vegetation						
Acton's and Virgin River brittle brush - net-veined goldeneye scrub	*Encelia* (*actonii, virginensis*) - *Viguiera reticulata* Shrubland Alliance	*Encelia actonii* Association	0.0	0.0	0.0	**S3**
Black-stem rabbitbrush scrub	*Ericameria paniculata* Shrubland Alliance	*Ericameria paniculata - Ambrosia salsola* Association	11.7	0.4	0.0	**S3**
Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub	*Ephedra nevadensis - Lycium andersonii - Grayia spinosa* Shrubland Alliance	*Ephedra nevadensis - Ericameria cooperi* Association	0.0	0.0	0.0	**S3S4, Yes[2]**
Desert almond – Mexican bladdersage scrub	*Prunus fasciculata - Salazaria mexicana* Shrubland Alliance	*Salazaria mexicana* Association	21.0	0.9	0.0	S4, **Yes[2]**
Shadscale scrub	*Atriplex confertifolia* Shrubland Alliance	*Atriplex confertifolia - Atriplex polycarpa* Association	0.0	0.0	0.0	S4.2
Allscale scrub	*Atriplex polycarpa* Shrubland Alliance	*Atriplex polycarpa* Association	0.0	0.0	0.0	S4
		Atriplex polycarpa Sparse Playa Association	0.0	0.0	0.0	S4
		Atriplex polycarpa / Annual Herbaceous Association	30.3	5.9	0.0	S4

Table 2-1e Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the National Parks Service within the Mojave National Preserve within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Catclaw acacia - desert lavender - chuparosa scrub	*Senegalia greggii - Hyptis emoryi - Justicia californica* Shrubland Alliance	*Senegalia greggii - Ambrosia salsola* Association	0.0	0.0	0.0	S4
		Senegalia greggii Wash Association	28.4	0.2	0.0	S4
Cheesebush - sweetbush scrub	*Ambrosia salsola - Bebbia juncea* Shrubland Alliance	*Ambrosia salsola* Association	24.0	0.9	0.0	S4
		Bebbia juncea Association	0.0	0.0	0.0	S4
		Ambrosia salsola - Larrea tridentata Association	0.0	0.0	0.0	S4
		Ambrosia salsola – (*Ambrosia eriocentra – Brickellia incana*) Association	1.0	0.02	0.0	S4, **Yes**[2]
		Senna armata - Ambrosia salsola Association	7.5	0.2	0.0	S4
Mojave yucca scrub	*Yucca schidigera* Shrubland Alliance	*Yucca schidigera - Coleogyne ramosissima* Association	0.0	0.0	0.0	S4
		Yucca schidigera - Cylindropuntia acanthocarpa Association	12.2	0.3		S4, **Yes**[2]
		Yucca schidigera - Larrea tridentata - Ambrosia dumosa Association	125.6	3.7	0.0	S4

Table 2-1e Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the National Parks Service within the Mojave National Preserve within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Yucca schidigera - Larrea tridentata - Ephedra nevadensis Association	18.1	0.4	0.0	S4
Mulefat thickets	*Baccharis salicifolia* Shrubland Alliance	*Baccharis salicifolia* Association	0.0	0.0	0.0	S5
Creosote bush - brittle bush scrub	*Larrea tridentata - Encelia farinosa* Shrubland Alliance	*Larrea tridentata - Encelia farinosa - Ambrosia dumosa* Association	0.0	0.0	0.0	S4
Big sagebrush scrub	*Artemisia tridentata* Shrubland Alliance	*Artemisia tridentata - Ephedra nevadensis* Association	0.0	0.0	0.0	S5
		Artemisia tridentata - Ericameria nauseosa Association	0.0	0.0	0.0	S5
Creosote bush scrub	*Larrea tridentata* Shrubland Alliance	*Larrea tridentata* Association	97	5.3	0.002	S5
		Larrea tridentata - Atriplex polycarpa Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ephedra nevadensis Association	4.6	0.1	0.0	S5
		Larrea tridentata / wash Association	0.0	0.0	0.0	S5
Creosote bush - white bursage scrub	*Larrea tridentata - Ambrosia dumosa* Shrubland Alliance	*Larrea tridentata - Ambrosia dumosa* Association	604.6	22.9	0.0	S5

Table 2-1e Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the National Parks Service within the Mojave National Preserve within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Larrea tridentata - Ambrosia dumosa - Ambrosia salsola Association	7.9	0.1	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Encelia farinosa Association	19.6	0.6	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Salazaria mexicana Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Senna armata Association	0.0	0.0	0.0	S5, **Yes[2]**
		Larrea tridentata - Ambrosia dumosa - Yucca schidigera Association	106.1	3.7	0.1	S5
		Larrea tridentata – Ambrosia dumosa / Pleuraphis rigida Association	82.4	3.2	0.0	S5, **Yes[2]**
White bursage scrub	*Ambrosia dumosa* Shrubland Alliance	*Ambrosia dumosa* Association	0.0	0.0	0.0	S5
Rubber rabbitbrush scrub	*Ericameria nauseosa* Shrubland Alliance	*Ericameria nauseosa* Association	0.0	0.0	0.0	S5
		Ericameria nauseosa - Juniperus californica / herb Association	0.0	0.0	0.0	S5

Table 2-1e Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the National Parks Service within the Mojave National Preserve within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
California buckwheat scrub	*Eriogonum fasciculatum* Shrubland Alliance	*Eriogonum fasciculatum* Association	0.0	0.0	0.0	S5
Tamarisk thickets	*Tamarix* spp. Semi-natural Alliance	*Tamarix* spp. Association	1.4	0.4	0.0	NA
		Total Acres Shrubland Vegetation[3]	**1,203.5**	**49.1**	**0.1**	
Herbaceous Vegetation						
Big galleta shrub-steppe	*Pleuraphis rigida* Herbaceous Alliance	*Pleuraphis rigida* Association	68.3	5.0	0.0	**S2.2**
		Pleuraphis rigida / Ambrosia dumosa Association	0.0	0.0	0.0	**S2.2**
Desert needlegrass grassland	*Achnatherum speciosum* Herbaceous Alliance	*Achnatherum speciosum* Shrub Association	1.7	0.1	0.0	**S2.2**
Mojave-Sonoran desert dunes	*Dicoria canescens - Abronia villosa - Panicum urvilleanum* Sparsely Vegetated Alliance	*Panicum urvilleanum* Association	29.8	1.1	0.0	**S3.2**
Alkali-heath marsh	*Frankenia salina* Herbaceous Alliance	*Frankenia salina* Association	0.0	0.0	0.0	**S3**

Table 2-1e Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the National Parks Service within the Mojave National Preserve within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Rigid spineflower – hairy desert sunflower desert pavement	*Chorizanthe rigida – Geraea canescens* Desert Pavement Sparsely Vegetated Alliance	*Chorizanthe rigida – Geraea canescens* Desert Pavement Association	0.0	0.0	0.0	S4, **Yes**[2]
Red brome or Mediterranean grass grasslands	*Bromus rubens - Schismus* (*arabicus, barbatus*) Semi-natural Herbaceous Stands	*Bromus rubens* - mixed herbs Association	0.0	0.0	0.0	NA
		Schismus (*arabicus, barbatus*) Association	23.4	2.1	0.0	NA
Cheatgrass - medusahead grassland	*Bromus tectorum - Taeniatherum caput-medusae* Semi-natural Alliance	*Bromus tectorum* Association	0.0	0.0	0.0	NA
		Total Acres Herbaceous Vegetation[3]	**123.2**	**8.2**	**0.0**	
		Total Acres Native Vegetation[3]	**2,089.5**	**107.8**	**0.0**	
		Total Acres Non-native Vegetation[3]	**24.9**	**2.4**	**0.0**	
		Total Acres All Vegetation[3]	**2,114.4**	**110.2**	**0.0**	
		Total Acres of Sensitive Vegetation[3]	**1,015.8**	**63.8**	**0.0**	
Active Agriculture			0.0	0.0	0.0	
Disturbed			0.0	0.0	0.0	
Developed (towers, roads, etc)			106.1	5.6	0.0	
Streambed			0.0	0.0	0.0	
		Total Mapped Acres[3]	**2,220.5**	**115.9**	**0.1**	

Table 2-1e Summary of Maximum Potential Impacts to Vegetation Communities on Lands Managed by the National Parks Service within the Mojave National Preserve within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking

Notes:
1. As of July 2022
2. Included as Sensitive on 2022 CDFW California Sensitive Natural Communities list
3. Total mapped acres between sub-tables may not sum to grand total on Table 2-1a due to rounding errors

Alliance Rarity Rankings (CDFW 2022, https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background):
S1: Fewer than 6 viable occurrences statewide and/or up to 518 hectares
S2: 6-20 viable occurrences statewide and/or 518-2,590 hectares
S3: 21-100 viable occurrences statewide and/or 2,590-12,950 hectares

Additional Threat Ranks:
0.1: Very threatened 0.2: Threatened 0.3: No current threat known

Table 2-1f Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the State of California within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Woodland Forest Vegetation						
Joshua tree woodland	*Yucca brevifolia* Woodland Alliance	*Yucca brevifolia / Juniperus californica / Ephedra nevadensis* Association	0.0	0.0	0.0	**S3.2**
		Yucca brevifolia / Larrea tridentata – Yucca schidigera / Pleuraphis rigida Association	0.0	0.0	0.0	**S3.2**
		Yucca brevifolia / Cylindropuntia acanthocarpa Association	0.0	0.0	0.0	**S3.2**
Desert-willow - smoketree wash woodland	*Chilopsis linearis - Psorothamnus spinosus* Woodland Alliance	*Psorothamnus spinosus* Association	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Ambrosia salsola – (*Bebbia juncea – Ephedra californica*) Association	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Senegalia greggii (*Hyptis emoryi*) Association	0.0	0.0	0.0	**S3**
California juniper woodland	*Juniperus californica* Woodland Alliance	*Juniperus californica / herbaceous Association*	0.0	0.0	0.0	S4, **Yes**[2]
		Juniperus californica / Ericameria nauseosa Provisional Association	0.0	0.0	0.0	S4
		Total Acres Woodland Vegetation[3]	**0.0**	**0.0**	**0.0**	
Shrubland Vegetation						

Table 2-1f Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the State of California within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Acton's and Virgin River brittle brush - net-veined goldeneye scrub	*Encelia* (*actonii, virginensis*) - *Viguiera reticulata* Shrubland Alliance	*Encelia actonii* Association	0.0	0.0	0.0	**S3**
Black-stem rabbitbrush scrub	*Ericameria paniculata* Shrubland Alliance	*Ericameria paniculata - Ambrosia salsola* Association	0.0	0.0	0.0	**S3**
Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub	*Ephedra nevadensis - Lycium andersonii - Grayia spinosa* Shrubland Alliance	*Ephedra nevadensis - Ericameria cooperi* Association	0.0	0.0	0.0	**S3S4, Yes[2]**
Desert almond – Mexican bladdersage scrub	*Prunus fasciculata - Salazaria mexicana* Shrubland Alliance	*Salazaria mexicana* Association	0.0	0.0	0.0	S4, **Yes[2]**
Shadscale scrub	*Atriplex confertifolia* Shrubland Alliance	*Atriplex confertifolia - Atriplex polycarpa* Association	0.0	0.0	0.0	S4.2
Allscale scrub	*Atriplex polycarpa* Shrubland Alliance	*Atriplex polycarpa* Association	0.0	0.0	0.0	S4
		Atriplex polycarpa Sparse Playa Association	0.0	0.0	0.0	S4
		Atriplex polycarpa / Annual Herbaceous Association	0.0	0.0	0.0	S4
	Senegalia greggii - Hyptis emoryi -	*Senegalia greggii - Ambrosia salsola* Association	0.0	0.0	0.0	S4

Table 2-1f Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the State of California within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Catclaw acacia - desert lavender - chuparosa scrub	*Justicia californica* Shrubland Alliance	*Senegalia greggii* Wash Association	0.0	0.0	0.0	S4
Cheesebush - sweetbush scrub	*Ambrosia salsola - Bebbia juncea* Shrubland Alliance	*Ambrosia salsola* Association	4.4	0.1	0.0	S4
		Bebbia juncea Association	0.0	0.0	0.0	S4
		Ambrosia salsola - Larrea tridentata Association	0.0	0.0	0.0	S4
		Ambrosia salsola – (*Ambrosia eriocentra* – *Brickellia incana*) Association	0.0	0.0	0.0	S4, **Yes**[2]
		Senna armata - Ambrosia salsola Association	0.0	0.0	0.0	S4
Mojave yucca scrub	*Yucca schidigera* Shrubland Alliance	*Yucca schidigera - Coleogyne ramosissima* Association	0.0	0.0	0.0	S4
		Yucca schidigera - Cylindropuntia acanthocarpa Association	0.0	0.0	0.0	S4, **Yes**[2]
		Yucca schidigera - Larrea tridentata - Ambrosia dumosa Association	8.8	0.0	0.0	S4
		Yucca schidigera - Larrea tridentata - Ephedra nevadensis Association	0.0	0.0	0.0	S4

Table 2-1f Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the State of California within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Mulefat thickets	*Baccharis salicifolia* Shrubland Alliance	*Baccharis salicifolia* Association	0.0	0.0	0.0	S5
Creosote bush - brittle bush scrub	*Larrea tridentata - Encelia farinosa* Shrubland Alliance	*Larrea tridentata - Encelia farinosa - Ambrosia dumosa* Association	0.0	0.0	0.0	S4
Big sagebrush scrub	*Artemisia tridentata* Shrubland Alliance	*Artemisia tridentata - Ephedra nevadensis* Association	0.0	0.0	0.0	S5
		Artemisia tridentata - Ericameria nauseosa Association	0.0	0.0	0.0	S5
Creosote bush scrub	*Larrea tridentata* Shrubland Alliance	*Larrea tridentata* Association	0.0	0.0	0.0	S5
		Larrea tridentata - Atriplex polycarpa Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ephedra nevadensis Association	0.0	0.0	0.0	S5
		Larrea tridentata / wash Association	0.0	0.0	0.0	S5
Creosote bush - white bursage scrub	*Larrea tridentata - Ambrosia dumosa* Shrubland Alliance	*Larrea tridentata - Ambrosia dumosa* Association	75.2	2.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Ambrosia salsola Association	43.8	0.8	0.0	S5

Table 2-1f Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the State of California within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Larrea tridentata - Ambrosia dumosa - Encelia farinosa Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Salazaria mexicana Association	14.6	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Senna armata Association	0.0	0.0	0.0	S5, **Yes[2]**
		Larrea tridentata - Ambrosia dumosa - Yucca schidigera Association	0.0	0.0	0.0	S5
		Larrea tridentata – Ambrosia dumosa / Pleuraphis rigida Association	21.0	1.4	0.0	S5, **Yes[2]**
White bursage scrub	*Ambrosia dumosa* Shrubland Alliance	*Ambrosia dumosa* Association	0.0	0.0	0.0	S5
Rubber rabbitbrush scrub	*Ericameria nauseosa* Shrubland Alliance	*Ericameria nauseosa* Association	0.0	0.0	0.0	S5
		Ericameria nauseosa - Juniperus californica / herb Association	0.0	0.0	0.0	S5
California buckwheat scrub	*Eriogonum fasciculatum* Shrubland Alliance	*Eriogonum fasciculatum* Association	0.0	0.0	0.0	S5

Table 2-1f Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the State of California within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Tamarisk thickets	*Tamarix* spp. Semi-natural Alliance	*Tamarix* spp. Association	0.0	0.0	0.0	NA
		Total Acres Shrubland Vegetation[3]	**167.9**	**4.3**	**0.0**	
Herbaceous Vegetation						
Big galleta shrub-steppe	*Pleuraphis rigida* Herbaceous Alliance	*Pleuraphis rigida* Association	0.0	0.0	0.0	**S2.2**
		Pleuraphis rigida / Ambrosia dumosa Association	0.0	0.0	0.0	**S2.2**
Desert needlegrass grassland	*Achnatherum speciosum* Herbaceous Alliance	*Achnatherum speciosum* Shrub Association	0.0	0.0	0.0	**S2.2**
Mojave-Sonoran desert dunes	*Dicoria canescens - Abronia villosa - Panicum urvilleanum* Sparsely Vegetated Alliance	*Panicum urvilleanum* Association	0.0	0.0	0.0	**S3.2**
Alkali-heath marsh	*Frankenia salina* Herbaceous Alliance	*Frankenia salina* Association	0.0	0.0	0.0	**S3**

Table 2-1f Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the State of California within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Rigid spineflower – hairy desert sunflower desert pavement	*Chorizanthe rigida – Geraea canescens* Desert Pavement Sparsely Vegetated Alliance	*Chorizanthe rigida – Geraea canescens* Desert Pavement Association	0.0	0.0	0.0	S4, **Yes**[2]
Red brome or Mediterranean grass grasslands	*Bromus rubens - Schismus* (*arabicus, barbatus*) Semi-natural Herbaceous Stands	*Bromus rubens* - mixed herbs Association	0.0	0.0	0.0	NA
		Schismus (*arabicus, barbatus*) Association	0.0	0.0	0.0	NA
Cheatgrass - medusahead grassland	*Bromus tectorum - Taeniatherum caput-medusae* Semi-natural Alliance	*Bromus tectorum* Association	0.0	0.0	0.0	NA
		Total Acres Herbaceous Vegetation[3]	**0.0**	**0.0**	**0.0**	
		Total Acres Native Vegetation[3]	**167.9**	**4.3**	**0.0**	
		Total Acres Non-native Vegetation[3]	**0.0**	**0.0**	**0.0**	
		Total Acres All Vegetation[3]	**167.9**	**4.3**	**0.0**	
		Total Acres of Sensitive Vegetation[3]	**21.0**	**1.4**	**0.0**	
Active Agriculture			0.0	0.0	0.0	
Disturbed			0.0	0.0	0.0	
Developed (towers, roads, etc.)			11.7	0.3	0.0	
Streambed			0.0	0.0	0.0	
		Total Mapped Acres[3]	**179.5**	**4.6**	**0.0**	

Table 2-1f Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the State of California within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking

Notes:
1. As of July 2022
2. Included as Sensitive on 2022 CDFW California Sensitive Natural Communities list
3. Total mapped acres between sub-tables may not sum to grand total on Table 2-1a due to rounding errors

Alliance Rarity Rankings (CDFW 2022, https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background):
S1: Fewer than 6 viable occurrences statewide and/or up to 518 hectares
S2: 6-20 viable occurrences statewide and/or 518-2,590 hectares
S3: 21-100 viable occurrences statewide and/or 2,590-12,950 hectares

Additional Threat Ranks:
0.1: Very threatened 0.2: Threatened 0.3: No current threat known

Table 2-1g Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the City of Boulder City, Nevada within the EPL Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Woodland Forest Vegetation						
Joshua tree woodland	*Yucca brevifolia* Woodland Alliance	*Yucca brevifolia / Juniperus californica / Ephedra nevadensis* Association	0.0	0.0	0.0	**S3.2**
		Yucca brevifolia / Larrea tridentata – Yucca schidigera / Pleuraphis rigida Association	0.0	0.0	0.0	**S3.2**
		Yucca brevifolia / Cylindropuntia acanthocarpa Association	0.0	0.0	0.0	**S3.2**
Desert-willow - smoketree wash woodland	*Chilopsis linearis - Psorothamnus spinosus* Woodland Alliance	*Psorothamnus spinosus* Association	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Ambrosia salsola – (*Bebbia juncea – Ephedra californica*) Association	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Senegalia greggii (*Hyptis emoryi*) Association	0.0	0.0	0.0	**S3**
California juniper woodland	*Juniperus californica* Woodland Alliance	*Juniperus californica / herbaceous Association*	0.0	0.0	0.0	S4, **Yes[2]**
		Juniperus californica / Ericameria nauseosa Provisional Association	0.0	0.0	0.0	S4

Table 2-1g Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the City of Boulder City, Nevada within the EPL Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Total Acres Woodland Vegetation[3]	**0.0**	**0.0**	**0.0**	
Shrubland Vegetation						
Acton's and Virgin River brittle brush - net-veined goldeneye scrub	*Encelia* (*actonii, virginensis*) - *Viguiera reticulata* Shrubland Alliance	*Encelia actonii* Association	0.0	0.0	0.0	**S3**
Black-stem rabbitbrush scrub	*Ericameria paniculata* Shrubland Alliance	*Ericameria paniculata - Ambrosia salsola* Association	0.02	0.0	0.0	**S3**
Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub	*Ephedra nevadensis - Lycium andersonii - Grayia spinosa* Shrubland Alliance	*Ephedra nevadensis - Ericameria cooperi* Association	0.0	0.0	0.0	**S3S4, Yes**[2]
Desert almond – Mexican bladdersage scrub	*Prunus fasciculata - Salazaria mexicana* Shrubland Alliance	*Salazaria mexicana* Association	0.0	0.0	0.0	S4, **Yes**[2]
Shadscale scrub	*Atriplex confertifolia* Shrubland Alliance	*Atriplex confertifolia - Atriplex polycarpa* Association	0.0	0.0	0.0	S4.2
Allscale scrub	*Atriplex polycarpa* Shrubland Alliance	*Atriplex polycarpa* Association	0.0	0.0	0.0	S4
		Atriplex polycarpa Sparse Playa Association	0.0	0.0	0.0	S4
		Atriplex polycarpa / Annual Herbaceous Association	0.0	0.0	0.0	S4

Table 2-1g Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the City of Boulder City, Nevada within the EPL Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Catclaw acacia - desert lavender - chuparosa scrub	*Senegalia greggii - Hyptis emoryi - Justicia californica* Shrubland Alliance	*Senegalia greggii - Ambrosia salsola* Association	0.0	0.0	0.0	S4
		Senegalia greggii Wash Association	0.0	0.0	0.0	S4
Cheesebush - sweetbush scrub	*Ambrosia salsola - Bebbia juncea* Shrubland Alliance	*Ambrosia salsola* Association	0.0	0.0	0.0	S4
		Bebbia juncea Association	0.0	0.0	0.0	S4
		Ambrosia salsola - Larrea tridentata Association	0.0	0.0	0.0	S4
		Ambrosia salsola – (*Ambrosia eriocentra – Brickellia incana*) Association	0.0	0.0	0.0	S4, **Yes**[2]
		Senna armata - Ambrosia salsola Association	0.0	0.0	0.0	S4
Mojave yucca scrub	*Yucca schidigera* Shrubland Alliance	*Yucca schidigera - Coleogyne ramosissima* Association	0.0	0.0	0.0	S4
		Yucca schidigera - Cylindropuntia acanthocarpa Association	0.0	0.0	0.0	S4, **Yes**[2]
		Yucca schidigera - Larrea tridentata - Ambrosia dumosa Association	0.0	0.0	0.0	S4

Table 2-1g Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the City of Boulder City, Nevada within the EPL Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Yucca schidigera - Larrea tridentata - Ephedra nevadensis Association	0.0	0.0	0.0	S4
Mulefat thickets	*Baccharis salicifolia* Shrubland Alliance	*Baccharis salicifolia* Association	0.0	0.0	0.0	S5
Creosote bush - brittle bush scrub	*Larrea tridentata - Encelia farinosa* Shrubland Alliance	*Larrea tridentata - Encelia farinosa - Ambrosia dumosa* Association	0.0	0.0	0.0	S4
Big sagebrush scrub	*Artemisia tridentata* Shrubland Alliance	*Artemisia tridentata - Ephedra nevadensis* Association	0.0	0.0	0.0	S5
		Artemisia tridentata - Ericameria nauseosa Association	0.0	0.0	0.0	S5
Creosote bush scrub	*Larrea tridentata* Shrubland Alliance	*Larrea tridentata* Association	0.0	0.0	0.0	S5
		Larrea tridentata - Atriplex polycarpa Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ephedra nevadensis Association	0.0	0.0	0.0	S5
		Larrea tridentata / wash Association	0.0	0.0	0.0	S5

Table 2-1g Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the City of Boulder City, Nevada within the EPL Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Creosote bush - white bursage scrub	*Larrea tridentata - Ambrosia dumosa* Shrubland Alliance	*Larrea tridentata - Ambrosia dumosa* Association	212.5	0.22	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Ambrosia salsola Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Encelia farinosa Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Salazaria mexicana Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Senna armata Association	0.0	0.0	0.0	S5, **Yes**[2]
		Larrea tridentata - Ambrosia dumosa - Yucca schidigera Association	0.0	0.0	0.0	S5
		Larrea tridentata – Ambrosia dumosa / Pleuraphis rigida Association	0.0	0.0	0.0	S5, **Yes**[2]
White bursage scrub	*Ambrosia dumosa* Shrubland Alliance	*Ambrosia dumosa* Association	0.0	0.0	0.0	S5

Table 2-1g Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the City of Boulder City, Nevada within the EPL Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Rubber rabbitbrush scrub	*Ericameria nauseosa* Shrubland Alliance	*Ericameria nauseosa* Association	0.0	0.0	0.0	S5
		Ericameria nauseosa - Juniperus californica / herb Association	0.0	0.0	0.0	S5
California buckwheat scrub	*Eriogonum fasciculatum* Shrubland Alliance	*Eriogonum fasciculatum* Association	0.0	0.0	0.0	S5
Tamarisk thickets	*Tamarix* spp. Semi-natural Alliance	*Tamarix* spp. Association	0.0	0.0	0.0	NA
		Total Acres Shrubland Vegetation[3]	**212.52**	**0.22**	**0.0**	
Herbaceous Vegetation						
Big galleta shrub-steppe	*Pleuraphis rigida* Herbaceous Alliance	*Pleuraphis rigida* Association	0.0	0.0	0.0	**S2.2**
		Pleuraphis rigida / Ambrosia dumosa Association	0.0	0.0	0.0	**S2.2**
Desert needlegrass grassland	*Achnatherum speciosum* Herbaceous Alliance	*Achnatherum speciosum* Shrub Association	0.0	0.0	0.0	**S2.2**
Mojave-Sonoran desert dunes	*Dicoria canescens - Abronia villosa - Panicum urvilleanum* Sparsely Vegetated Alliance	*Panicum urvilleanum* Association	0.0	0.0	0.0	**S3.2**

Table 2-1g Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the City of Boulder City, Nevada within the EPL Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Alkali-heath marsh	*Frankenia salina* Herbaceous Alliance	*Frankenia salina* Association	0.0	0.0	0.0	**S3**
Rigid spineflower – hairy desert sunflower desert pavement	*Chorizanthe rigida – Geraea canescens* Desert Pavement Sparsely Vegetated Alliance	*Chorizanthe rigida – Geraea canescens* Desert Pavement Association	0.0	0.0	0.0	S4, **Yes[2]**
Red brome or Mediterranean grass grasslands	*Bromus rubens - Schismus* (*arabicus, barbatus*) Semi-natural Herbaceous Stands	*Bromus rubens* - mixed herbs Association	0.0	0.0	0.0	NA
		Schismus (*arabicus, barbatus*) Association	0.0	0.0	0.0	NA
Cheatgrass - medusahead grassland	*Bromus tectorum - Taeniatherum caput-medusae* Semi-natural Alliance	*Bromus tectorum* Association	0.0	0.0	0.0	NA
		Total Acres Herbaceous Vegetation[3]	**0.0**	**0.0**	**0.0**	
		Total Acres Native Vegetation[3]	**212.52**	**0.22**	**0.0**	
		Total Acres Non-native Vegetation[3]	**0.0**	**0.0**	**0.0**	
		Total Acres All Vegetation[3]	**212.52**	**0.22**	**0.0**	
		Total Acres of Sensitive Vegetation[3]	**0.0**	**0.0**	**0.0**	
Active Agriculture			0.0	0.0	0.0	
Disturbed			0.0	0.0	0.0	
Developed (towers, roads, etc)			20.1	0.0	0.0	
Streambed			0.0	0.0	0.0	
		Total Mapped Acres[3]	**232.62**	**0.22**	**0.0**	

Table 2-1g Summary of Maximum Potential Impacts to Vegetation Communities on Lands Owned by the City of Boulder City, Nevada within the EPL Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking

Notes:
1. As of July 2022
2. Included as Sensitive on 2022 CDFW California Sensitive Natural Communities list
3. Total mapped acres between sub-tables may not sum to grand total on Table 2-1a due to rounding errors

Alliance Rarity Rankings (CDFW 2022, https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background):
S1: Fewer than 6 viable occurrences statewide and/or up to 518 hectares
S2: 6-20 viable occurrences statewide and/or 518-2,590 hectares
S3: 21-100 viable occurrences statewide and/or 2,590-12,950 hectares

Additional Threat Ranks:
0.1: Very threatened 0.2: Threatened 0.3: No current threat known

Table 2-1h Summary of Maximum Potential Impacts to Vegetation Communities on Private Lands within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Woodland Forest Vegetation						
Joshua tree woodland	*Yucca brevifolia* Woodland Alliance	*Yucca brevifolia / Juniperus californica / Ephedra nevadensis* Association	9.4	0.0	0.0	**S3.2**
		Yucca brevifolia / Larrea tridentata – Yucca schidigera / Pleuraphis rigida Association	224.4	0.0	0.0	**S3.2**
		Yucca brevifolia / Cylindropuntia acanthocarpa Association	68.3	0.2	0.0	**S3.2**
Desert-willow - smoketree wash woodland	*Chilopsis linearis - Psorothamnus spinosus* Woodland Alliance	*Psorothamnus spinosus* Association	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Ambrosia salsola – (*Bebbia juncea – Ephedra californica*) Association	0.0	0.0	0.0	**S3**
		Psorothamnus spinosus / Senegalia greggii (*Hyptis emoryi*) Association	0.0	0.0	0.0	**S3**
California juniper woodland	*Juniperus californica* Woodland Alliance	*Juniperus californica / herbaceous Association*	23.6	0.02	0.02	S4, **Yes**[2]

Table 2-1h Summary of Maximum Potential Impacts to Vegetation Communities on Private Lands within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Juniperus californica / Ericameria nauseosa Provisional Association	18.9	0.0	0.0	S4
		Total Acres Woodland Vegetation[3]	***344.7***	***0.3***	***0.0***	
Shrubland Vegetation						
Acton's and Virgin River brittle brush - net-veined goldeneye scrub	*Encelia* (*actonii, virginensis*) - *Viguiera reticulata* Shrubland Alliance	*Encelia actonii* Association	9.6	0.1	0.0	**S3**
Black-stem rabbitbrush scrub	*Ericameria paniculata* Shrubland Alliance	*Ericameria paniculata - Ambrosia salsola* Association	0.0	0.0	0.0	**S3**
Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub	*Ephedra nevadensis - Lycium andersonii - Grayia spinosa* Shrubland Alliance	*Ephedra nevadensis - Ericameria cooperi* Association	12.7	0.0	0.0	**S3S4, Yes[2]**
Desert almond – Mexican bladdersage scrub	*Prunus fasciculata - Salazaria mexicana* Shrubland Alliance	*Salazaria mexicana* Association	0.0	0.0	0.0	S4, **Yes[2]**
Shadscale scrub	*Atriplex confertifolia* Shrubland Alliance	*Atriplex confertifolia - Atriplex polycarpa* Association	62.1	0.0	0.0	S4.2
Allscale scrub	*Atriplex polycarpa* Shrubland Alliance	*Atriplex polycarpa* Association	89.4	0.5	0.0	S4
		Atriplex polycarpa Sparse Playa Association	23.1	0.1	0.0	S4

Table 2-1h Summary of Maximum Potential Impacts to Vegetation Communities on Private Lands within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Atriplex polycarpa / Annual Herbaceous Association	24.1	0.0	0.0	S4
Catclaw acacia - desert lavender - chuparosa scrub	*Senegalia greggii - Hyptis emoryi - Justicia californica* Shrubland Alliance	*Senegalia greggii - Ambrosia salsola* Association	0.0	0.0	0.0	S4
		Senegalia greggii Wash Association	0.0	0.0	0.0	S4
Cheesebush - sweetbush scrub	*Ambrosia salsola - Bebbia juncea* Shrubland Alliance	*Ambrosia salsola* Association	1.9	0.0	0.0	S4
		Bebbia juncea Association	0.0	0.0	0.0	S4
		Ambrosia salsola - Larrea tridentata Association	0.0	0.0	0.0	S4
		Ambrosia salsola – (*Ambrosia eriocentra* – *Brickellia incana*) Association	1.6	0.01	0.0	S4, **Yes[2]**
		Senna armata - Ambrosia salsola Association	0.0	0.0	0.0	S4
Mojave yucca scrub	*Yucca schidigera* Shrubland Alliance	*Yucca schidigera - Coleogyne ramosissima* Association	0.0	0.0	0.0	S4

Table 2-1h Summary of Maximum Potential Impacts to Vegetation Communities on Private Lands within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Yucca schidigera - Cylindropuntia acanthocarpa Association	0.0	0.0	0.0	S4, **Yes**[2]
		Yucca schidigera - Larrea tridentata - Ambrosia dumosa Association	2.1	0.0	0.0	S4
		Yucca schidigera - Larrea tridentata - Ephedra nevadensis Association	0.0	0.0	0.0	S4
Mulefat thickets	*Baccharis salicifolia* Shrubland Alliance	*Baccharis salicifolia* Association	5.3	0.0	0.0	S5
Creosote bush - brittle bush scrub	*Larrea tridentata - Encelia farinosa* Shrubland Alliance	*Larrea tridentata - Encelia farinosa - Ambrosia dumosa* Association	0.0	0.0	0.0	S4
Big sagebrush scrub	*Artemisia tridentata* Shrubland Alliance	*Artemisia tridentata - Ephedra nevadensis* Association	0.9	0.0	0.0	S5
		Artemisia tridentata - Ericameria nauseosa Association	3.5	0.0	0.0	S5
Creosote bush scrub	*Larrea tridentata* Shrubland Alliance	*Larrea tridentata* Association	0.0	0.0	0.0	S5
		Larrea tridentata - Atriplex polycarpa Association	74.8	0.1	0.0	S5
		Larrea tridentata - Ephedra nevadensis Association	0.0	0.0	0.0	S5

Table 2-1h Summary of Maximum Potential Impacts to Vegetation Communities on Private Lands within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Larrea tridentata / wash Association	0.0	0.0	0.0	S5
Creosote bush - white bursage scrub	*Larrea tridentata - Ambrosia dumosa* Shrubland Alliance	*Larrea tridentata - Ambrosia dumosa* Association	226.2	2.9	0.1	S5
		Larrea tridentata - Ambrosia dumosa - Ambrosia salsola Association	25.7	0.02	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Encelia farinosa Association	0.1	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Salazaria mexicana Association	0.0	0.0	0.0	S5
		Larrea tridentata - Ambrosia dumosa - Senna armata Association	0.0	0.0	0.0	S5, **Yes**[2]
		Larrea tridentata - Ambrosia dumosa - Yucca schidigera Association	0.0	0.0	0.0	S5
		Larrea tridentata – Ambrosia dumosa / Pleuraphis rigida Association	2.8	0.1	0.0	S5, **Yes**[2]
White bursage scrub	*Ambrosia dumosa* Shrubland Alliance	*Ambrosia dumosa* Association	0.0	0.0	0.0	S5

Table 2-1h Summary of Maximum Potential Impacts to Vegetation Communities on Private Lands within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Rubber rabbitbrush scrub	*Ericameria nauseosa* Shrubland Alliance	*Ericameria nauseosa* Association	141.9	0.9	0.1	S5
		Ericameria nauseosa - Juniperus californica / herb Association	4.2	0.0	0.0	S5
California buckwheat scrub	*Eriogonum fasciculatum* Shrubland Alliance	*Eriogonum fasciculatum* Association	14.2	0.0	0.0	S5
Tamarisk thickets	*Tamarix* spp. Semi-natural Alliance	*Tamarix* spp. Association	7.8	0.0	0.0	NA
		Total Acres Shrubland Vegetation	**734.0**	**4.8**	**0.2**	
Herbaceous Vegetation						
Big galleta shrub-steppe	*Pleuraphis rigida* Herbaceous Alliance	*Pleuraphis rigida* Association	0.0	0.0	0.0	**S2.2**
		Pleuraphis rigida / Ambrosia dumosa Association	0.0	0.0	0.0	**S2.2**
Desert needlegrass grassland	*Achnatherum speciosum* Herbaceous Alliance	*Achnatherum speciosum* Shrub Association	0.0	0.0	0.0	**S2.2**

Table 2-1h Summary of Maximum Potential Impacts to Vegetation Communities on Private Lands within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
Mojave-Sonoran desert dunes	*Dicoria canescens - Abronia villosa - Panicum urvilleanum* Sparsely Vegetated Alliance	*Panicum urvilleanum* Association	0.0	0.0	0.0	**S3.2**
Alkali-heath marsh	*Frankenia salina* Herbaceous Alliance	*Frankenia salina* Association	1.3	0.0	0.0	**S3**
Rigid spineflower – hairy desert sunflower desert pavement	*Chorizanthe rigida – Geraea canescens* Desert Pavement Sparsely Vegetated Alliance	*Chorizanthe rigida – Geraea canescens* Desert Pavement Association	0.0	0.0	0.0	S4, **Yes**[2]
Red brome or Mediterranean grass grasslands	*Bromus rubens - Schismus* (*arabicus, barbatus*) Semi-natural Herbaceous Stands	*Bromus rubens* - mixed herbs Association	1.7	0.0	0.0	NA
		Schismus (*arabicus, barbatus*) Association	0.0	0.0	0.0	NA
Cheatgrass - medusahead grassland	*Bromus tectorum - Taeniatherum caput-medusae* Semi-natural Alliance	*Bromus tectorum* Association	6.7	0.0	0.0	NA
		Total Acres Herbaceous Vegetation	**9.7**	**0.0**	**0.0**	
		Total Acres Native Vegetation[3]	**1,072.2**	**5.0**	**0.2**	

Table 2-1h Summary of Maximum Potential Impacts to Vegetation Communities on Private Lands within the EPL Project Alignment

Vegetation Alliance Common Name	Vegetation Alliance Scientific Name	Vegetation Association	Total Area Mapped on EPL Project Alignment (acres)	Anticipated Maximum Temporary Impacts in Proposed Project Work Areas (acres)[1]	Anticipated Maximum Permanent Impacts in Proposed Project Work Areas (acres)[1]	California State Rarity Ranking
		Total Acres Non-native Vegetation[3]	**16.2**	**0.0**	**0.0**	
		Total Acres All Vegetation[3]	**1,088.4**	**5.0**	**0.2**	
		Total Acres of Sensitive Vegetation[3]	**353.7**	**0.5**		
Active Agriculture			20.3	0.0	0.0	
Disturbed			32.5	3.5	0.0	
Developed (towers, roads, etc)			192.2	5.7	0.03	
Streambed			2.4	0.0	0.0	
		Total Mapped Acres[3]	**1,335.8**	**14.3**		

Notes:
1. As of July 2022
2. Included as Sensitive on 2022 CDFW California Sensitive Natural Communities list
3. Total mapped acres between sub-tables may not sum to grand total on Table 2-1a due to rounding errors

Alliance Rarity Rankings (CDFW 2022, https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background):
S1: Fewer than 6 viable occurrences statewide and/or up to 518 hectares
S2: 6-20 viable occurrences statewide and/or 518-2,590 hectares
S3: 21-100 viable occurrences statewide and/or 2,590-12,950 hectares

Additional Threat Ranks:
0.1: Very threatened 0.2: Threatened 0.3: No current threat known

2.2 Native Trees in Potential Project Work Areas

A survey of potentially impacted individual native trees has not yet been completed for the EPL Project alignment; this will be completed at a later time. Below is a list of tree species observed on the EPL Project alignment during the 2017, 2018, and 2022 surveys.

Scientific Name	Common Name	Temporary Impacts (acres)	Permanent Impacts (acres)
Chilopsis linearis	desert-willow	ND	ND
Juniperus californica	California juniper	ND	ND
Populus fremontii	Fremont cottonwood	ND	ND
Psorothamnus spinosus	desert smoketree	ND	ND
Yucca brevifolia	Joshua tree	ND	ND

2.3 Special-status Plant Species in Potential Project Work Areas

During the 2017, 2018, and 2022 surveys, fifteen non-listed special-status plant species were observed within the EPL Project alignment. No federally or California or Nevada Endangered or Threatened plant species were observed within the EPL Project alignment during the surveys and no Federally or California or Nevada Endangered or Threatened plant species have the potential to occur within the EPL Project alignment.

Eleven non-listed special-status plant species were observed within the EPL Project alignment in California, including one sensitive shrub species, three cactus species, four herbaceous perennial species, and three annual species. In Nevada, observed Nevada special-status plants include one cactus species and one herbaceous perennial species. More information on the surveyed special-status plant species is detailed in the *TLRR Sensitive Species and Habitat Report: Eldorado – Pisgah – Lugo 220 kV Subtransmission Line* (Arcadis 2020a).

Of the observed non-listed special-status plant species, five special-status plant species were identified within potential Project work areas in California and Nevada: pink funnel lily (*Androstephium breviflorum*), Harwood's eriastrum (*Eriastrum harwoodii*), matted cholla (*Grusonia parishii*), Mojave menodora (*Menodora spinescens* var. *mohavensis*), and Rusby's desert mallow (*Sphaeralcea rusbyi* var. *eremicola*). No special-status plant species were observed in proposed staging areas.

Tables 2-3a through Tables 2-3f summarize the special-status plant species identified during the surveys in potential Project work areas within the EPL Project alignment, along with the regulatory status for each species and the number of individuals observed in potential Project work areas.

Table 2-3a provides a summary of the special-status plant species identified during the surveys on all lands within potential Project work areas on the EPL Project Alignment.

Table 2-3b presents the special-status plant species identified during the surveys within potential Project work areas on lands managed by the BLM Barstow Office within the EPL Project alignment.

Table 2-3c presents the special-status plant species identified during the surveys within potential Project work areas on lands managed by the BLM Needles Office within the EPL Project alignment.

Table 2-3d presents the special-status plant species identified during the surveys within potential Project work areas on lands managed by the BLM Las Vegas Field Office within the EPL Project alignment.

Table 2-3e presents the special-status plant species identified during the surveys within potential Project work areas on lands managed by the NPS within the Mojave National Preserve within the EPL Project alignment.

Table 2-3g presents the special-status plant species identified during the surveys within potential Project work areas on lands owned by the State of California within the EPL Project alignment.

Table 2-3g presents the special-status plant species identified during the surveys within potential Project work areas on lands owned by the City of Boulder City within the EPL Project alignment.

Table 2-3h presents the special-status plant species identified during the surveys within potential Project work areas on private lands within the EPL Project alignment.

In all cases, the number of special status plant species identified within potential Project work areas represent the maximum possible extent of Project work. In practice, due to a combination of impact avoidance methods, helicopter use, and careful siting of Project work activities, actual impacts will be greatly reduced.

Table 2-3a Summary of Number of Special-status Plants Observed within Potential Project Work Areas on All Lands within the EPL Project Alignment

Scientific Name	Common Name	Regulatory Status (Federal/State /CNPS)	Project Segment (s)[1]	Number of Special-status Plants Observed within Potential Project Work Areas[2]
Androstephium breviflorum	pink funnel lily	--/2B.2	3, 4	2
Eriastrum harwoodii	Harwood's eriastrum	--/1B.2	3,4	50
Grusonia parishii	matted cholla	--/2B.2	3,4	64
Menodora spinescens var. *mohavensis*	Mojave menodora	--/1B.2	1,2	2,024
Sphaeralcea rusbyi var. *eremicola*	Rusby's desert mallow	--/1B.2	3,4	481
Total Number of Special-status Plants on All Lands				**2,621**

Notes:
1. Segment where observed special-status species may be potentially impacted by Project activities
2. Number based on number of individuals observed in potential Project disturbance areas in 2017 and/or 2018

CNPS – California Native Plant Society Ranks and Extensions

List 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
.1 - Seriously endangered (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered (20-80% occurrences threatened)
.3 – Not very endangered (<20% of occurrences threatened, or no current threats known)

Table 2-3b Summary of Number of Special-status Plants Observed within Potential Project Work Areas on Land Managed by the BLM Barstow Field Office within the EPL Project Alignment

Scientific Name	Common Name	Regulatory Status (Federal/State /CNPS)	Project Segment[1]	Number of Special-status Plants Observed within Potential Project Work Areas[2]
Androstephium breviflorum	pink funnel lily	--/2B.2	3, 4	1
Eriastrum harwoodii	Harwood's eriastrum	--/1B.2	3,4	0
Grusonia parishii	matted cholla	--/2B.2	3,4	0
Menodora spinescens var. *mohavensis*	Mojave menodora	--/1B.2	1,2	2,024
Sphaeralcea rusbyi var. *eremicola*	Rusby's desert mallow	--/1B.2	3,4	0
Total Number of Special-status Plants on Lands Managed by BLM Barstow Office				**2,025**

Notes:
1. Segment where observed special-status species may be potentially impacted by Project activities
2. Number based on number of individuals observed in potential Project disturbance areas in 2017 and/or 2018

CNPS – California Native Plant Society Ranks and Extensions

List 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
.1 - Seriously endangered (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered (20-80% occurrences threatened)
.3 – Not very endangered (<20% of occurrences threatened, or no current threats known)

Table 2-3c Summary of Number of Special-status Plants Observed within Potential Project Work Areas on Lands Managed by the BLM Needles Office within the EPL Project Alignment

Scientific Name	Common Name	Regulatory Status (Federal/State /CNPS)	Project Segment[1]	Number of Special-status Plants Observed within Potential Project Work Areas[2]
Androstephium breviflorum	pink funnel lily	--/2B.2	3, 4	1
Eriastrum harwoodii	Harwood's eriastrum	--/1B.2	3,4	0
Grusonia parishii	matted cholla	--/2B.2	3,4	0
Menodora spinescens var. *mohavensis*	Mojave menodora	--/1B.2	1,2	0
Sphaeralcea rusbyi var. *eremicola*	Rusby's desert mallow	--/1B.2	3,4	0
Total Number of Special-status Plants on Lands Managed by BLM Needles Office				**1**

Notes:
1. Segment where observed special-status species may be potentially impacted by Project activities
2. Number based on number of individuals observed in potential Project disturbance areas in 2017 and/or 2018

CNPS – California Native Plant Society Ranks and Extensions

List 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
.1 - Seriously endangered (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered (20-80% occurrences threatened)
.3 – Not very endangered (<20% of occurrences threatened, or no current threats known)

Table 2-3d Summary of Number of Special-status Plants Observed within Potential Project Work Areas on Lands Managed by the BLM Las Vegas Field Office within the EPL Project Alignment

Scientific Name	Common Name	Regulatory Status (Federal/State /CNPS)	Project Segment[1]	Number of Special-status Plants Observed within Potential Project Work Areas[2]
Androstephium breviflorum	pink funnel lily	--/2B.2	3, 4	0
Eriastrum harwoodii	Harwood's eriastrum	--/1B.2	3,4	0
Grusonia parishii	matted cholla	--/2B.2	3,4	0
Menodora spinescens var. *mohavensis*	Mojave menodora	--/1B.2	1,2	0
Sphaeralcea rusbyi var. *eremicola*	Rusby's desert mallow	--/1B.2	3,4	0
Total Number of Special-status Plants on Lands Managed by BLM Las Vegas Office				**0**

Notes:
1. Segment where observed special-status species may be potentially impacted by Project activities
2. Number based on number of individuals observed in potential Project disturbance areas in 2017 and/or 2018

CNPS – California Native Plant Society Ranks and Extensions

List 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere	.1 - Seriously endangered (over 80% of occurrences threatened / high degree and immediacy of threat)
List 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere	.2 – Fairly endangered (20-80% occurrences threatened) .3 – Not very endangered (<20% of occurrences threatened, or no current threats known)

Table 2-3e Summary of Number of Special-status Plants Observed within Potential Project Work Areas on Lands Managed by National Park Service within the Mojave National Preserve within the EPL Project Alignment

Scientific Name	Common Name	Regulatory Status (Federal/State /CNPS)	Project Segment[1]	Number of Special-status Plants Observed within Potential Project Work Areas[2]
Androstephium breviflorum	pink funnel lily	--/2B.2	3, 4	0
Eriastrum harwoodii	Harwood's eriastrum	--/1B.2	3,4	50
Grusonia parishii	matted cholla	--/2B.2	3,4	0
Menodora spinescens var. *mohavensis*	Mojave menodora	--/1B.2	1,2	0
Sphaeralcea rusbyi var. *eremicola*	Rusby's desert mallow	--/1B.2	3,4	481
Total Number of Special-status Plants on Lands Managed by NPS within the MNP				**531**

Notes:
1. Segment where observed special-status species may be potentially impacted by Project activities
2. Number based on number of individuals observed in potential Project disturbance areas in 2017 and/or 2018

CNPS – California Native Plant Society Ranks and Extensions

List 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere	.1 - Seriously endangered (over 80% of occurrences threatened / high degree and immediacy of threat)
List 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere	.2 – Fairly endangered (20-80% occurrences threatened) .3 – Not very endangered (<20% of occurrences threatened, or no current threats known)

Table 2-3f Summary of Number of Special-status Plants Observed within Potential Project Work Areas on Lands Owned by the State of California within the EPL Project Alignment

Scientific Name	Common Name	Regulatory Status (Federal/State /CNPS)	Project Segment[1]	Number of Special-status Plants Observed within Potential Project Work Areas[2]
Androstephium breviflorum	pink funnel lily	--/2B.2	3, 4	0
Eriastrum harwoodii	Harwood's eriastrum	--/1B.2	3,4	0
Grusonia parishii	matted cholla	--/2B.2	3,4	0
Menodora spinescens var. *mohavensis*	Mojave menodora	--/1B.2	1,2	0
Sphaeralcea rusbyi var. *eremicola*	Rusby's desert mallow	--/1B.2	3,4	0
Total Number of Special-status Plants on Lands Owned by the State of California				**0**

Notes:
1. Segment where observed special-status species may be potentially impacted by Project activities
2. Number based on number of individuals observed in potential Project disturbance areas in 2017 and/or 2018

CNPS – California Native Plant Society Ranks and Extensions

List 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere	.1 - Seriously endangered (over 80% of occurrences threatened / high degree and immediacy of threat)
List 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere	.2 – Fairly endangered (20-80% occurrences threatened) .3 – Not very endangered (<20% of occurrences threatened, or no current threats known)

Table 2-3g Summary of Number of Special-status Plants Observed within Potential Project Work Areas on Lands Owned within the City of Boulder City within the EPL Project Alignment

Scientific Name	Common Name	Regulatory Status (Federal/State /CNPS)	Project Segment[1]	Number of Special-status Plants Observed within Potential Project Work Areas[2]
Androstephium breviflorum	pink funnel lily	--/2B.2	3, 4	0
Eriastrum harwoodii	Harwood's eriastrum	--/1B.2	3,4	0
Grusonia parishii	matted cholla	--/2B.2	3,4	64
Menodora spinescens var. *mohavensis*	Mojave menodora	--/1B.2	1,2	0
Sphaeralcea rusbyi var. *eremicola*	Rusby's desert mallow	--/1B.2	3,4	0
Total Number of Special-status Plants on Lands Owned by the City of Boulder City				**64**

Notes:
1. Segment where observed special-status species may be potentially impacted by Project activities
2. Number based on number of individuals observed in potential Project disturbance areas in 2017 and/or 2018

CNPS – California Native Plant Society Ranks and Extensions

List 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere	.1 - Seriously endangered (over 80% of occurrences threatened / high degree and immediacy of threat)
List 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere	.2 – Fairly endangered (20-80% occurrences threatened) .3 – Not very endangered (<20% of occurrences threatened, or no current threats known)

Table 2-3h Summary of Number of Special-status Plants Observed within Potential Project Work Areas on Private Lands within the EPL Project Alignment

Scientific Name	Common Name	Regulatory Status (Federal/State /CNPS)	Project Segment[1]	Number of Special-status Plants Observed within Potential Project Work Areas[2]
Androstephium breviflorum	pink funnel lily	--/2B.2	3, 4	0
Eriastrum harwoodii	Harwood's eriastrum	--/1B.2	3,4	0
Grusonia parishii	matted cholla	--/2B.2	3,4	0
Menodora spinescens var. *mohavensis*	Mojave menodora	--/1B.2	1,2	0
Sphaeralcea rusbyi var. *eremicola*	Rusby's desert mallow	--/1B.2	3,4	0
Total Number of Special-status Plants on Private Lands				**0**

Notes:
1. Segment where observed special-status species may be potentially impacted by Project activities
2. Number based on number of individuals observed in potential Project disturbance areas in 2017 and/or 2018

CNPS – California Native Plant Society Ranks and Extensions

List 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere	.1 - Seriously endangered (over 80% of occurrences threatened / high degree and immediacy of threat)
List 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere	.2 – Fairly endangered (20-80% occurrences threatened)
	.3 – Not very endangered (<20% of occurrences threatened, or no current threats known)

2.4 Wetlands and Jurisdictional Features in Potential Project Work Areas

Potentially jurisdictional non-wetland waters occur throughout the EPL Project alignment. Potentially jurisdictional non-wetland waters found in Segments 1, 2, 3, 4, 5, and 6 are generally classified as rivers and streams. The Mojave River is the only major river within the EPL Project alignment, where it normally remains dry except during flooding conditions. More information on the surveyed jurisdictional features is detailed in the *Wetlands and Other Waters Jurisdictional Delineation Report*: *Eldorado – Pisgah - Lugo 220 kV Transmission Line* (Arcadis 2020b).

Tables 2-4a through Tables 2-4h summarize the acres of regulated Waters of the U.S. within potential Project work areas within the EPL Project alignment, including total number of features and anticipated maximum temporary and permanent impacts.

Table 2-4a summarizes the acres of regulated Waters of the U.S. within potential Project work areas on all lands within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4b presents the acres of regulated Waters of the U.S. within potential Project work areas on lands managed by the BLM Barstow Field Office within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4c presents the acres of regulated Waters of the U.S. within potential Project work areas on lands managed by the BLM Needles Field Office within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4d presents the acres of regulated Waters of the U.S. within potential Project work areas on lands managed by the BLM Las Vegas Field Office within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4e presents the acres of regulated Waters of the U.S. within potential Project work areas on lands managed by the NPS within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4f presents the acres of regulated Waters of the U.S. within potential Project work areas on lands owned by the State of California within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4g presents the acres of regulated Waters of the U.S. within potential Project work areas on lands owned by the City of Boulder City within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4h presents the acres of regulated Waters of the U.S. within potential Project work areas on private lands within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

In all cases, the listed impacts within potential Project work areas represent the maximum possible extent of Project work. In practice, due to a combination of impact avoidance methods, helicopter use, and careful siting of Project work activities, actual impacts will be greatly reduced.

Table 2-4a Summary of Maximum Acres of Regulated Waters of the U.S. within Potential Project Work Areas on All Lands within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 other waters	4,807	8.996	226	39.60	2

Table 2-4b Summary of Maximum Acres of Regulated Waters of the U.S. within Potential Project Work Areas on Lands Managed by BLM Barstow Office within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 other waters	1,263	4.73	131	0.0	0

Table 2-4c Summary of Maximum Acres of Regulated Waters of the U.S. within Potential Project Work Areas on Lands Managed by BLM Needles Office within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 other waters	611	1.79	65	0.0	0

Table 2-4d Summary of Maximum Acres of Regulated Waters of the U.S. within Potential Project Work Areas on Lands Managed by BLM Las Vegas Field Office within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 other waters	696	0.0	0.0	0.0	0.0

Table 2-4e Summary of Maximum Acres of Regulated Waters of the U.S. within Potential Project Work Areas on Lands Managed by NPS within Mojave National Preserve within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 other waters	1,505	4.71	154	0.0	0

Table 2-4f Summary of Maximum Acres of Regulated Waters of the U.S. within Potential Project Work Areas on Lands Owned by the State of California within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 other waters	317	0.62	21	0.0	0

Table 2-4g Summary of Maximum Acres of Regulated Waters of the U.S. within Potential Project Work Areas on Lands Owned by the City of Boulder City, Nevada within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 other waters	153	0.0	0.0	0.0	0.0

Table 2-4h Summary of Maximum Acres of Regulated Waters of the U.S. within Potential Project Work Areas on Private Lands within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 other waters	184	0.03	7	0.0	0

Tables 2-4i through Tables 2-4p summarize the acres of regulated Waters of the State within potential Project work areas within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4i summarizes the acres of regulated Waters of the State within potential Project work areas on all lands within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4kj presents the acres of regulated Waters of the State within potential Project work areas on lands managed by the BLM Barstow Field Office within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4k presents the acres of regulated Waters of the State within potential Project work areas on lands managed by the BLM Needles Field Office within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4l presents the acres of regulated Waters of the State within potential Project work areas on lands managed by the BLM Las Vegas Field Office within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4m presents the acres of regulated Waters of the State within potential Project work areas on lands managed by the NPS within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4n presents the acres of regulated Waters of the State within potential Project work areas on lands owned by the State of California within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4o presents the acres of regulated Waters of the State within potential Project work areas on lands owned by the City of Bounder City within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts.

Table 2-4p presents the acres of regulated Waters of the State within potential Project work areas on private lands within the EPL Project alignment, including number of features and anticipated maximum temporary and permanent impacts; note that the EPL Project alignment does not cross private lands within Nevada.

In all cases, the listed impacts within potential Project work areas represent the maximum possible extent of Project work. In practice, due to a combination of impact avoidance methods, helicopter use, and careful siting of Project work activities, actual impacts will be greatly reduced.

Table 2-4i Summary of Maximum Acres of Regulated Waters of the State within Potential Project Work Areas within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 Other Waters	4,807	8.996	226	0.003	2
1602 Jurisdictional Streams (California)	3,970	10.96	225	0.004	2
Jurisdictional Streams (Nevada)	837	0.008	2	0.0	0.0

Table 2-4j Summary of Maximum Acres of Regulated Waters of the State within Potential Project Work Areas on Lands Managed by BLM Barstow Office within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 Other Waters	1,262	4.73	131	0.0	0
1602 Jurisdictional Streams (California)	1,263	5.98	138	0.0	0

Table 2-4k Summary of Maximum Acres of Regulated Waters of the State within Potential Project Work Areas on Lands Managed by BLM Needles Office within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 Other Waters	611	1.79	65	0.0	0
1602 Jurisdictional Streams (California)	611	2.32	69	0.0	0

Table 2-4l Summary of Maximum Acres of Regulated Waters of the State within Potential Project Work Areas on Lands Managed by BLM Las Vegas Field Office within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 Other Waters	696	0.0	0.0	0.0	0.0
Jurisdictional Streams (Nevada)	699	0.0001	1	0.0	0.0

Table 2-4m Summary of Maximum Acres of Regulated Waters of the State within Potential Project Work Areas on Lands Managed by NPS on Mojave National Preserve within the ELP Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 Other Waters	1,505	4.71	154	0.0	0
1602 Jurisdictional Streams (California)	1,505	5.57	162	0.0	0

Table 2-4n Summary of Maximum Acres of Regulated Waters of the State within Potential Project Work Areas on Lands Owned by the State of California within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 Other Waters	317	0.62	21	0.0	0
1602 Jurisdictional Streams (California)	318	0.81	22	0.0	0

Table 2-4o Summary of Maximum Acres of Regulated Waters of the State within Potential Project Work Areas on Lands Owned by the City of Boulder City, Nevada within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 Other Waters	153	0.0	0.0	0.0	0.0
Jurisdictional Streams (Nevada)	154	0.0	0.0	0.0	0.0

Table 2-4p Summary of Maximum Acres of Regulated Waters of the State within Potential Project Work Areas on Private Lands within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
404/401 wetlands	0	0.0	0	0.0	0
404/401 Other Waters	184	0.03	7	0.0	0

Table 2-4p Summary of Maximum Acres of Regulated Waters of the State within Potential Project Work Areas on Private Lands within the EPL Project Alignment

Feature Type	Total Number of Features Mapped	Temporary Impacts		Permanent Impacts	
		Acres	Features	Acres	Features
1602 Jurisdictional Streams (California)	186	0.04	8	0.0	0

3. Mitigation Strategy

SCE's approach to mitigate for impacts to sensitive biological resources due to construction of the Project is to restore temporarily impacted areas on BLM-administered lands consistent with Conservation and Management Action (CMA) LUPA-BIO-7 and LUPA-BIO-8 in the Desert Renewable Energy Conservation Plan Land Use Plan Amendment (DRECP LUPA; BLM 2016). The environmental measures for this Project will generally be applied Project-wide and include erosion control, soil stabilization, and restoration of areas supporting native vegetation that are temporarily impacted by the Project.

Temporary Project disturbance areas requiring restoration will be treated as "restoration areas". The term "restoration area", as used in this HRP, reflects those areas that are subject to required restoration activities. Restoration areas are subject to quantifiable performance standards or targets (e.g., vegetation cover and species diversity). Quantitative monitoring will be conducted to document the progress of restoration areas in meeting performance targets. In addition, qualitative and quantitative monitoring will be conducted to assess maintenance needs, verify whether site stabilization has been achieved, and record the status of invasive plants in the site and the effectiveness of weed abatement measures.

Temporary impacts in areas dominated by non-native species will be revegetated with appropriate native species following initial treatments identified in the Project's IPMP. Temporary impacts to all other categories of land such as private lands or disturbed areas (e.g., agricultural lands, existing roads, OHV trails, grazing areas, trash/dump site, etc.) shall only be subject to the requirements of the Storm Water Pollution Prevention Plan (SWPPP) and the Invasive Plant Management Plan. No additional goals, objectives, or success criteria regarding habitat condition are required for these sites.

Temporary impacts in barren areas may not be subject to restoration requirements if the site is naturally barren, but site stabilization measures will be implemented in accordance with the EPL Project SWPPP. The HRP does not apply to private land. Temporary impacts on private lands would be addressed according to landowner requirements.

Temporary impacts to desert tortoise (*Gopherus agassizii*) habitat will be subject to habitat restoration as outlined in this HRP. Restoration reflects areas with objective standards or goals for measures such as vegetation cover and species diversity. In addition to qualitative monitoring described for restoration, quantitative monitoring will be conducted to document the progress of restoration sites in meeting those goals.

This Plan outlines the methods for restoration of areas temporarily disturbed by the Project. The goal of the restoration efforts is for the treated areas to exhibit evidence of increasing native vegetative cover, density, diversity, and species dominance that is similar to the pre-disturbance conditions or existing conditions in adjacent native vegetation.

4. Baseline Conditions

Documenting baseline conditions is an important component of the restoration program, as the performance criteria for the five-year restoration period will be based on these data. Baseline condition (pre-impact) data will be collected for temporary impact areas. Pre-impact data for the Project site consists of identifying the vegetation community (native species, nonnative species); percent native cover; percent nonnative cover; presence of special status species; soils present; slope aspect(s); any observed disturbance from previous or historic activities; and photographs. Reference sites are employed to account for seasonal fluctuations of vegetation cover and diversity due to weather or climate conditions in comparison with restoration areas.

Reference sites may be used to assess performance issues in restoration areas compared with nearby natural sites to evaluate if a region-wide issue is affecting the revegetation success and to refine performance standards, if needed.

5. Implementation

This section describes general methods that will be used to restore vegetation communities and habitats impacted by the Project. Restoration of temporary disturbance areas following construction will occur as soon as practical after completion of construction activities in the affected area. Plan implementation includes tasks that will be completed prior to construction, during construction, and after construction.

Activities to be completed prior to construction include:

- Establishment of baseline conditions;
- Site-specific restoration planning;
- Seed source identification and collection during the appropriate season (at a minimum one year prior to construction).

Activities to be completed during construction include:

- Plant material salvage and procurement, including salvaging of cacti and yuccas (Section 5.1.4) and special status-plants (Section 5.1.3) as well as salvage of material to be used for mulch;
- Topsoil salvaging and stockpiling to preserve the microbial network within the soil and retain the native seed bank and organic material important to nutrient cycles within the soil;
- Propagation of container plantings, as needed.

Post-construction activities include:

- Site preparation;
- Plant installation;
- Maintenance;
- Monitoring and reporting.

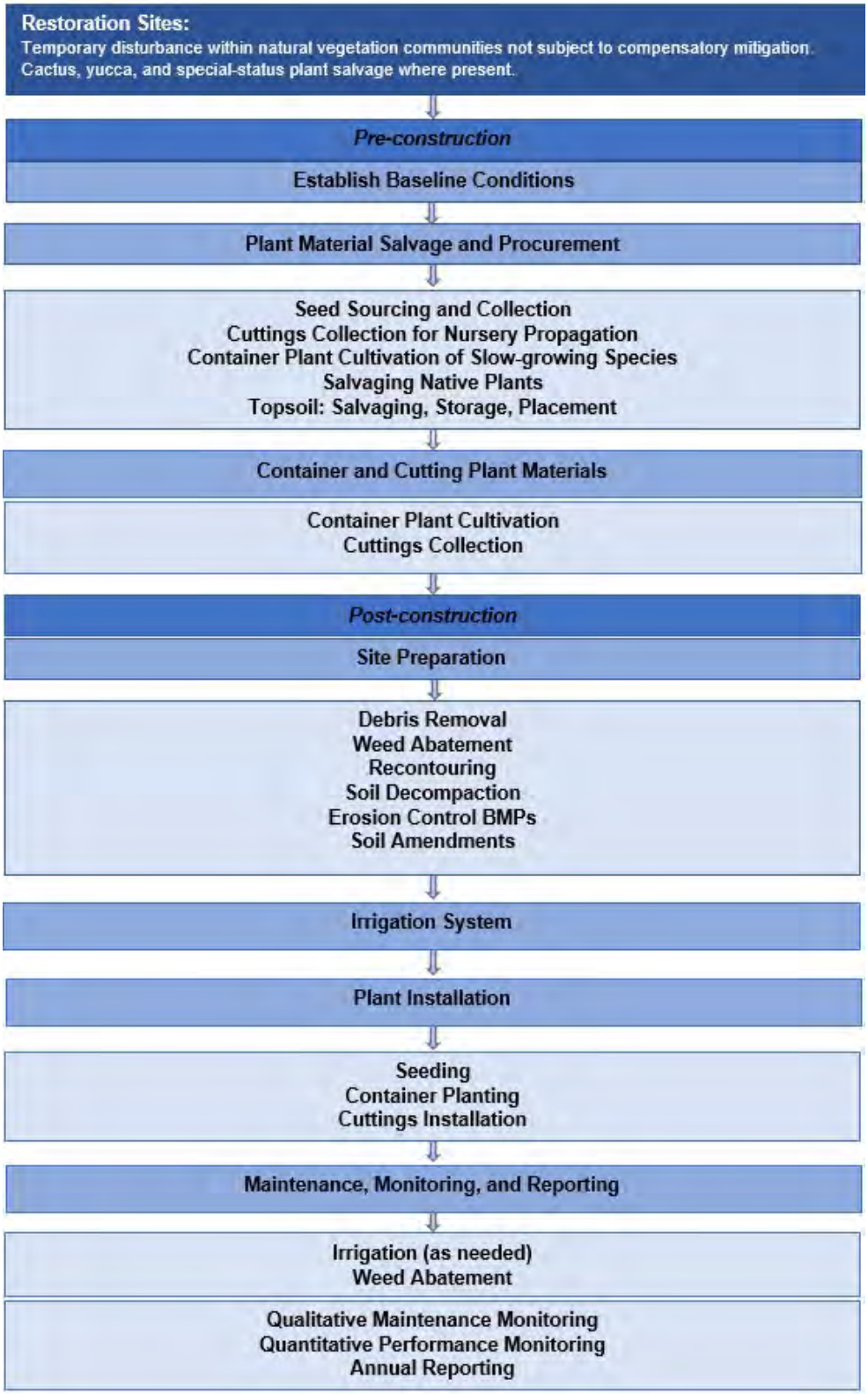
The activities and sequencing associated with Project restoration are summarized in Sections 4 through Section 11 and are shown in a generalized flow chart (Figure 1).

5.1 Plant Material Procurement and Salvaging

Plant materials used for restoration will be derived from on-site sources to the extent feasible. This includes seed collection; container plant propagation from site-collected propagules; salvage of cacti and special-status plants; and salvage of material to be used for mulch. On-site seed collection is not anticipated to fully meet the needs of the restoration process, and supplementary materials may be used as described in this section and in Section 5.2. Generally, acquisition of propagules would occur prior to and during the construction process during the appropriate season for seed maturation.

Selection of on-site plant material for collection and salvage will be made by the Restoration Contractor in consultation with Project construction personnel. As described in this Plan, plant salvage will be determined in part by the plant's health and the probability of transplant success.

Figure 1 Restoration Sequence



5.1.1 Mitigation Plant Propagule Source and Collection

Seeds may be obtained from onsite seed collection prior to or during construction, and seed may also be purchased from commercial vendors. Purchased seed would comply with U.S. Department of Agriculture (USDA) rules and regulations under the Federal Seed Act. Purity and germination rates would be warranted by the seed supplier (e.g., all seed mixtures will be certified "weed free"). All seed would be furnished in sealed standard containers.

On-site seed collection would take place where authorized by the land management agency (primarily BLM or NPS) in the vicinity of the Project area. SCE will work with land management agencies to secure appropriate propagule collection authorizations and establish collection areas. Seed collection is described in more detail below. Container plant cultivation is summarized in Section 5.2. Collection of stem cuttings will primarily be confined to propagules for nursery production of container plantings. Use of stem cuttings placed directly in the ground in restoration areas is not anticipated for the EPL Project with the exception of some cactus species, see Section 5.1.4.

Seed collection will occur at a minimum at least one year prior to construction and may vary across the Project area. Native seed collections will be weed-free and stored in cool dry conditions until ready to use. Collection efforts will follow characterization of potential revegetation sites and determination of planting palettes. Seed collection will target as many native annual and perennial species as are available during each collection phase.

Seed that has become wet, moldy, or otherwise damaged in transit or in storage would not be used and would be rejected and removed from site. If sufficient seed cannot be collected/obtained for a particular species or vegetation community, seed will be substituted with seed of a comparable species with approval from the appropriate land management agency. Changes to seed or planting palettes will be submitted to BLM, CPUC, and NPS for approval. Seeds must be acquired from the appropriate climatic zones for each species.

Seed shall contain no noxious, prohibited, or restricted weed seeds and shall contain no more than 0.5 percent by weight of other weed seeds. Seed may contain up to 2.0 percent of "other crop" seed by weight, including the seed of other agronomic crops and native plants; however, a lower percentage of other crop seed is recommended. Seed tags or other official documentation shall be submitted to BLM and/or NPS at least 14 days before the date of proposed seeding for acceptance. Seed that does not meet the above criteria shall not be applied to public lands.

Seven planting palettes based on dominant vegetation types have been proposed for use across the Project area (see Tables 5-1 through 5-7) to be applied to temporary disturbance areas. These include planting palettes for California Juniper Woodland, Desert Wash Woodland, Joshua Tree Woodland - Mojave Yucca Scrub, Mojave Desert Scrub, Desert Pavement, Saltbush Alkali Scrub, and Desert Sands and Grasses. Planting palettes include species common to several alliances and associations that occur in similar habitats or at similar elevations and may be modified on a case-by-case basis to target dominant species in a given area.

Vegetation communities that will not be impacted by Project activities are not included in the discussion below but are shown in Table 2-1.

The Restoration Contractor will work with the agencies and the Biological Compliance Lead in the field to determine the transition point for use of each planting palette to support site-specific restoration planning.

5.1.1.1 California Juniper Woodland

California Juniper Woodland is dominated by California juniper, a large evergreen shrub to small tree. California Juniper Woodland includes widely scattered mature California junipers growing

with small trees and shrubs such as Joshua tree, rubber rabbitbrush (*Ericameria nauseosa*), and Nevada joint-fir (*Ephedra nevadensis*). California Juniper Woodland occurs in the EPL Project alignment between the Lugo Substation and Mojave River in intermittent patches in Segments 1 and 2.

Alliances and associations of California Juniper Woodland within the EPL Project alignment include:

Vegetation Alliance Common Name	Association Name
California juniper woodland	*Juniperus californica* / herbaceous Association

Impacts to California juniper woodland will be minimized to the maximum extent feasible due to a combination of impact avoidance methods, helicopter use, and careful siting of Project work activities, and topsoil salvaging and placement will be prioritized where soil is disturbed (see Section 3).

The proposed California Juniper Woodland planting palette includes observed dominant native woody species in California Juniper Woodlands, as well as common annual and perennial forbs and a perennial grass.

Table 5-1 California Juniper Woodland Planting Palette

Scientific Name	Common Name	Growth Habit	Propagule Type	Number of Containers or Pounds per Acre (Pure Live Seed)	Segment(s)
Juniperus californica	California juniper	tree, large shrub	container	2	1, 2
Yucca brevifolia	Joshua tree	tree, large shrub	container	1	1, 2
Yucca schidigera	Mojave yucca	shrub	container	1	1, 2
Ambrosia dumosa	white bursage	shrub	seed	2	1, 2
Ephedra nevadensis	Nevada ephedra	shrub	container	1	1, 2
Ericameria nauseosa	rubber rabbitbrush	shrub	seed	2	1, 2
Eriogonum fasciculatum var. *polifolium*	California buckwheat	shrub	seed	2	1, 2
Tetradymia stenolepis	Mojave cottonthorn	shrub	seed	1	1, 2
Stipa speciosa	desert needlegrass	perennial grass	seed	1	1, 2
Sphaeralcea ambigua	desert globemallow	perennial forb	seed	1	1, 2
Amsinckia tessellata	fiddleneck	annual forb	seed	1	1, 2
Malacothrix glabrata	desert dandelion	annual forb	seed	1	1, 2
Mentzelia albicaulis	small-flowered blazing star	annual forb	seed	1	1, 2

Notes:
Planting palette is dependent on availability of seed and other propagules, as well as dominant vegetation at given restoration site

5.1.1.2 Desert Wash Woodland

Desert Wash Woodland and Shrubland vegetation occurs primarily in valleys, flats, arroyos, intermittent channels, and washes in the Mojave Desert and adjacent mountain ranges where there is seasonal surface or subsurface water flow, depending on rainfall. Desert Wash Woodland and Shrubland occurs in all segments of the EPL Project alignment and supports large trees and shrubs such as desert-willow (*Chilopsis linearis*), catclaw acacia (*Senegalia greggii*), and desert smoketree (*Psorothamnus spinosus*), as well as smaller shrubs such as cheesebush (*Ambrosia salsola*) and desert sage (*Salvia dorrii*), among others, depending on location. Five alliances and 11 associations of Desert Wash Woodland vegetation were characterized during the field surveys (Table 2-1).

Alliances and associations of Desert Wash Woodland within the EPL Project alignment include:

Vegetation Alliance Common Name	Association Name
Desert-willow - smoketree wash woodland	*Psorothamnus spinosus* Association *Psorothamnus spinosus / Ambrosia salsola* – (*Bebbia juncea – Ephedra californica*) Association *Psorothamnus spinosus / Senegalia greggii* (*Hyptis emoryi*) Association
Black-stem rabbitbrush scrub	*Ericameria paniculata - Ambrosia salsola* Association
Desert almond – Mexican bladdersage scrub	*Salazaria mexicana* Association
Cheesebush - sweetbush scrub	*Ambrosia salsola* Association *Bebbia juncea* Association *Ambrosia salsola - Larrea tridentata* Association *Ambrosia salsola – (Ambrosia eriocentra – Brickellia incana)* Association *Senna armata - Ambrosia salsola* Association
Creosote bush - white bursage scrub	*Larrea tridentata - Ambrosia dumosa - Senna armata* Association

Impacts to Desert Wash Woodland will be minimized to the maximum extent feasible due to a combination of impact avoidance methods, helicopter use, and careful siting of Project work activities, and topsoil salvaging and placement will be prioritized where soil is disturbed (see Section 3).

The proposed Desert Wash Woodland planting palette includes observed dominant native woody species in Desert-willow – Smoketree Wash Woodland, Black-stem Rabbitbrush Scrub, Desert Almond – Mexican Bladdersage Scrub, Cheesebush – Sweetbush Scrub as well as common perennial and annual forbs and a perennial grass.

Table 5-2 Desert Wash Woodland Planting Palette

Scientific Name	Common Name	Growth Habit	Propagule Type	Number of Containers or Pounds per Acre (Pure Live Seed)	Segment(s)
Chilopsis linearis	desert-willow	tree		1	3, 4, 5, 6
Psorothamnus spinosus	desert smoketree	shrub to small tree		1	3, 4, 5, 6
Senegalia greggii	catclaw acacia	shrub to small tree		1	1, 2, 3, 4, 5, 6
Ambrosia dumosa	white bursage	shrub		2	1, 2, 3, 4, 5, 6
Ambrosia salsola	cheesebush	shrub		1	1, 2, 3, 4, 5, 6
Bebbia juncea var. *aspera*	sweetbush	shrub		0.5	1, 2, 3, 4, 5, 6
Encelia actoni	Acton's brittlebush	shrub		2	1, 2, 3, 4, 5, 6
Encelia farinosa	brittlebush	shrub		1	3, 4, 5, 6
Ericameria paniculata	black-stem rabbitbrush	shrub		1	3, 4, 5, 6
Prunus fasciculata	desert apricot	shrub		0.5	3, 4, 5, 6
Salvia dorrii	Dorr's sage	shrub		0.5	1, 2, 3, 4, 5, 6
Scuttelaria (Salazaria) mexicana	bladder sage	shrub		0.5	3, 4, 5, 6
Senna armata	desert senna	shrub		0.5	1, 2, 3, 4, 5, 6
Pleuraphis rigida	big galleta	perennial grass		1	1, 2, 3, 4, 5, 6
Sphaeralcea ambigua	desert globemallow	perennial forb		2	1, 2, 3, 4, 5, 6
Amsinckia tessellata	fiddleneck	annual forb		0.5	1, 2, 3, 4, 5, 6
Eschscholzia glyptosperma	desert gold poppy	annual forb		1.5	1, 2, 3, 4, 5, 6
Eschscholzia minutiflora	pygmy poppy	annual forb		1	1, 2, 3, 4, 5, 6
Lupinus microcarpus var. microcarpus	chick lupine	annual forb		1	1, 2, 3, 4, 5, 6
Lupinus shockleyi	purple desert lupine	annual forb		1	1, 2, 3, 4, 5, 6
Malacothrix glabrata	desert dandelion	annual forb		1.5	1, 2, 3, 4, 5, 6

Note:
Planting palette is dependent on availability of seed and other propagules, as well as dominant vegetation at given restoration site

5.1.1.3 Joshua Tree Woodland - Mojave Yucca Scrub

Joshua Tree Woodland occurs along all segments of the EPL Project alignment in suitable habitat above 2,500 feet above mean sea level (amsl) on gentle to moderate slopes and alluvial fans. Associated species often include dominants of Mojave Desert Scrub. Mojave yucca is a frequent associated species in Joshua Tree Woodland and also is dominant in several locations at lower elevations than Joshua tree. Joshua Tree Woodland – Mojave Yucca Scrub vegetation occurs in all segments of the EPL Project alignment. A total of 3 alliances and 7 associations of Joshua Tree Woodland – Mojave Yucca Scrub vegetation were characterized during the 2017 and 2018 field surveys (Table 2-1).

Alliances and associations of Joshua Tree Woodland - Mojave Yucca Scrub within the EPL Project alignment include:

Vegetation Alliance Common Name	Association Name
Joshua tree woodland	*Yucca brevifolia / Larrea tridentata – Yucca schidigera / Pleuraphis rigida* Association *Yucca brevifolia / Cylindropuntia acanthocarpa* Association
Mojave yucca scrub	*Yucca schidigera - Coleogyne ramosissima* Association *Yucca schidigera - Cylindropuntia acanthocarpa* Association *Yucca schidigera - Larrea tridentata - Ambrosia dumosa* Association *Yucca schidigera - Larrea tridentata - Ephedra nevadensis* Association
Creosote bush - white bursage scrub	*Larrea tridentata - Ambrosia dumosa - Yucca schidigera* Association

Impacts to Joshua tree woodland and Mojave yucca scrub will be minimized to the maximum extent feasible due to a combination of impact avoidance methods, helicopter use, and careful siting of Project work activities, and topsoil salvaging and placement will be prioritized where soil is disturbed (see Section 3).

The proposed Joshua Tree Woodland - Mojave Yucca Scrub planting palette includes observed dominant native woody species in Joshua Tree Woodland and Mojave Yucca Scrub as well as two perennial grasses and common annual and perennial forbs.

Table 5-3 Joshua Tree Woodland - Mojave Yucca Scrub Planting Palette

Scientific Name	Common Name	Growth Habit	Propagule Type	Number of Containers or Pounds per Acre (Pure Live Seed)	Segment(s)
Yucca brevifolia	Joshua tree	tree	container	2	1, 2, 3, 4, 5, 6
Acamptopappus sphaerocephalus	rayless goldenhead	shrub	seed	1	1, 2, 3, 4, 5, 6
Ambrosia dumosa	white bursage	shrub	seed	1	1, 2, 3, 4, 5, 6
Coleogyne ramosissima	blackbrush	shrub	container	2	1, 2, 3, 4, 5, 6
Encelia actoni	Acton's brittlebush	shrub	seed	1	1, 2, 3, 4, 5, 6
Encelia farinosa	brittlebush	shrub	seed	1	3, 4, 5, 6
Ephedra nevadensis	Nevada ephedra	shrub	container	1	1, 2, 3, 4, 5, 6
Eriogonum fasciculatum var. *polifolium*	California buckwheat	shrub	seed	2	1, 2, 3, 4, 5, 6
Larrea tridentata	creosote bush	shrub	container, seed	1	1, 2, 3, 4, 5, 6
Lycium andersonii	Anderson's thornbush	shrub	container, seed	1	1, 2, 3, 4, 5, 6
Tetradymia stenolepis	Mojave cottonthorn	shrub	seed	1	1, 2, 3, 4, 5, 6
Yucca schidigera	Mojave yucca	shrub	container	2	1, 2, 3, 4, 5, 6
Pleuraphis rigida	big galleta	perennial grass	seed	1	1, 2, 3, 4, 5, 6
Stipa speciosa	desert needlegrass	perennial grass	seed	1	1, 2, 3, 4, 5, 6
Sphaeralcea ambigua	desert globemallow	perennial forb	seed	2	1, 2, 3, 4, 5, 6
Amsinckia tessellata	fiddleneck	annual forb	seed	1	1, 2, 3, 4, 5, 6
Malacothrix glabrata	desert dandelion	annual forb	seed	1	1, 2, 3, 4, 5, 6
Mentzelia albicaulis	small-flowered blazing star	annual forb	seed	1	1, 2, 3, 4, 5, 6

Note: Planting palette is dependent on availability of seed and other propagules, as well as dominant vegetation at given restoration site

5.1.1.4 Mojave Desert Scrub

The majority of the Project is located in Mojave Desert Scrub vegetation, which covers large areas of all segments of the EPL Project alignment. Mojave Desert Scrub vegetation is dominated by creosote bush (*Larrea tridentata*) and/or white bursage (*Ambrosia dumosa*) in many locations but may also be dominated by other desert shrub and herbaceous species, depending on location. A total of 5 alliances and 12 associations of Mojave Desert Scrub vegetation were characterized during the 2017 and 2018 field surveys (Table 2-1).

Alliances and associations of Mojave Desert Scrub within the EPL Project alignment include:

Vegetation Alliance Common Name	Association Name
Acton's and Virgin River brittle brush - net-veined goldeneye scrub	*Encelia actonii* Association
Creosote bush - brittle bush scrub	*Larrea tridentata - Encelia farinosa - Ambrosia dumosa* Association
Creosote bush scrub	*Larrea tridentata* Association *Larrea tridentata - Atriplex polycarpa* Association *Larrea tridentata - Ephedra nevadensis* Association *Larrea tridentata /* wash Association
Creosote bush - white bursage scrub	*Larrea tridentata - Ambrosia dumosa* Association *Larrea tridentata - Ambrosia dumosa - Ambrosia salsola* Association *Larrea tridentata - Ambrosia dumosa - Encelia farinosa* Association *Larrea tridentata - Ambrosia dumosa - Salazaria mexicana* Association *Larrea tridentata – Ambrosia dumosa / Pleuraphis rigida* Association
White bursage scrub	*Ambrosia dumosa Association*

Impacts to Mojave Desert scrub will be minimized to the maximum extent feasible due to a combination of impact avoidance methods, helicopter use, and careful siting of Project work activities, and topsoil salvaging and placement will be prioritized where soil is disturbed, see Section 3.

The proposed Mojave Desert Scrub planting palette includes observed dominant native woody species in Acton's and Virgin River Brittle Brush – Net-veined Goldeneye Scrub, Creosote Bush – Brittle Bush Scrub, Creosote Bush Scrub, Creosote Bush – White Bursage Scrub, and White Bursage Scrub as well as two perennial grasses and common annual and perennial forbs.

Table 5-4 Mojave Desert Scrub Planting Palette

Scientific Name	Common Name	Growth Habit	Propagule Type	Number of Containers or Pounds per Acre (Pure Live Seed)	Segment(s)
Ambrosia dumosa	white bursage	shrub	seed	3	1, 2, 3, 4, 5, 6
Ambrosia salsola	cheeseweed	shrub	seed	2	1, 2, 3, 4, 5, 6
Atriplex polycarpa	allscale	shrub	seed	1	1, 2, 3, 4, 5, 6
Encelia actoni	Acton's brittlebush	shrub	seed	1	1, 2, 3, 4, 5, 6
Encelia farinosa	brittlebush	shrub	seed	1	1, 2, 3, 4, 5, 6
Ephedra nevadensis	Nevada ephedra	shrub		0.5	1, 2, 3, 4, 5, 6
Ericameria cooperi	Cooper's goldenbush	shrub	seed	0.5	1, 2
Eriogonum fasciculatum var. *polifolium*	California buckwheat	shrub	seed	2	1, 2, 3, 4, 5, 6
Larrea tridentata	creosote bush	shrub	container, seed	1	1, 2, 3, 4, 5, 6
Lycium andersonii	Anderson's thornbush	shrub	container, seed	0.5	1, 2, 3, 4, 5, 6
Senna armata	desert senna	shrub	seed	0.5	1, 2, 3, 4, 5, 6
Sphaeralcea ambigua	desert globemallow	perennial forb	seed	1	1, 2, 3, 4, 5, 6
Pleuraphis rigida	big galleta	perennial grass	seed	0.5	1, 2, 3, 4, 5, 6
Stipa hymenoides	Indian ricegrass	perennial grass	seed	0.5	1, 2, 3, 4, 5, 6
Amsinckia tessellata	fiddleneck	annual forb	seed	1	1, 2, 3, 4, 5, 6
Eschscholzia glyptosperma	desert gold poppy	annual forb	seed	1	1, 2, 3, 4, 5, 6
Eschscholzia minutiflora	pygmy poppy	annual forb	seed	1	1, 2, 3, 4, 5, 6
Lupinus microcarpus var. *microcarpus*	chick lupine	annual forb	seed	1.5	1, 2, 3, 4, 5, 6
Lupinus shockleyi	purple desert lupine	annual forb	seed	1.5	1, 2, 3, 4, 5, 6
Malacothrix glabrata	desert dandelion	annual forb	seed	1.5	1, 2, 3, 4, 5, 6

Note: Planting palette is dependent on availability of seed and other propagules, as well as dominant vegetation at given restoration site

5.1.1.5 Saltbush Scrub

The EPL Project alignment intersects playas, alkali flats, and other alkaline habitats in low-lying areas, with Allscale Scrub vegetation dominant in Segments 1 and 2. Dominant species in Saltbush Scrub vegetation include several species of saltbush (*Atriplex* spp.), as well as bush seepweed (*Suaeda nigra*), saltgrass (*Distichlis spicata*), and other salt-tolerant species. Native species diversity is lower in alkaline and salty soils than in other upland habitats. One alliance and 3 associations of Saltbush Scrub vegetation were characterized during the 2017 and 2018 field surveys (Table 2-1).

Alliances and associations of Saltbush Scrub within the EPL Project alignment include:

Vegetation Alliance Common Name	Association Name
Allscale scrub	*Atriplex polycarpa* Association
	Atriplex polycarpa Sparse Playa Association
	Atriplex polycarpa / Annual Herbaceous Association

Impacts to saltbush scrub will be minimized to the maximum extent feasible due to a combination of impact avoidance methods, helicopter use, and careful siting of Project work activities, and topsoil salvaging and placement will be prioritized where soil is disturbed (see Section 3).

The proposed Saltbush Scrub planting palette includes observed dominant native woody species in Allscale Scrub as well as common perennial and annual forbs and two perennial grasses.

Table 5-5 Saltbush Scrub Planting Palette

Scientific Name	Common Name	Growth Habit	Propagule Type	Number of Containers or Pounds per Acre (Pure Live Seed)	Segment(s)
Ambrosia dumosa	white bursage	shrub	seed	2	1, 2
Ambrosia salsola	cheeseweed	shrub	seed	2	1, 2
Atriplex canescens var. *canescens*	fourwing saltbush	shrub	seed	1	1, 2
Atriplex confertifolia	shadscale	shrub	seed	2	1, 2
Atriplex polycarpa	allscale	shrub	seed	4	1, 2
Suaeda nigra	bush seepweed	perennial forb	seed	0.5	1, 2
Distichlis spicata	saltgrass	perennial grass	seed	1.5	1, 2
Stipa hymenoides	Indian ricegrass	perennial grass	seed	0.5	1, 2
Amsinckia tessellata	fiddleneck	annual forb	seed	1.5	1, 2
Malacothrix glabrata	desert dandelion	annual forb	seed	1.5	1, 2

Note: Planting palette is dependent on availability of seed and other propagules, as well as dominant vegetation at given restoration site

5.1.1.6 Desert Pavement

The Rigid Spineflower - Hairy Desert Sunflower Desert Pavement Alliance is dominated by seasonal cover of herbaceous annual and perennial species on fairly well-developed desert pavement in one location in the Cady Mountains in Segments 3 and 4.

There is one Alliance and one association of Desert Pavement within the EPL Project alignment:

Vegetation Alliance Common Name	Association Name
Rigid spineflower – hairy desert sunflower desert pavement	*Chorizanthe rigida – Geraea canescens* Desert Pavement Association

Impacts to Desert Pavement will be minimized to the maximum extent feasible due to a combination of impact avoidance methods, helicopter use, and careful siting of Project work activities, and topsoil salvaging and placement will be prioritized where soil is disturbed (see Section 3).

The proposed Desert Pavement planting palette includes observed annual forbs in Rigid Spineflower –Hairy Desert Sunflower Desert Pavement.

Table 5-6 Desert Pavement Planting Palette

Scientific Name	Common Name	Growth Habit	Propagule Type	Number of Containers or Pounds per Acre (Pure Live Seed)	Segment(s)
Chorizanthe spinosa	Mojave spineflower	annual forb	seed	5	3, 4
Chaenactis fremontii	pincushion flower, Fremont pincushion	annual forb	seed	5	3, 4
Malacothrix glabrata	desert dandelion	annual forb	seed	5	3, 4

Note: Planting palette is dependent on availability of seed and other propagules, as well as dominant vegetation at given restoration site

5.1.1.7 Desert Sands and Grasses

Desert Sands and Grasses form sparse cover in active to partially stabilized dunes and sand fields in the Mojave Desert. Observed species include big galleta (*Pleuraphis rigida*), desert panicgrass (*Panicum urvilleanum*), desert needlegrass (*Achnatherum speciosum*), desert dicoria (*Dicoria canescens*), and desert sand-verbena (*Abronia villosa*). A total of 3 alliances and 4 associations of Desert Sands and Grasses vegetation were characterized during the 2017, 2018, and 2022 field surveys (Table 2-1).

Alliances and associations of Desert Sands and Grasses within the EPL Project alignment include:

Vegetation Alliance Common Name	Association Name
Big galleta shrub-steppe	*Pleuraphis rigida* Association *Pleuraphis rigida / Ambrosia dumosa* Association
Desert needlegrass grassland	*Achnatherum speciosum* Association
Mojave-Sonoran Desert dunes	*Panicum urvilleanum* Association

Impacts to Desert Sands and Grasses will be minimized to the maximum extent feasible due to a combination of impact avoidance methods, helicopter use, and careful siting of Project work activities, and topsoil salvaging and placement will be prioritized where soil is disturbed (see Section 3).

The proposed Desert Sands and Grasses planting palette includes observed dominant native perennial grasses in Big Galleta Shrub-Steppe, Desert Needlegrass Grassland, and Mojave-Sonoran Desert Dunes as well as common annual forbs and a perennial forb.

Table 5-7 Desert Sands and Grasses Planting Palette

Scientific Name	Common Name	Growth Habit	Propagule Type	Number of Containers or Pounds per Acre (Pure Live Seed)	Segment(s)
Pleuraphis rigida	big galleta	perennial grass		3	3, 4
Stipa hymenoides	Indian ricegrass	perennial grass		3	3, 4
Achnatherum speciosum	desert needlegrass	perennial grass		3	3, 4
Panicum urvilleanum	desert panicgrass	perennial grass		3	3, 4
Croton californicus	California croton	perennial forb		2	3, 4
Dicoria canescens	desert dicoria	annual forb		3	3, 4
Abronia villosa var. *villosa*	desert sand-verbena	annual forb		3	3, 4

Note:
Planting palette is dependent on availability of seed and other propagules, as well as dominant vegetation at given restoration site

5.1.2 Salvage of Native Plant Material

Salvaging of cacti and yuccas will be conducted according to the guidance provided in Section 5.1.4 and salvaging of special-status plants will be conducted according to the guidance provided in Section 5.1.3. In addition, plant material will be salvaged to be used for mulch.

The practice of applying vertical and/or horizontal mulching reduces wind erosion, traps seed, provides refuge sites for wildlife, and acts as a protective barrier. Vertical mulch derived from salvaged plant material will be buried as vertical mulch to prevent high winds or flood events from moving the mulch off site. Horizontal mulch is appropriate for large pieces of mulch that would not be practical to bury, such as a dead Joshua tree or desert-willow.

These mulching practices may be incorporated into restoration efforts. Materials for vertical or horizontal mulch may include rocks, boulders and natural organic debris (e.g., shrub branches and other plant materials). Where appropriate, sites will be brushed prior to topsoil salvage to salvage native plant material for mulching purposes during restoration activities. Salvaged plant material will be temporarily stored in a designated storage location.

Following construction, SCE will determine the best locations to place the plant material on the restoration sites. Woody plant material generated during vegetation removal operations may be preserved (windrowed) intact onsite as vertical mulch for later use in soil rehabilitation of temporary disturbance areas. Prior to use, windrowed vegetation may be chipped or shredded to a large particle size (1 to 3 inches). To prevent possible spread of non-native invasive species, only native material will be salvaged and reapplied to the restoration sites. To prevent

fire hazards, windrowed vegetation will not be stockpiled within the CAL FIRE high and very high fire hazard severity zones (see https://egis.fire.ca.gov/FHSZ/), and all plant material stockpiling will be done in accordance with the Project-specific Fire Prevention and Emergency Response Plan.

5.1.3 Special-status Plant Species Restoration, Salvage, and Relocation

Three special-status plant species were observed within Project work areas, as detailed in Table 2-3a through 2-3h. Of these, two species are herbaceous perennials: pink funnel lily and Rusby's desert mallow. One species is a shrub: Mojave menodora.

The following subsections describe the methods that will be implemented prior to construction, during construction, and, where relevant, during the post-construction/restoration phase of the Project to facilitate avoidance, minimization, and/or mitigation of impacts to special-status plants, if required.

5.1.3.1 Pre-construction Impact Analysis

Prior to the start of construction, an updated analysis will be conducted to determine the extent to which CRPR 1 and 2, or California BLM Special Status, plants may be impacted by construction. The impact analysis will be conducted by intersecting the permanent and temporary disturbance areas with the local occurrences of special-status plants mapped in the study area. To the greatest extent possible given the data available, impacts will be quantified in terms of individual plants rather than occupied habitat area. For some species, however, it may not be feasible to count the number of individuals, particularly in the full extent of the local occurrence for the purpose of quantifying the percentage of individuals impacted.

Where avoidance of CRPR 1 or 2, or California BLM Special Status, plant species is not feasible and the impacts are greater than 10 percent of the local occurrence[1], either by number of individual plants (if possible given available data) or by area of occupied habitat[2], the seed collection or salvage methods discussed below will be implemented.

5.1.3.2 Pre-construction Survey

A pre-construction survey will be conducted prior to the start of construction. The Construction Contractor and Qualified Biologists will cooperate to locate special-status plants expected to occur based on the analysis presented in this Plan, and to determine if impacts can be avoided. The Construction Contractor generally has some flexibility in where equipment is positioned in an approved disturbance area. The surveys will be conducted by Qualified Biologists[3] using the current CNPS – CDFW botanical survey protocol (CDFW 2018). The locations of each special-status plant or population will be recorded using a GPS-enabled handheld data collector. Particular effort will be made to verify the number of individual plants and record their precise locations where they occur inside Project disturbance areas, although this may be infeasible for some species. If construction proceeds at specific locations on a schedule that precludes seasonally appropriate pre-construction surveys and/or if drought conditions that affect the

[1] A local occurrence is a population or group of populations separated by no more than 0.25 mile.
[2] For the purpose of analysis, occupied habitat is defined as each mapped plant location and a 25-foot buffer for the cumulative results of all focused plant surveys conducted for the Project, current to the date of the analysis.
[3] A Qualified Biologist is a biologist approved by the appropriate land management agency to conduct pre-construction surveys, pre-activity sweeps, biological monitoring and/or relocation/salvage activities for special-status plant and wildlife species and nesting birds

detectability of special-status plants, impact avoidance or minimization determinations will be based on the survey data from past surveys conducted for the Project.

Where special-status plants occur, it may be possible to position equipment to avoid the plants completely or to reduce the number of plants affected. The results of the pre-construction survey will inform additional impact analysis and avoidance and/or impact reduction approaches.

5.1.3.3 Avoidance Buffers and Monitoring

Prior to the start of construction, buffers of sufficient size to prevent direct or indirect disturbance from construction activities, erosion, inundation, or dust will be established around each CRPR 1 or 2, or California BLM Special Status, plant/population in or near a defined construction area. Buffers will be established at the direction of a Qualified Biologist in cooperation with the Construction Contractor, to the extent feasible. The purpose of buffering is to facilitate avoidance of special-status plants, adjacent suitable soils, and presumed seed bank. The buffer area will be clearly staked, flagged, or signed for avoidance and maintained throughout construction at a given location. The size of the buffer will depend upon the proposed use of the adjacent lands and the plant's ecological requirements (e.g., sunlight, shade, water availability, edaphic physical and chemical characteristics). For plants/populations in close proximity to construction activities, exclusion fencing (e.g., snow fence, silt fence) may be implemented at the discretion of the Qualified Biologist and biological monitoring may be conducted to ensure avoidance.

5.1.3.4 Proposed Impact Reduction Approaches

As described above, avoidance is the first course of action. However, where avoidance is not feasible, and where the Project would directly or indirectly affect more than 10 percent of a local occurrence of CRPR 1 or 2, or California BLM Special Status, plant species, seed collection and/or salvage methods will be implemented as described in the following sections.

5.1.3.4.1 Seed Collection

For some special-status plant species covered by this Plan, the recommended impact reduction approach is to collect seed from source plants and replace lost individuals/occurrence extent by seeding during the restoration process. Topsoil salvage may incidentally also preserve the natural seedbank and potentially support restoration of special-status annuals and herbaceous perennials in sites that are subject to grading. The seed of special-status plant species within Project work areas will be collected prior to Project disturbance, as described below.

Prior to and during construction (if feasible), seed from special-status plant occurrences potentially impacted by the Project will be collected. Seed will be collected in such a manner as to not damage the parent plants. Only seeds (or fruit) that are ripe and readily detach from the plant will be collected. SCE may, at its discretion, collect up to 50 percent of recoverable seed per plant from plants within the same occurrence but outside the Project disturbance areas. To the extent possible, where seed collection is the primary method for salvage, seed collection activities will be scheduled during a time when seed production is at a maximum.

If grading is required within special-status plant habitat, topsoil salvage and replacement will also be conducted, if feasible. Steep slopes, bedrock, and other factors may preclude topsoil salvage.

Collected seed will be incorporated into the seed mix that will be used in the restoration of temporary disturbance areas, and will be applied according to this Plan. Seeds will only be

applied to temporary disturbance areas within the occurrence that was the seed's original source and will not be introduced into other Project locations.

5.1.3.4.2 Relocation

Special-status plant species that may be salvaged and relocated include pink funnel lily, Rusby's desert mallow, and Mojave menodora. The special-status plants likely to be affected by the Project are those located within temporary disturbance areas. SCE will determine whether individual special-status plants warrant attempted relocation based on each plant's health, availability of suitable receptor sites, and the comparable viability of alternative salvage methods. Relocation of perennial herbs may be attempted; alternatively, seeds may be collected and included in the restoration seed mix.

Impacted shrubs and subshrubs that cannot be salvaged will be replaced by cultivating plants from seed (i.e., nursery propagation) and replanting them as a proxy for the impacted individuals. Cuttings may be used for nursery propagation of special-status species.

Relocation of individual plants may include planting in temporary disturbance areas within the Project boundaries where work is complete or moving plants to suitable receptor sites that are outside the temporary disturbance areas but that are within the EPL Project alignment. Receptor sites for any salvaged plants shall be in the nearest area of habitat for the species that is not likely to be subjected to future disturbances (whether Project-related—such as operation and maintenance activities—or non-Project-related—such as recreational impacts from off-highway vehicle use; etc.). Receptor sites will, to the extent feasible, match the microhabitat conditions (e.g., slope, aspect, soil characteristics, plant community) of each plant's original location.

Special-status plants identified for salvage and relocation will be tagged with a unique identifier, the north side of the plant will be marked, and species, size, location, and current health will be recorded. The health assessment will be based on the following guidelines:

- **Good:** Plant has primarily normal and healthy growth, less than 10 percent dead or yellowed leaves and tissue.
- **Fair:** Plant shows signs of stress but has primarily live growth, 10 to 40 percent dead or yellowed leaves and tissue.
- **Poor:** Plant shows signs of severe stress or disease, more than 40 percent dead or yellowed leaves and tissue.

In coordination with the Restoration Ecologist, SCE will determine if the salvaged plant will be relocated to a receptor site or held on site and re-planted in the original location. Ecological and microhabitat information, as well as salvage date and location, will be recorded for each plant/occurrence at the time of salvage to assist in mitigation success. Representative photographs will also be taken at each salvage location. The planting location will be recorded once the relocation effort is complete.

Individual plants will be extracted by hand or with heavy equipment (Bobcat, backhoe, tree spade, or similar as appropriate) to include a root mass extending approximately 12 inches around the base of each plant. For large cactus mats, the plants may need to be segmented and removed in pieces. Injured or cut roots will be treated with sulfur. Salvaged plants will be placed in temporary pots and stored on site under shade cloth, then replanted in approximately the original location after post-construction site stabilization treatments have been applied, generally within one week of the initial excavation.

Planting holes will be excavated to diameters approximately twice that of the root ball (but not deeper than the root ball, to avoid settling). Planting holes will be thoroughly moistened prior to placement of salvaged plants. During installation, care will be taken to minimize disturbance of the root system. The plants will be placed in the holes and loose native soil will be backfilled into the hole around the plant and firmly hand-packed around the root ball to eliminate any air pockets. Berms or basins may be constructed to aid in irrigation, but special care will be taken to avoid pooling of water around plant stems or settling of the stem/root union below grade. Plants will be watered immediately after installation with at least one gallon of water.

To increase survival probability and overall plant success, salvaged plants are not proposed to be harvested a second time for replacement onto the Project site during post-construction restoration.

Rooting of established plants may be deep, requiring relocation of a large block of soil to maintain root structure. Seed collection and nursery propagation also may be considered.

5.1.3.4.3 Nursery Propagation

To supplement salvaged plants and replace those that could not be salvaged, some special-status plants maybe grown from seed, rhizomes, or cuttings. Seeds, rhizomes, or cuttings from special-status plants in or adjacent to Project disturbance areas will be collected prior to construction. Native soil will also be collected and used in cultivation. The size and shape of the containers used for nursery propagation will match the plant's rooting strategy (i.e., deep-rooted plants should be grown in tall pots to encourage more root development, while fibrous-rooted plants can be grown in shorter pots or as plugs). All special-status plants will be planted within the occurrence location that was the original source of their seed, rhizome, or cutting. Replanting will generally occur between October and March (depending on location) to take advantage of rainfall. Planting and subsequent care and maintenance will follow the same procedures used for relocation of mature plants. If determined to be appropriate, plants may also be propagated in nurseries for the purpose of seed bulking, with the resulting seeds added to the restoration seed mixes as described in Section 5.1.1.

Roots or stems may be salvaged as a potential propagation technique for some species (i.e., rhizomes or succulent stems). To ensure availability of material for mitigation and adaptive management, vegetatively reproducing species may be held at a qualified plant conservation institution or native plant nursery where materials shall be increased through division or other propagation methods prior to onsite mitigation. Seeds, rhizomes, or container plants resulting from nursery propagation may be used as backup for additional mitigation if success standards are not met and to allow for "over planting" during the initial mitigation attempt to increase the probability of success.

5.1.4 Cactus and Yucca Salvage and Relocation

This section outlines methods for the avoidance and reduction of impacts to cacti and yucca, cacti and yucca salvage guidance, methods for relocation of cacti and yucca when Project impacts are unavoidable, and maintenance, monitoring, and reporting if relocation occurs. These methods are consistent with Federal and State requirements, including the Desert Renewable Energy Conservation Plan (DRECP) and state statutes and codes.

Fourteen species of cacti were observed within the EPL Project alignment: desert pincushion (*Coryphantha chlorantha*), spinystar (*C. vivipera* ssp. *vivipera*), buckhorn cholla (*Cylindropuntia acanthocarpa*), golden cholla (*C. echinocarpa*), pencil cholla (*C. ramosissima*), cottontop cactus

(*Echinocactus polycephalus*), Engelmann's hedgehog cactus (*Echinocereus engelmannii*), Mojave kingcup cactus (*E. mojavensis*), beavertail cactus (*Opuntia basilaris* subsp. *basilaris*), pancake prickly-pear (*O. chlorotica*), cactus apple (*O. engelmannii*), brown-spined prickly-pear (*O. phaeacantha*), plains prickly-pear (*O. polyacantha*), and matted cholla (*Grusonia parishii*).

Four species of Yucca were observed within the EPL Project alignment: western Joshua tree (*Yucca brevifolia*), Mojave yucca (*Y. schidigera*), Spanish bayonet (*Y. baccata*), and chaparral yucca (*Hesperoyucca whipplei*).

Of these, three cactus species are included in the California Native Plant Society (CNPS) Rare Plant Inventory with a California Rare Plant Rank (CRPR): desert pincushion (CRPR 2B.1), spinystar (CRPR 2B.2), and matted cholla (CRPR 2B.2), but none of these species were observed within potential Project work areas. In addition, Joshua tree woodland, which is protected by the DRECP, was observed in multiple locations within the EPL Project alignment. The western Joshua tree is currently a candidate species for listing status by CDFW as of August 2022; this species has no CRPR ranking.

The following subsections describe the methods that will be implemented prior to construction, during construction, and during the post-construction/restoration phase of the Project to facilitate avoidance, minimization, and/or mitigation of impacts to cactus and yucca. These methods will also be implemented for yucca clones larger than 3 meters (9.8 feet) in diameter (longest diameter if the clone forms an ellipse rather than a circular ring) per DRECP LUPA-BIO-SVF-2.

5.1.4.1 Project Design and Impact Minimization

The Project has been designed to minimize impacts to native habitats, including native vegetation communities with cactus and yucca, by incorporating previously developed and disturbed areas into the design, to the extent feasible. "Drive and crush" methods will be implemented to the extent feasible to preserve native vegetation and native seed banks.

5.1.4.1.1 Focused Surveys and Mapping

Prior to the start of construction, SCE will conduct focused surveys to inventory cactus and yucca individuals occurring in the Project disturbance areas. The data will serve to identify the number of individual plants of each species that are suitable for transplant within each disturbance area, if necessary. The height and health status of each cactus and yucca that are suitable for transplant will be recorded.

5.1.4.1.2 Avoidance and Minimization

As described above, the Project has been designed to minimize impacts to native vegetation, including vegetation communities with cactus and yucca species, to the extent feasible. Based on the results of the preconstruction surveys, SCE will further work towards impact avoidance by coordinating with the Construction Contractor prior to the initiation of ground-disturbing activities to determine if impacts may be further reduced by modifying the disturbance areas and/or locating vehicles and equipment to avoid cactus and yucca.

For cactus and yucca plants (all species) within disturbance areas that can be avoided, avoidance buffers of an appropriate size will be clearly staked, flagged, fenced, and/or signed. The buffers will be maintained throughout the construction phase. The size of the buffers will vary depending on species, habitat, and type of construction disturbance.

5.1.4.2 Salvage and Relocation Approach

Where avoidance is not feasible, SCE will implement salvage and relocation as described in the following sections, depending on transplant suitability. The methods that follow will be implemented in coordination with a qualified Restoration Ecologist.

Salvage and relocation will be conducted as described below on federal lands throughout the Project area. Salvage and relocation of non-special-status cactus and yucca species will not be conducted on non-federal lands. Salvage of special-status cactus (i.e., matted cholla) are addressed in Section 5.1.3.

5.1.4.2.1 Health Assessments and Transplant Suitability

The ecophysiology of North American cactus was a principal subject of study during the first decades of the 20th Century, as summarized by McGinnies (1981). Cactus resist desiccation partly because they lack leaves and have a very small surface to mass ratio. Their cuticle is also thick, with stomata that close tightly during the day, open after dark, and respire at night to reduce moisture loss. Their root systems can also grow rapidly in response to increases in soil moisture, and rootlets also dieback readily, minimizing moisture loss caused by soil desiccation. Injuries, whether to the stem or root system of cactus, also callous quickly in the absence of fungi or other pathogens. Cactus are also rich in water and nutrients; their spines serve chiefly as defense mechanisms against herbivores.

Many of the physiological adaptations of cactus to desert environments also mean that they are relatively easy to transplant successfully if appropriate procedures are implemented. Rooted primarily in dry soils, cactus typically do not have the resistance to fungal pathogens possessed by most plants of more humid habitats. Thus, some of the procedures outlined herein anticipate the vulnerability of cactus to soil pathogens.

High survival rates following transplanting have been reported for a variety of cactus species, including barrel cactus (*Echinocactus* spp.), cholla (*Cylindropuntia* spp.), and opuntia (*Opuntia* spp.), which establish well from individual joints and pads. These transplants can be especially advantageous in acting as “nurse plants,” as grown plants in relocation areas provide beneficial modifications to the microclimate, such as shading or wind protection, which can enhance establishment of seeded plant species (Kigel 1995).

For cactus and yucca plants that cannot be avoided, a health assessment will be conducted. Health categories will include dead, poor, fair, and good and will be based on the following criteria:

Good: live, green leaves and branches (no yellowing), new growth in season, no or little damage from pests and disease.

Fair: pest, drought, and disease damage may be present but not fatal (e.g., some yellowing). Plants in fair health have predominantly green stems.

Poor: mostly dead or yellow foliage and branches, plant shows signs of severe stress or disease.

Dead: the entire aboveground portion of the plant is dead (for yucca, no green leaves; for barrel-type cactus, stems are hollow).

Cactus and yucca ranked in good or fair health will be candidates for relocation. Cactus and yucca ranked in poor health or dead will not be considered for transplanting and will be stockpiled for use as vertical mulch.

Age, as measured by size (height) of the potential transplant, can also be a factor for success for cactus. Smaller (i.e., young) cactus have demonstrated transplant survival rates of 95 percent; larger (i.e., old) cactus are not as receptive to relocation (NRCS 2009). Therefore, during the health assessment, height will also be documented for each plant and only smaller individuals of each cactus species will be designated for relocation. Yucca over six feet in height will not be salvaged.

5.1.4.2.2 Transplant Timing

Salvage of unavoidable candidate plants will occur prior to the start construction at each site. Seasonal considerations will be incorporated into the salvage effort when feasible, such as prioritizing the salvage of cactus and yucca during mild weather (e.g., spring) when temperatures rarely drop below 60 degrees Fahrenheit. Periods of heavy rain will be avoided. If transplanting must occur during colder months or during rainfall periods, additional methods may be required to ensure successful transplantation (NRCS 2009).

5.1.4.2.3 Transplant Site Selection

The locations chosen to receive transplanted cactus and yucca will be selected to maximize long-term survival of salvaged plants. Transplant sites will include sites where work is complete and/or where no impacts are anticipated, such as undisturbed margins of work areas or areas outside of but adjacent to the work area in undisturbed vegetation.

Transplant sites will be located within the SCE ROW or 100-foot buffer. When cactus and yucca are transplanted outside of Project disturbance areas, the prospective transplant site will be evaluated to determine if any existing undisturbed cactus and yucca are present. Salvaged plants will not be planted in areas with existing high densities of cactus and yucca plants to avoid potentially jeopardizing success through over-competition for resources. Care will be taken to ensure that each transplant site is similar to the plant's original location with respect to slope, soil, soil texture, vegetation community, and degree of sun exposure. A desktop analysis and field survey will be conducted prior to conducting transplanting activities to facilitate avoidance of jurisdictional features, rare plant occurrences, and other sensitive resources (e.g., desert tortoise burrows, cultural resources).

5.1.4.2.4 Transplant Preparation Methods

Cactus and yucca eligible for salvage based on the evaluation criteria defined in Section 5.1.4.2.1 will be prepared as follows:

- Record the species, size, and current health of the plant
- Record the removal and transplant location with GPS coordinates and required microsite data
- Determine the transplant procedure to be used
    - Transplant to adjacent site (preferred), or
    - Hold on site or transplant to temporary nursery, then re-plant in original location

- Attach numbered flagging, pins, or other demarcation to identify each plant (tying flagging on the north side for clumps of plants, or for single barrel plants, tying the flag around the stem and locating the knot on the north side to maintain direction)
- Salvaged plants will be stored on site prior to transplanting. In most cases, survival of transplanted plants will be maximized by allowing the roots to heal (approximately 5 days)

For all salvaged plants, materials and tools that come in contact with plant tissue (e.g., burlap, shovels used for excavations) will be rinsed in a 10 percent bleach solution before use on another plant. During the period that plants are held to allow the roots to heal, the plants will be stored in locations that minimize risk of damage or theft. Examples of potential locations may be at the edge of work areas where adequate space is present or at nearby Project features with available space.

Cactus and yucca relocated from the shade canopy of adjacent vegetation will not survive direct sunlight and will sunburn (NRCS 2009). Shade cloth will be implemented during hot season transplanting, if drought stress is apparent or suspected. The shade cloth, either supported by a structure over the plant or placed directly on the plant, can be used to protect plants following transplanting until the root system recovers adequate function. Shading will be used during the first summer following transplanting, if needed.

Herbivore protection, such as exclusionary fencing, may be required if signs of herbivore damage is observed at the time of transplanting or during monitoring events.

5.1.4.2.5 Barrel-type Cactus Salvage

Several barrel-type cactus species are present or have the potential to occur in Project disturbance areas. These species include cottontop cactus, hedgehog cactus, and Mojave kingcup cactus. The following is generally a two-person process, recommended to ensure successful transplantation of barrel-type cactus species:

- The plant will be excavated with enough soil mass to maintain a viable root system. Small cactus (under eight inches in height) may be excavated with a shovel, with a soil and root mass extending outward three to six inches beyond the base of the plant. Cactus larger than eight inches will be prepared by excavation of a 12-inch deep trench around the plant, approximately 12 inches from the base.
- Hand tools will be used to undercut the root mass to a point near where it can be detached. Lateral roots will be saved to the extent possible to help stabilize the transplant (NRCS 2009). The root mass will be wrapped in canvas or burlap, and if needed, the cactus will be stabilized with staking. Cactus will be removed by hand or with hand tools and carts when possible. Large cactus may require use of heavy equipment, such as an excavator, to lift them out of the trench.
- Immediately after removal from the trench, the root mass will be inspected. Damaged roots will be trimmed back and the root mass will be treated with sulfur to minimize infection risk. Excavated cactus will then be stored on site under shade cloth for several days, if needed based on weather conditions, to allow root healing. Shade cloth will be supported by a framework to avoid entanglement with spines.

- After the root healing period, cactus from short-term temporary disturbance areas will be replaced in approximately their original location after completion of construction activities and site stabilization actions. Replanting will require an excavation adequate to contain the root mass. The cactus will be replanted with its original compass orientation (i.e., flagging side facing north), and the soil will be replaced and firmly packed and immediately watered. Watering will be adequate to saturate and compact the soil around the transplant; additional soil will be added as needed.

5.1.4.2.6 Cholla and Opuntia Salvage

Several species of cholla and opuntia are present or have the potential to occur in Project disturbance areas. These species include buckhorn cholla, golden cholla, silver cholla, pencil cholla, beavertail cactus, and matted cholla. These species will be salvaged as intact individuals, if feasible, or through nursery propagation of cuttings, a piece of a plant that is used in horticulture for vegetative (asexual) propagation.

Chollas grow with segmented stems that easily detach and fragment and larger plants often cannot be salvaged intact. However, chollas also readily root from the fragmented stem segments. Within Project disturbance areas, live cholla material will be salvaged and stockpiled for use as vertical mulch during restoration. Rooted chollas under three feet in height will be salvaged using methods described for barrel-type cactus (Section 5.1.4.2.5). Larger chollas may also be salvaged with the root ball intact, although plant stems may be trimmed as cuttings if intact transplant cannot be achieved. If chollas fragment during the salvage attempt, the root ball will be planted and the stems will be scattered adjacent to the salvaged plant to provide an opportunity for regrowth.

Small opuntias may be salvaged using methods described for barrel-type cactus at the discretion of the Restoration Contractor. Opuntias that cannot be salvaged whole without substantial stem fragmentation will be salvaged as cuttings, with supportive methods used to encourage rooting and cutting survival.

Opuntia pads (i.e., cuttings) will be salvaged from each individual that cannot be salvaged. Three to five healthy pads from each opuntia will be removed at the node (the area where the pads attach to one another) and kept together throughout the salvage and transplant process. Cuttings will be dusted with sulfur and allowed to heal for approximately seven days. Cuttings will be planted as a group from the original plant, buried vertically to approximately half the depth of the pad with the cut side down. Pads will be watered after transplant. The location will be staked with the original plant's unique identification, as tagging separate pads will not be effective. Remaining opuntia material will be salvaged for use as vertical mulch during restoration.

5.1.4.2.7 Yucca Salvage

Four species of yucca were observed within the EPL Project alignment: Mojave yucca, Spanish bayonet, Joshua tree, and chaparral yucca. Transplant sites will be located within the EPL Project alignment or 100-foot buffer. When yucca are transplanted outside of Project disturbance areas, the prospective transplant site will be evaluated to determine if any existing undisturbed cactus and yucca are present. Salvaged plants will not be planted in areas with existing high densities of cactus and yucca plants to avoid potentially jeopardizing success through over-competition for resources.

Care will be taken to ensure that each transplant site is similar to the plant's original location with respect to slope, soil, soil texture, vegetation community, and degree of sun exposure. A desktop analysis and field survey will be conducted prior to conducting transplanting activities to facilitate avoidance of jurisdictional features, rare plant occurrences, and other sensitive resources (e.g., desert tortoise burrows, cultural resources).

Yucca receiver sites should have excellent drainage, including loose, gravelly, or otherwise well-drained soils.

5.1.4.2.7.1 Spanish Bayonet, Mojave Yucca, and Chaparral Yucca Salvaging

Spanish bayonet, Mojave yucca, and chaparral yucca under six feet tall will be salvaged. Individuals over six feet tall are less likely to survive the transplant process and require large excavations and heavy equipment for transplant. These individuals will be salvaged for use as vertical mulch during restoration rather than transplanted live.

Spanish bayonet, Mojave yucca, and chaparral yucca will be salvaged using methods similar to those described for barrel-type cactus. Yuccas have lower internal water reserves than cactus, and survival and reestablishment can be lower than for cactus of a comparable size. Yuccas are also sensitive to replanting depth and will not be planted with the base of the rosette any deeper than the original pre-disturbance depth.

5.1.4.2.7.2 Joshua Tree Salvaging

Joshua trees under 10 feet tall have the highest likelihood of surviving the transplanting process and should be the focus of the salvaging effort. Larger Joshua trees may be transplanted or used as vertical mulch during restoration. Salvaging and transplanting should occur during the cool season, ideally in February or March but any time between October through March is acceptable. Joshua tree transplants exhibit high mortality during warm to hot months (April through September).

Large Joshua trees should be salvaged using machinery, but smaller individuals can be dug up by hand. A hydraulic tree spade or front-end-loader is recommended. Excavation equipment should be sterilized prior to digging up and transplanting each Joshua tree to reduce the likelihood of pathogen transfer.

- Prior to salvaging, the north side of each Joshua tree will be clearly marked or tagged, and each tree will be replanted, or temporarily stored prior to replanting, in the same orientation as it was prior to removal.
- The Joshua tree will be excavated with enough soil mass to maintain a viable root system. This includes excavation of a trench located outside of the edge of the canopy of the above ground canopy and extending at least 18 inches into the ground.
- Hand tools will be used to undercut the root mass to a point near where it can be detached. Lateral roots will be saved to the extent possible to help stabilize the transplant.
- Immediately after removal from the trench, the root mass will be inspected. Damaged roots will be trimmed back and the root mass will be treated with sulfur or a fungicide to decrease exposure to pathogens.

- The root mass will be wrapped in canvas or burlap, and if needed, the Joshua tree will be stabilized with staking.
- Excavated cactus will then be stored on site under shade cloth, ideally for no more than two to three days before transplanting. Shade cloth will be supported by a framework to avoid entanglement with pointed leaves.
- Joshua trees should be pre-watered 24 hours before transplanting in receiver sites.
- Holes should be pre-dug prior to moving the Joshua tree into position for planting and filled with water and allowed to drain.
- Place the Joshua tree in the hole with the flare of the base of the trunk at grade level.
- After placing the Joshua tree in the hole, backfill the hole with native soil. Use a shovel handle to carefully tamp dirt down around the roots to avoid any air pockets, which can result in pathogen formation and root loss.
- Large or leaning Joshua trees may require stabilization until the roots have become reestablished using guy-wire staking. Guy-wires are connected to the ground (i.e., preferably via a “dead-man” anchor below grade) and attached to the trunk or limbs with an expandable, non-abrasive connector. Multiple guy-wires may be required (i.e., recommended three equally spaced around the rootball for stability).
- Water in the transplant, thoroughly wetting the soil but not leaving the Joshua tree in a ponded basin. Water transplants once or twice a week for the first three months after transplanting, allowing the soil to dry out between waterings; hence watering frequency may vary, depending on rainfall and temperature. Continue watering once a week or so for the first two years after transplanting, with less frequent watering during the cold months. In all cases, the Restoration Ecologist should monitor soil moisture and adjust watering as needed.

5.1.4.2.8 Temporary Nurseries

Use of temporary nurseries will be avoided, as feasible. Temporary nurseries would require transplanting individual plants multiple times, which decreases the survival of salvaged plants. However, a temporary nursery may be considered if there is no suitable transplant location nearby. Some locations on the Project have high densities of cactus and the surrounding habitat may not support the addition of transplanted cactus from other areas. Therefore, if a suitable location is not available in the adjacent habitat, or would not be available within a short period of time, a temporary nursery will be considered.

Temporary nurseries would be on site if adequate space with level ground and access is available at a nearby Project disturbance area, or if necessary, at the nearest Project staging yard. Temporary nurseries would consist of a raised bed with native soils if on site or clean sand if in a yard. Prior to the final transplant from the temporary nursery back into the transplant site, the health of the plant will be evaluated. Plants in poor condition will be used as vertical mulch, as their probability of survival if transplanted is low.

If feasible, plants held in temporary nurseries would be replanted in the fall, when summer heat has subsided and rain has begun, and the plants can become established prior to the coldest and wettest weeks of winter. After removal of plants from temporary nurseries, the above-

ground frame and soil would be removed. Native soils would be used in the recontouring of the site after construction is complete.

5.1.5 Topsoil Salvage, Storage, and Placement

The practice of salvaging and stockpiling the top 2 to 6 inches of topsoil is intended to preserve the microbial network within the soil and to retain the native seed bank and organic material important to nutrient cycles within the soil. This treatment is most appropriate at sites with native vegetation in which severe disturbance to the soil will occur, such as grading or excavating, and the protection of existing soil is not feasible.

SCE proposes to salvage, stockpile, and reuse the top 2 to 6 inches of topsoil in temporary impact areas where it's feasible to do so, and where it will clearly contribute to the successful establishment of the target vegetation communities or to support special-status species (https://deserttortoise.org/wp-content/uploads/BMP_fact_sheet_3_topsoil.pdf).

Criteria for potentially suitable sites for topsoil salvage include the following:

- Areas dominated by native species with low to no cover of non-native species
- Construction activities such as underground trenching, heavy grading, or other excavation activities where natural soil horizons are substantially disrupted

Stockpile locations should be identified in safe locations and restricted to existing approved disturbance areas and in compliance with other environmental and visual restrictions.

Limiting factors for topsoil salvage:

- Slopes greater than 25%
- Sites with cultural resources where ground-disturbing activities are limited
- Weed infestation areas

Salvaged topsoil shall be stored in compliance with the SWPPP requirements. If covering the topsoil pile is recommended to prevent soil migration, use of jute or other permeable erosion control materials is recommended to allow adequate oxygen to soil biota.

5.2 Container Plant Materials

Habitat restoration will be primarily achieved through a combination of seeding where possible, coupled with appropriate use of container plants for species that exhibit low germination rates under field conditions, especially in arid conditions. Use of container plants in desert areas, where seasonal precipitation may be low or infrequent, may facilitate establishment of dominant woody plants in a timely manner. The plant palette tables for different vegetation types in Section 5.1.1 identify suitable candidates for container plantings by habitat.

As described in Sections 5.1.2, 5.1.3, 5.1.4, and 5.1.5, salvage of native plant material and topsoil will also be implemented to restore native species and associated soil microbiomes.

Container plants may be used for certain species that are unlikely to readily germinate under field conditions. Seeds or cuttings used for propagating nursery-grown container plantings must be acquired from locally-collected plant material within the appropriate climate zones and may be collected prior to construction and delivered to a restoration nursery for cultivation, as described in Section 5.1.1.

The size and shape of the containers should match the plant's rooting strategy (i.e., deep-rooted plants should be grown in tall pots to encourage more root development, while fibrous-rooted plants can be grown in shorter pots or as plugs).

Container plants will be grown for a minimum period of four months in a greenhouse or under shade cloth and then conditioned in full sun for at least four months prior to planting. SCE will inspect all container plants prior to or upon delivery to verify that the plants are of the correct species and quantities, are visually free of weeds, pests and disease, and showing signs of healthy growth (e.g., no evidence of coiled roots), as determined by a visual field inspection upon delivery. Any plants that are not within these standards will be rejected.

Container plant installation is discussed in more detail in Section 5.5.2.

5.3 Post-construction Site Preparation

Post-construction site preparation will include debris removal, non-native plant removal, recontouring, soil decompaction, and installation of erosion control BMPs, along with other activities.

5.3.1 Removal of Debris

All restoration sites shall be free from trash and debris. SCE will make all reasonable efforts to remove trash and debris from every restoration site prior to installation and throughout the maintenance and monitoring period.

5.3.2 Non-native Plant Removal

Prior to seed and/or plant installation, SCE will remove any non-native plants from the restoration site by hand-pulling, mechanical removal, and/or herbicide application. Plant materials containing viable seed shall be immediately bagged, removed from the site and disposed of at an approved location. Rhizomatous species will be treated with herbicide to ensure that plants cannot re-sprout, if herbicide use is approved by the appropriate agency. All herbicides shall be applied in a manner to minimize/avoid drift or transport of chemical away from target plants and in accordance with all state and federal regulations and manufacturer's instructions by a Licensed Qualified Applicator under the direction of a Pest Control Advisor (PCA). In riparian areas, only water-safe herbicides approved for use near water shall be used unless otherwise approved.

A weed control management approach referred to as "grow and kill cycles" may also be implemented at select sites as a component of site preparation. Grow and kill cycles is the management approach of using irrigation or natural rainfall to intentionally stimulate the germination of weed seeds within the restoration site. The germination and growth of weed seeds is followed by subsequent treatment and removal of the weedy material, often by herbicide application, conducted at the appropriate growth stage to achieve maximum kill of the unwanted plants. Grow and kill cycles contribute to the reduction of weed seeds present within the existing seed bank by extracting and eliminating the material prior to installation of native seed material. Depending on the conditions of the site, multiple grow and kill cycles may be implemented within a single growing season. On sites with temporary irrigation systems installed, grow and kill cycles can be implemented during the dry season as well.

5.3.3 Recontouring

If necessary, temporary impact areas that are disturbed by Project construction activities will be recontoured to restore the original land contour and slope grade of the adjacent areas to the extent feasible to restore a natural appearance. Gravel or rock laid at temporary impact areas will be removed. Recontouring shall take place at the cessation of construction activities.

5.3.4 Soil Decompaction

Soils in restoration areas that are compacted or become compacted as a result of Project construction activities (e.g., use of heavy equipment or large construction vehicles, repeated/regular driving on site) shall be loosened prior to seeding and/or planting. Appropriate locations for soil decompaction will be identified by SCE in consultation with the Restoration Ecologist. A penetrometer may be used to measure the compaction on adjacent reference sites to determine if decompaction is required. Decompaction shall occur prior to the restoration installation activities. Decompaction can be achieved by loosening the soil using a backhoe, equipment with ripping teeth, a disk harrow, or manually using shovels. The soil at rooting depth shall be loosened generally to a depth of 12 inches unless otherwise specified; loosening may need to occur at a greater depth depending on the existing soil conditions. The surface shall be left rough-textured with no clods or rocks greater than three inches in diameter. Following loosening, the soil shall be track walked or texturized to create a surface suitable for hydroseeding and planting. For some sites, decompaction may be limited by the SWPPP requirements.

5.3.5 Erosion Control BMPs

SCE will maintain erosion control best management practices (BMPs) within restoration sites in compliance with SWPPP requirements. To prevent sediment from leaving the restoration areas or rills from forming, SCE shall ensure that the proper remedial measures are in place. This may include hydroseeding, and/or installation of erosion control measures such as silt fencing, straw or coir wattles, hay bales, and jute netting. SCE will make every effort to integrate SWPPP treatments with restoration site preparation.

5.3.6 Soil Amendments

The use of soil amendments is not anticipated; however, if topsoil replacement is not possible, SCE may add organic soil amendments to improve nutrient holding capacity, soil structure, and root development under the guidance of the Project Restoration Ecologist, if consistent with the licensing/permitting documents. In addition, native plants with tolerance for specific conditions may be substituted for species in the current palette.

5.4 Irrigation System (Contingency)

Container stock installation requires an associated irrigation method to supply irrigation through the first one to three years. This may include the use of a water truck to water container plantings in small areas or installation of a temporary irrigation system.

Irrigation will be installed and tested prior to container plant installation and may include use of flood bubblers or drip emitters. In cases of very small or remote planting sites, DRiWATER or equivalent gel water product or hand watering using buckets may be used to irrigate container plants.

Irrigation frequency is discussed in Section 6.1.

5.5 Plant Installation

Plant installation methods, including seeding, container planting, and plant protection are described in this section.

5.5.1 Seeding Methods

Seeding will be completed following site preparation activities and non-native plant abatement using the seed sourcing guidelines detailed in Section 5.1.1.

To the extent possible, seeding will be conducted when atmospheric moisture levels are high (generally between the months of October and February). Seeding would be accomplished through application of an appropriate seed mix via one of three techniques: imprint seeding, hydroseeding, or broadcast seeding. Seeding rates based on the seeding method will be incorporated into Site-based planning under the guidance of the Project Restoration Ecologist. For instance, broadcast seeding requires higher seeding rates than mechanical seeding.

The seeding method implemented at each restoration site will depend upon accessibility and size of the area to be seeded. Easily accessible areas will be seeded with the imprint seeding method, and/or hydroseeding method; smaller more remote and/or inaccessible areas will be broadcast seeded. These methods are described below.

5.5.1.1 Imprint Seeding

Imprint seeding may be used in mitigation sites that are large enough and accessible for the imprinting equipment and where the soils are neither too loose nor heavily compacted. Imprint seeding provides greater soil-to-seed contact and provides a pocket for water infiltration that protects and encourages germination. Imprinting is accomplished via a mechanical imprinter that is pulled behind a tractor or tracked vehicle and simultaneously spreads and buries seeds in V-shaped depressions. In appropriate soils, imprinting facilitates successful establishment of seed into the soil and eliminates the need for mulch, soil irrigation, and soil binding. Imprinting also increases rainwater infiltration, improves gas exchange between the soil and atmosphere, reduces erosion, and improves contact between seeds and soil water (Barnes 1950; Gintzburger 1987; Bainbridge 2007). Hard soils should be loosened using ripping shanks, or similar equipment, prior to imprinting to ensure that the troughs are deep enough to retain water. Wheat bran or similar binder should be mixed with seed to assist with uniformity of application rate. Where container planting is also planned, imprint seeding should take place prior to container planting. In lieu of an imprinting machine, dozer track walking perpendicular to the site contours may also be used to create seed “safe sites” prior to hand-broadcasting or hydroseeding.

5.5.1.2 Hydroseeding

The designated seeding areas should be seeded using a two-stage hydroseed application method. Where container planting is planned, preventative measures may be taken to avoid damage to container plants, such as covering plants to prevent them from being coated with hydroseed slurry, or damaged from hydroseeding spraying. The seed mix (quantity will vary based on habitat type and site-specific conditions) will be mixed with approximately 2,000 pounds per acre of long-strand wood fiber, a colorant, 150 pounds per acre of binder (adjust accordingly for slope), and sufficient water to allow the mix to be applied evenly over the restoration area. All hydroseeding mixing shall be performed in a clean tank, rinsed a minimum of three times (to ensure the removal of any residual seed) in a wash out area. The hydroseeder would be equipped with a continuous agitation and recirculation system to produce a uniform slurry and have the capacity to apply this slurry at a uniform and continuous rate.

Application of hydroslurry would comply with product specifications. The designated areas would be sprayed with the slurry in a sweeping motion and in an arced stream until a uniform coat is achieved, with no slumping or shadowing as the material is spread at the required rate. Any excessive mulch coating on plants would be removed. The seed slurry would be applied within one hour of preparation as the viability of the seed could be compromised. A typical rate of application in arid California is 500 pounds per acre of wood fiber mulch for hydroseed-only sites and 1,500 to 2,000 pounds per acre of wood fiber mulch and a tackifier for the hydromulch

method (Newton and Claassen, 2003); however, the restoration contractor will determine the specific rate of application on a site-by-site basis in consultation with the SWPPP consultant.

5.5.1.3 Broadcast Seeding

Broadcast seeding will generally be used where mechanical seeding is deemed infeasible because of substrate, location, or disturbance area size. In general, application of hand-broadcasted seed will be reserved for areas approximately 0.5 acre or less or where small amounts of seed are needed. However, greater quantities of broadcast seed are generally required for successful plant establishment compared with mechanical seeding methods.

Hand-seeded sites will be raked or harrowed before seeding to break up the surface and after to allow seeds to fall into crevices. Raking or other post-seeding treatment to lightly cover seed will also be completed to enhance germination likelihood, provide even distribution of seed, and reduce losses to granivores. This will also help retain moisture for germination. The seed material may be broadcast by hand or using a seed spreader. Hand seeding will be timed to occur in the late fall prior to rains.

5.5.2 Container Planting

Container planting will occur prior to seeding activities when feasible. All container plants will be inspected prior to planting to ensure that they are healthy, free of weeds, pests, and disease, and the proper size. Container plants will be installed in areas determined to be feasible and appropriate by SCE. During transport from the nursery or storage facility to the planting site the plant material will be handled carefully, such as the plants shall not be dropped, tossed or otherwise “roughly handled.” Upon plant delivery, container plants shall be stored in a designated temporary storage location that is within a developed or disturbed area approved by SCE. Plants will be protected from herbivory, vandalism or theft, as well as maintained (watered) while they are in temporary storage for planting.

Plants will typically be installed on 5-foot centers for shrub species, with closer spacing for herbaceous perennials and wider spacing for larger shrubs or trees, (although final spacing may vary upon container size used and species to be planted). All container plants and trees shall be planted in accordance with the following specifications:

- Plants shall be planted with the roots untangled and sides scarified to promote new root development, roots shall be protected from weather exposure during planting.
- Planting holes shall be augured and be no more than 1.5 times the diameter and 2 times the depth of the container species to be planted.
- Planting holes shall be backfilled 25 percent with excavated native soil and filled with water and allowed to drain completely prior to planting. Container plants must never be installed in planting holes with standing water; all water shall be allowed to settle and infiltrate through the soil prior to plant installation.
- Plantings shall be set in well-drained planting holes with the crown of the root ball approximately 0.5 inches above the backfilled soil. The soil around the planting shall be tamped down sufficiently to eliminate any air pockets in the soil.
- A basin around the planting shall be constructed by creating a berm above the existing grade approximately 24 inches in diameter around the planting.
- Each planting shall be sufficiently watered after installation so that water reaches the lower roots.

5.6 Plant Protection

Some plantings may be vulnerable to herbivory by rabbits, burros, deer, cattle, and/or other herbivores, and use of tree tubes, deer cages, or perimeter fencing may be considered for specific sites. Herbivore barriers made of chicken wire or a similar material that will prevent herbivores from chewing through the barrier. Barriers will be a minimum of two feet above ground. The herbivory cages shall be inspected during each maintenance visit, and removed when that herbivory will no longer compromise the health and establishment of the plantings. Herbivory caging will be removed before it hinders plant development and growth. If determined that there is a potential threat of subterranean root damage by small mammals, wire cages constructed of chicken wire may be installed into planting holes prior to planting.

In addition, some areas may be subject to offroad use and require plant protection, including but not limited to hard barriers, to protect vulnerable seedlings and plantings. The installation of plant protection measures will be addressed on a case by case basis during the restoration planning phase of the Project.

6. Maintenance

Maintenance will begin with implementation of the restoration work at each of the Project's temporary disturbance areas, and will continue for 5 years or until success standards are met, whichever comes first. Maintenance tasks may include supplemental watering, erosion control, and weed/pest abatement. Environmental conditions will be monitored and adaptive measures may be applied as necessary.

6.1 Irrigation

Germination at seeded areas will rely on natural precipitation. Supplemental watering is not proposed for the seeded restoration efforts. However, if the applied seed does not successfully germinate due to low seasonal precipitation, supplemental watering may be considered as a remedial action to promote plant establishment and growth. Supplemental watering may also be conducted in restoration areas where container plantings have been installed, if needed.

6.1.1 Supplemental Watering

The appropriate supplemental watering methodology would be decided on a case-by-case basis. Watering would be gradually reduced as the plants become established.

The goal of irrigation is to supplement or mimic natural rainfall patterns to promote root systems to maximize survival and vigor. Irrigation may be used on sites where container plants are installed. Irrigation and supplemental watering may be considered in conjunction with other restoration treatments on a site-by-site basis. Specific schedules and quantities of irrigation will depend on weather patterns and site conditions.

6.2 Weed Control

Weed control measures will be implemented during post-construction restoration where necessary in accordance with the IPMP. Control measures may include physical (hand-pulling, mechanical removal) and chemical (herbicide application) treatment methods. These control methods shall be dependent on the weed species, location of weeds, and the time of year that weed control operations occur.

6.2.1 Physical Methods

Physical/manual weed control methods may be appropriate in sensitive habitats, immediately around container plant basins, around germinating native species, and in areas where chemical methods are prohibited. Recommended physical control methods are as follows:

- Hand-pulling may be used to remove localized and discrete populations of herbaceous species prior to seed set. Cutting may be used to remove shrub and tree species. This method may require follow-up herbicide applications to kill the root system and prevent re-sprouting.
- Mechanical removal may be used to remove weed infestations from large areas where few or no native plant species are present. This method may use a mower, weed whacker, or tiller.

6.2.2 Chemical Methods (Herbicides)

Herbicides can be a very effective method in controlling weed species by killing or inhibiting plant growth. The appropriate chemical and method of application is based on the species, the

degree of infestation, time of year, temperature, and environmental conditions. Only state, BLM-, and/or NPS-approved herbicides may be used. Herbicides will be used in compliance with USEPA instructions, and applications will be performed in accordance with federal, state, and local laws and regulations. The environmental risks of using herbicides will be minimized by using marker dyes to make the herbicide visible in areas where it has been applied.

6.3 Plant Protection

Any installed plant protection measures will be maintained during the maintenance and monitoring period. Maintenance includes repairs, installation of additional measures, and removal of plant protection if plants have outgrown the protective barrier.

The installation of remedial plant protection measures will be addressed on a case-by-case basis during the maintenance phase of the Project.

7. Monitoring (excluding Special-status Plant Species and Cacti)

SCE will perform periodic monitoring to assess site stabilization and restoration progress. Assessments during monitoring may include seed germination observations, evaluation of restoration progress such as planting survival and volunteer recruitment of native species, estimates of percent native and weed cover by species, and documenting and correction of any erosion problems. SCE may also evaluate other performance indicators including the presence of non-native plant species, the presence of significant disease or pest problems, and the need for remedial measures.

The monitoring period will commence after installation and will continue for 5 years or until success standards are met. Monitoring may consist of maintenance and performance monitoring. When the success standards are met, no further maintenance, monitoring, or remedial measures will be required.

7.1 Maintenance Monitoring

SCE will perform maintenance monitoring to assess the maintenance needs of the sites as needed. Maintenance monitoring will be focused on the potential need for remedial actions to address problems that could influence plant growth and not on the success standards themselves. Maintenance monitoring will be conducted Project-wide in restoration areas, as well as representative areas where drive-and-crush was implemented. Remedial actions may be implemented in drive-and-crush areas if maintenance monitoring indicates that the level of disturbance from the Project precludes successful natural recovery.

The frequency of visits may be adjusted based on the season (e.g., more weed growth occurs in spring), restoration activity (i.e., container plant installation), and the needs of the site. Assessments may include evaluation of soil conditions (i.e., moisture), container plant health, container plant growth, seed germination, irrigation system function or the need for supplemental watering, volunteer recruitment of native species, presence/absence of non-native plant species, presence of significant disease or pest problems, general site maintenance, and any erosion problems.

7.2 Performance Monitoring

SCE will perform performance monitoring annually during the growing season. The specific timing will be intended to provide the most useful information on progress towards meeting restoration objectives. Generally, the monitoring survey will occur in early to mid-summer, depending on location, after annual plants would have reached maturity but before senescence and high summer temperatures. This timing allows estimates of the maximum level of annual and perennial ground cover and allows identification of most plant species. Monitoring for special-status species would occur in the appropriate season to identify and determine success.

The goal of performance monitoring is to evaluate the progress of the restoration site towards achieving success criteria, which are set relative to pre-Project disturbance (baseline) conditions. An appropriate reference site may be selected for each vegetation type that is similar in vegetative composition as well as environmental parameters for sites that may not have baseline data and to account for seasonal fluctuations of vegetation cover and diversity due to weather or climate conditions.

Data collection may include the general site conditions, native and nonnative plant percent cover, bare ground cover, plant density, container plant survival, species richness, and photo documentation and/or aerial surveys. Data collected will be compared to baseline conditions or reference site conditions to assess progress and determine if remedial actions are needed. In particular, the success standards for percent cover should be relative to baseline conditions. Baseline condition data may be modified based on reference site conditions over the monitoring period. For example, baseline data collected in drought conditions may be artificially low and may need adjustment relative to reference site data collected concurrently. Similarly, baseline conditions collected in a good rainfall year may need adjustment in extended drought conditions relative to reference site data collected concurrently.

Vegetation cover data collection will generally follow the line-point intercept methods outlined in the Monitoring Manual for Grassland, Shrubland, and Savanna Ecosystems, Volume 1 (Herrick et al. 2017). Cover data will be collected along three transects at most sites. Very small sites will require modified design and additional transects may be added to large sites. Data will be collected at specific points along the line. The design will be modified to fit the size and shape of the restoration site. Cover data using the CDFW-CNPS Protocol for the Combined Vegetation Rapid Assessment and Relevé Field Form (CNPS 2019) methods may also be collected.

Vegetation sampling will follow the methods outlined in the CDFW-CNPS Protocol for the Combined Vegetation Rapid Assessment and Relevé Field Form (CNPS 2019). In addition, photographs of the site will be taken from permanent photo monitoring stations facing the restoration area. The locations of the photo monitoring stations will be recorded using GPS.

7.3 Monitoring Schedule

A 5-year maintenance and monitoring period will commence following installation to track progress toward achieving success standards. Under the 5-year monitoring program, maintenance monitoring will occur monthly for Year 1 and quarterly for years 2 through 5 and will continue until the success standards are met. Following installation, data from the first performance monitoring event, which generally occurs every spring, will be in the As-Built report. The monitoring schedule is presented in Table 7-1.

Table 7-1 Monitoring Schedule

Restoration Phase	Frequency (per Calendar Year)	Duration
Installation period	Twice per month (directly follows completion of plant installation).	120 Days
Maintenance Monitoring Years 1 -3	Up to 20 events; timing may vary by year but should be scheduled to sufficiently assess weed occurrence, soil moisture, planting health and growth, natural recruitment, and presence of disease or pests.	Variable
Maintenance Monitoring Years 4 & 5	8 events; timing may vary by year but should be scheduled to sufficiently assess weed occurrence, soil moisture, planting health and growth, natural recruitment, and presence of disease or pests.	Variable
Performance Monitoring Years 1- 5	5 events; will typically occur in summer but may vary by year to optimize data collection and account for year-to-year variations in rainfall and/or other factors.	Variable

8. Monitoring (Special-status Species and Cacti)

SCE will implement a monitoring, maintenance, and reporting program to record implementation efforts and to evaluate progress of the restoration efforts towards meeting the success standards set forth in this Plan. The purpose of monitoring and reporting is to document successes, failures, and remedial actions related to the effort. Monitoring the status and progress of this effort will allow for timely adaptive or remedial measures to increase the probability of success.

Monitoring and maintenance will begin at the commencement of the seeding, salvaging, and/or planting effort and will continue for up to 5 years, or until the success standards are met. When the success standards are met, no further maintenance, monitoring, or remedial measures will be required.

8.1 Monitoring

Seeded, salvaged, and/or planted special-status plant and cactus individuals will be monitored throughout the first year, beginning at the commencement of the seeding, planting, and/or salvage and relocation effort, to increase the rate of re-establishment and reproductive success. Performance monitoring will be conducted annually for up to five years, or until the success standards are met, or if directed otherwise by the appropriate agencies, following the schedule presented in Section 7.1.3.

Monitoring field work will be timed to allow a growing season following completion of transplanting (or previous monitoring effort) to occur and may be conducted concurrently with other monitoring surveys performed as required by this Plan. Monitoring will be conducted by qualified botanists with experience identifying native and non-native plants present in the EPL Project area. Performance monitoring frequency may be increased in response to observed conditions, such as unusually dry years or the potential need for remedial actions after the first year of maintenance.

8.2 Maintenance

Maintenance visits will be conducted approximately every 2-4 weeks in the first year but may be increased and/or extended in response to observed conditions, such as unusually dry years or the potential need for remedial actions after the first year of maintenance.

Seeded, salvaged, and/or planted special-status plant and cactus individuals will be monitored and maintained throughout the first year to increase the rate of re-establishment. For salvaged individuals or container plantings, depressions or small berms (depending on the species, size of plant, soil conditions, etc.) will be created at the base of each transplant to capture rain and irrigation water to better allow the soil to become and remain saturated. These watering basins may require maintenance over time.

Salvaged plantings or container plantings will receive one year of irrigation after planting and may require supplemental irrigation in Years 2 and 3, depending on natural precipitation. Irrigation can be conducted near sites with a permanent water source, and near permanent access roads, through the installation of a temporary system that can be fed by a water truck. Direct watering with a hose fed by a water truck may also be appropriate near access roads, if the process can be accomplished without damaging restored vegetation. In cases of very small or remote transplant sites, DRiWATER or equivalent gel water product or hand watering using buckets may be used to irrigate the transplanted plants.

Hand watering with buckets or a hose will be used as described above to wet the upper 4 to 5 inches of soil once per month, based on soil moisture levels. During prolonged hot, dry weather, transplanted cacti will be watered approximately every 14 days. Additional supplemental watering to help the plants establish will be provided as needed and determined by the Restoration Ecologist.

Watering will be kept to a minimum during the winter dormancy period. Transplants will not be watered during rainy periods. Watering will then follow the seasonal guidelines above, and at the discretion of the Restoration Ecologist.

Watering often encourages weed proliferation in disturbed or treated areas. Therefore, when irrigation occurs, applications of irrigation water will not be widely broadcast (e.g., overhead spray) but will be restricted to individual transplant specimens as much as possible (e.g., manually directed from a bucket or hose).

Manual removal prior to the plants' production of seed will be used to control weeds at planting sites. Grasses can be controlled by removing the flower heads. However, species such as mustards must be removed entirely, along with the roots, if possible. Methods for weed control will be implemented in accordance with guidelines and specifications provided in the Project's IPMP, prepared under a separate cover.

9. Success Standards

The following performance standards will be used for restoration areas on the Project, based on annual quantitative sampling during performance monitoring:

- At least 60 percent of native foliar cover, relative to pre-disturbance (baseline) or adjacent reference site native cover
- At least 50 percent of the total number of native species observed in pre-disturbance (baseline) or adjacent reference site.
- Perennial species richness of at least 50 percent of pre-disturbance (baseline) or adjacent reference site.
- Recruitment of native plant seedlings documented within restoration areas.
- Non-native foliar cover will not exceed non-native baseline cover. Any new introductions of invasive plants will be addressed (contained, suppressed, or eradicated) per the IPMP.
- Evidence of wildlife use.

Restoration activities will continue until success standards are met. After five years, SCE will consult with the agencies to discuss options for restoration areas that have not met success standards.

10. Adaptive Management Plan and Contingency Measures

It is anticipated that most restoration areas will meet the success standards within the five-year monitoring period. A small number of sites may show lower performance than expected and may require more maintenance and adaptive management. As needed, SCE will implement an Adaptive Management Plan with contingency measures to facilitate success of the restoration site(s). Sites where current conditions do not reflect desired trends or are not stabilized may require remedial measures such as reseeding, supplemental watering, controlling invasive plant species, additional stabilization measures (e.g., erosion control blankets), and/or regulating human and/or wildlife access to the restoration site. Replacement or supplemental seeding will be representative of native plant species for the associated habitat area, provided in the plant palettes in Section 5.1.1.

If an unforeseen catastrophic event (e.g., flood, fire, or other event beyond SCE control) damages a revegetation site within the monitoring period, SCE will assess adjacent areas and adjust success standards accordingly in coordination with the agencies.

11. Reporting

SCE will prepare annual reports and will notify the CPUC, BLM, and NPS when the restoration effort is complete.

11.1.1 Annual Monitoring Report

SCE will prepare and submit annual reports for a period of five years post-construction. The annual report will be a summary of site conditions, restoration treatments, maintenance activities, and the results of the qualitative and quantitative monitoring. It will also include a general discussion of the previous year's changes at the restoration sites, special-status plant establishment, effectiveness of off-highway vehicle (OHV) deterrents and signs of encroachment, grazing impacts, trash removal, and remedial actions

The annual report will also outline the activities for the following year and may include a discussion of adaptive management and contingency measures (see Section 10). Additional annual monitoring reports may be required if success standards are not met within the five-year monitoring period.

Annual reports will be submitted by SCE to the CPUC, BLM, and NPS as appropriate.

11.1.2 Notification of Completion

SCE will notify the CPUC, BLM, and NPS when the revegetation effort is complete and success standards have been met at sites. The notification will be submitted electronically and accompanied by a brief letter referencing the final annual report

For sites that are unable to meet success standards, SCE may request sign-off. For sites with disturbance outside SCE's control (e.g., vehicle use, livestock grazing, or land use conversion for non-Project purposes), it may not be possible to reestablish native vegetation. Some sites that have received all appropriate treatments and multiple years of adaptive management measures may not meet success standards. In these situations, the agencies (CPUC, BLM, NPS, and SWRCB as appropriate) may concur that additional efforts are not warranted and sign-off on these sites. The BLM and NPS must provide concurrence and sign off for restoration activities to cease on BLM or NPS lands.

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APPENDIX U

Invasive Plant Management Plan

TLRR: Eldorado – Pisgah – Lugo Project

Appendix U
Invasive Plant Management Plan

Prepared for
Southern California Edison Company

December 2022

Prepared by
Arcadis U.S., Inc

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Appendices

Acronyms and Abbreviations

ACCC	Aluminum Conductor Composite Core
APM	Applicant Proposed Measure
BLM	Bureau of Land Management
BMPs	Best Management Practices
Cal-IPC	California Invasive Plant Council
CDFA	California Department of Food and Agriculture
CCH	Consortium of California Herbaria
CCR	California Code of Regulations
CPUC	California Public Utilities Commission
EDRR	early detection rapid response
EPL	Eldorado – Pisgah - Lugo
ESA	Environmentally Sensitive Area
FRED	Field Reporting Environmental Database
GO 95	General Order 95
GPS	Global Positioning System
HRP	Habitat Restoration Plan
IPMP	Invasive Plant Management Plan
kV	kilovolt
MEER	Mechanical electrical equipment room
MNP	Mojave National Preserve
NDA	Nevada Department of Agriculture
NERC	North American Electric Reliability Corporation
NPS	National Park Service
NRS	Nevada Revised Statutes
O&M	Operations and Maintenance
OHGW	Overhead groundwire
PEA	Proponent’s Environmental Assessment
PPE	Personal Protective Equipment
PUP	Pesticide Use Proposal
ROW	Right-Of-Way
SCE	Southern California Edison Company
TBD	To be developed
USDA	United States Department of Agriculture
USEPA	U.S. Environmental Protection Agency
UTV	Utility Terrain Vehicle
WECC	Western Electricity Coordinating Council
WEAP	Worker Environmental Awareness Plan/Program

1.0 Introduction

The purpose of this Invasive Plant Management Plan (IPMP) is to prescribe methods and control procedures to prevent the spread of invasive plants by construction of the Eldorado – Pisgah – Lugo Project (EPL or Project). Southern California Edison Company (SCE) and its contractors will be responsible for carrying out the methods and procedures described in this IPMP. The scope of this plan is geographically limited to the area within disturbance areas planned for construction of the Project.

1.1 Project Description

Under the EPL Project, SCE proposes to remediate physical clearance discrepancies on four existing transmission circuits. This work will result in temporary and permanent disturbances. In California, the EPL Project will potentially affect approximately 5,784.5 acres of vegetation and other land uses. Of these impacts, temporary impacts will affect 226.9 acres of vegetation and other land uses (development, open water, active agriculture, etc.), with temporary impacts to 206.3 acres of vegetation. Permanent impacts will affect 0.9 acres of vegetation.

In Nevada, The EPL Project will potentially affect approximately 1,004.1 acres of vegetation and other land uses. Of these impacts, temporary impacts will affect 1.9 acres of vegetation. Permanent impacts will affect 0.0 acres of vegetation and other land uses.

The exact acreage of impacts will be recalculated once construction activities have been completed.

The EPL Project includes the following components to remediate the identified discrepancies:

1.1.1 Transmission

The EPL Project would install new, and replace existing infrastructure along portions of existing 220 kV transmission lines by:

- Installing new inter-set transmission structures and replacing or modifying the existing hardware on adjacent structures.
- Replacing the insulator assemblies on some existing structures that are not adjacent to new inter-set transmission structures.
- Removing existing conductor and installing new 609.5 Irving Aluminum Conductor Composite Core Ultra-Low Sag transmission conductor (ACCC conductor) on existing structures.
- Removing existing OHGW and installing 7#7 Alumoweld overhead groundwire (OHGW) on existing structures for system protection.

1.1.2 Distribution

No distribution-related work is included under the EPL Project.

1.1.3 Substations

The EPL Project would include the following substation-related work:

- Disconnect existing conductor from existing positions at the existing Pisgah Switchyard and Cima Substation and connect newly installed conductors to existing substation positions.
- Remove existing OHGW and install new OHGW at the existing Pisgah Switchyard and Cima Substation. Make minor modifications to the existing terminal racks to accommodate the new OHGW.
- Update, as necessary, relay settings at the existing Lugo, Cima, and Eldorado substations and at the existing Pisgah Switchyard.

1.2 Project Location

The EPL Project alignment is located in unincorporated San Bernardino County and in the City of Hesperia, in the State of California and in the unincorporated Clark County and in the City of Boulder City in the State of Nevada (Figure 1). The EPL Project is located on federal lands managed by the Bureau of Land Management (BLM) and the National Park Service's (NPS) Mojave National Preserve (MNP), on State Lands, and on private property.

1.3 Measures and Conditions from Environmental Documents

As addressed in the EPL Project Proponent's Environmental Assessment (PEA), SCE is not proposing any Applicant Proposed Measures (APMs). APMs are properly included in a proposed project to mitigate potential significant impacts to a less-than-significant level. As presented in the EPL PEA (SCE 2023), no significant impacts have been identified for the EPL Project, and thus no APMs are proposed.

The NPS provides a Status and Guidance document for weed management in Southern California Edison's Rights-of-Way in Mojave National Preserve that serves as the programmatic management guidance for SCE activities within its right-of-way (ROW) corridors. This guidance requires weed treatment field crews to look out for nesting birds, especially in shrubs, and for field crews to understand and implement the Mojave National Preserve's standard desert tortoise protective measures: watch out for tortoise while driving and working; and check for tortoise under parked vehicles before starting the engine (NPS 2019).

1.4 Agency Roles and Responsibilities

The Draft IPMP is provided to the BLM, NPS, and CPUC for the agency's use in their project approval processes. A final version of this Plan will be provided to the BLM, NPS, and CPUC with comments incorporated prior to issuance of the initial Notice to Proceed on the Project.

1.5 Goals and Objectives

The goal of this IPMP is to prevent introduction and establishment of new invasive plant species and noxious weeds not previously identified within the Project area and to minimize the spread of existing invasive plant populations resulting from construction of the Project. This goal will be achieved by the following objectives:

- Implementation of preventive measures to avoid introduction and spread of invasive plants and noxious weeds during Project construction activities
- Monitoring of the restoration areas for new or expanding invasive plant populations

- Treatment of invasive plants to reduce populations as needed to promote the establishment of native vegetation during the restoration program
- Eradication of any new invasive species not previously identified within the restoration areas that were introduced by Project construction activities[1]

2.0 Definitions

2.1 Invasive Plant and Noxious Weed Definitions

Because a variety of words are used to define “weeds”, “invasive species”, “invasive plants”, “noxious weeds”, and other such terms, the following summary of definitions provides a brief synopsis of several similar and related terms used in this IPMP.

Official U.S. definitions regarding invasive species are provided in Executive Order 13112, as follows:

- **Invasive Species:** Alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. "Alien species" means, with respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem.

For purposes of this Plan, the term non-native is synonymous with alien species.

The California Invasive Plant Council (Cal-IPC 2022) also provides definitions for invasive plants:

- **Invasive Plants:** plants that are not native to an environment, and once introduced, they establish quickly, reproduce and spread, and cause harm to the environment, economy, or human health.

Weeds are typically characterized as nonnative plants that aggressively colonize new areas and can grow to dominate native plant communities if uncontrolled. The following are the types of weeds addressed in this Plan:

- **Noxious Weeds**: Species identified by public law as exerting substantial negative environmental or economic impact. Noxious weeds are a subset of exotic plants. The term “noxious weeds” is a legal classification, not an ecological term.

The noxious weed plant lists from Nevada define invasive plants as those that require control measures. Additional nonnative plants not included in the State of Nevada and/or federal government noxious weed lists may be treated as needed.

2.1.1 Federal

The United States Department of Agriculture (USDA) maintains the official federal list of noxious weeds (7 CFR 360.200; USDA 2022). In addition to the federal list, the California Department of Food and Agriculture maintains the list of official noxious weeds requiring control under the

[1] As presented in Section 1.0, the purpose of the IPMP is to prescribe methods and control procedures to prevent the spread of invasive plants by construction of EPL Project. SCE currently performs operation and maintenance (O&M) activities along the subtransmission lines included as part of the EPL Project. These activities are performed under existing authorizations and would continue after construction of the EPL Project is completed under existing authorizations or under a new programmatic O&M agreement between SCE and BLM that is currently under development.

Noxious Weed Act of 1989 (CDFA 2021). The official weed list was last updated in the California Code of Regulations (CCR) (3 CCR 4500) in 2015.

The term “noxious weed” is defined by the USDA under the Federal Plant Protection Act (7 U.S.C. 7701 et seq.) as: “any plant or plant product that can directly or indirectly injure or cause damage to crops (including nursery stock or plant products); livestock, poultry, or other interests of agriculture; irrigation; navigation; the natural resources of the U.S.; the public health; or the environment.”

The BLM recognizes noxious weeds as a legal designation that can be made by state or federal agencies, with definitions that may vary by jurisdiction. The BLM also defines an invasive plant as “a plant that interferes with management objectives for a given area of land at a given point in time.” The BLM Manual 9015 (Integrated Weed Management) provides methods for weed control on BLM lands.

2.1.2 California

In California, the CDFA defines noxious weeds under the Noxious Weed Act of 1989 (pursuant to CDFA 3 CCR § 4500) as “any species of plant that is, or is liable to be, troublesome, aggressive, intrusive, detrimental, or destructive to agriculture, silviculture, or important native species, and difficult to control or eradicate, which the director, by regulation, designates to be a noxious weed. In determining whether or not a species shall be designated a noxious weed for the purposes of protecting silviculture or important native plant species, the director shall not make that designation if the designation will be detrimental to agriculture.” The CDFA also designates ratings for weeds and other pests. These ratings are based on the impacts of the pest to agriculture within California.

- A – An organism of known economic importance subject to state (or commissioner when acting as a state agent) enforced action involving eradication, quarantine regulation, containment, rejection, or other holding action.
- B – An organism of known economic importance subject to eradication, containment, control or other holding action at the discretion of the individual county agricultural commissioner, or an organism of known economic importance subject to state endorsed holding action and eradication only when found in a nursery.
- C – An organism subject to no state enforced action outside of nurseries except to retard spread at the discretion of the county agricultural commissioner, or an organism subject to no state enforced action except to provide for pest cleanliness in nurseries.
- Q – An organism or disorder requiring a temporary “A” action pending determination of a permanent rating. The organism is suspected to be of economic importance, but its status is uncertain because of incomplete identification or inadequate information. In the case of an established infestation, at the discretion of the Director, the Department may conduct surveys and may convene the Division Pest Study Team to determine a permanent rating.

The Cal-IPC maintains an inventory (Cal-IPC Inventory) of invasive plants and categorizes them according to the definitions below. Plants are evaluated for the Cal-IPC Inventory only if they invade California wildlands with native habitat values. The Cal-IPC Inventory does not include plants found solely in areas of human-caused disturbance such as roadsides and cultivated agricultural fields.

- **Wildlands:** Public and private lands that support native ecosystems, including some working landscapes such as grazed rangeland and active timberland.

- **Non-native plants:** Species introduced to California after European contact and as a direct or indirect result of human activity.
- **Invasive non-native plants that threaten wildlands:** Plants that 1) are not native to, yet can spread into, wildland ecosystems, and that also 2) displace native species, hybridize with native species, alter biological communities, or alter ecosystem processes.

The Cal-IPC maintains a rating for risk of spread and consequence of spread into wildlands for non-natives that is based upon the best available published literature and knowledge of invasive plant experts from California. The ratings are as follows:

- **High**: These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- **Moderate**: These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- **Limited**: These species are invasive, but their ecological impacts are minor on a statewide level, or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low-to-moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

2.1.3 Nevada

In Nevada, the Nevada Department of Agriculture (NDA) defines noxious weeds under the Nevada Revised Statutes (NRS; pursuant to NRS 555.130) as "any species of plant which is, or likely to be, detrimental or destructive and difficult to control or eradicate. The State Quarantine Officer may declare by regulation the weeds of the state that are noxious weeds, but a weed must not be designated as noxious which is already introduced and established in the State to such an extent as to make its control or eradication impracticable in the judgment of the State Quarantine Officer." All noxious weeds are regulated by the NDA. The NDA designates ratings for weeds (pursuant to NRS 555.130) and maintains the Nevada Noxious Weed List (NDA 2012):

- Category A –Noxious weeds that are generally not found or that are limited in distribution throughout the state. Such weeds are subject to:
  - Active exclusion from the State and active eradication wherever found
  - Active eradication from the premises of a dealer or nursery stock
- Category B –Noxious weeds that are generally established in scattered populations in some counties of the State. Such weeds are subject to:
  - Active exclusion where possible
  - Active eradication from the premises of a dealer or nursery stock
- Category C –Noxious weeds that are generally established and generally widespread in many counties in the State. Such weeds are subject to:
  - Active eradication from the premises of a dealer or nursery stock

3.0 Invasive Plants and Noxious Weeds Inventory

3.1 Invasive Plants and Noxious Weeds with Potential to Occur in the Project Area

A desktop analysis and literature review were performed to develop a preliminary list of invasive nonnative species with potential to occur in the EPL Project area. The following sources were used:

- Consortium of California Herbaria (CCH 2022)
- Cal-IPC Inventory (Cal-IPC 2022)
- The federal noxious weed list available at https://www.aphis.usda.gov/plant_health/plant_pest_info/weeds/downloads/weedlist.pdf
- The California noxious weed list available at: CCR 4500. https://www.cdfa.ca.gov/plant/ipc/encycloweedia/pdf/CaliforniaNoxiousWeeds.pdf
- The Nevada noxious weed list available at: https://agri.nv.gov/uploadedFiles/agrinvgov/Content/Plant/Noxious_Weeds/Documents/NVNoxiousWeedList_by%20category_2012.pdf
- SCE EPL Project PEA (SCE 2023)

A preliminary list of 50 nonnative species with potential to occur in the Project area was developed from these sources. Of these, 32 species are rated by the Cal-IPC as High, Moderate, or Limited, reflecting the level of each species' negative ecological impact in California and are also listed as noxious weeds in California or in the United States all have a rating by Cal-IPC (Section 2.1.2). In addition, 10 species are categorized by the NDA by A (limited distribution), B (scattered distribution), or C (widespread) and are listed as noxious weeds in Nevada (Section 2.1.3). Refer to Table 3-1 Invasive and Noxious Nonnative Plant Species with the Potential to Occur in the EPL Project Area, below. The 18 remaining nonnative species with potential to occur in the EPL Project are Not Rated or are on Watch by Cal-IPC or NDA. They are listed at the end of the table for informational purposes only. These species are not considered target invasive plants or noxious weeds for this Plan and do not have recommended control methods or goals at this time.

Table 3-1. Invasive and Noxious Nonnative Plant Species with Potential to Occur in the EPL Project Area

Scientific Name	Common Name	Cal-IPC Rating	NDA Category	Federal[1]/ California (CCR 4500)[2] / Nevada (555.130)[3] Noxious Weed
Rated Invasive Nonnative Plant Species with Potential to Occur in the Project Area				
Trees				
Elaeagnus angustifolia	Russian-olive	Moderate	--	--
Tamarix aphylla	athel tamarisk	Limited	C	California/Nevada Noxious
Shrubs				
Tamarix ramosissima	saltcedar	High	C	California /Nevada Noxious

Scientific Name	Common Name	Cal-IPC Rating	NDA Category	Federal[1]/ California (CCR 4500)[2] / Nevada (555.130)[3] Noxious Weed
Herbaceous Species (annuals, biennials, perennials, graminoids)				
Alhagi maurorum	camelthorn	Moderate	A	Nevada Noxious
Avena barbata	slender wild oat	Moderate	--	--
Bassia hyssopifolia	five-horned bassia	Limited	--	--
Brassica tournefortii	Sahara mustard	High	B	Nevada Noxious
Bromus diandrus	ripgut brome	Moderate	--	--
Bromus madritensis subsp. *rubens*	red brome	High	--	--
Bromus tectorum	cheatgrass	High	--	--
Carduus nutans	musk thistle	Moderate	C	California/Nevada Noxious
Centaurea melitensis	tocalote	Moderate	A	California/Nevada Noxious
Cirsium vulgare	bull thistle	Moderate	--	California Noxious
Cynodon dactylon	Bermudagrass	Moderate	--	--
Descurainia sophia	flix weed	Limited	--	--
Erodium cicutarium	red-stemmed filaree	Limited	--	--
Festuca myuros	rattail fescue	Moderate	--	--
Halogeton glomeratus	halogeton, saltlover	Moderate	--	California Noxious
Hirschfeldia incana	summer mustard, short-pod mustard	Moderate	--	--
Hordeum marinum	Mediterranean barely	Moderate	--	--
Hordeum murinum	foxtail barley, hare barley	Moderate	--	--
Marrubium vulgare	white horehound	Limited	--	--
Medicago polymorpha	burclover	Limited	--	--
Mesembryanthemum nodiflorum	slender-leaved ice plant	Limited	--	--
Peganum harmala	African-rue, harmel	Watch	A	California/Nevada Noxious
Rhaponticum repens	Russian knapweed	Moderate	C	California/Nevada Noxious
Salsola tragus	Russian-thistle	Limited	--	California Noxious
Schismus arabicus	Arabian schismus, Mediterranean grass	Limited	--	--
Schismus barbatus	Mediterranean grass	Limited	--	--
Sisymbrium irio	London rocket	Limited	--	--
Solanum elaeagnifolium	horse nettle	Not Rated	B	Nevada Noxious
Tribulus terrestris	puncture vine	Limited	C	California/Nevada Noxious
Unrated Nonnative Plant Species with Potential to Occur in the Project Area				
Shrubs				
Caesalpinia gilliesii	bird of paradise	Not Rated	--	--
Herbaceous Species (annuals, biennials, perennials, graminoids)				
Amaranthus albus	pigweed amaranth	Not Rated	--	--
Bromus berteroanus	Chilean chess	Not Rated	--	--
Chenopodium album	lambsquarters	Not Rated	--	--
Chenopodium murale	nettle-leaf goosefoot	Not Rated	--	--
Cycloloma atriplicifolium	winged pigweed	Not Rated	--	--
Eragrostis cilianensis	stink grass	Not Rated	--	--
Eruca vesicaria	garden rocket	Not Rated	--	--
Hornungia procumbens	prostrate hutchinsia	Not Rated	--	--
Lepidium perfoliatum	clasping pepperweed	Not Rated	--	--
Malva parviflora	cheeseweed	Not Rated	--	--

Scientific Name	Common Name	Cal-IPC Rating	NDA Category	Federal[1]/ California (CCR 4500)[2] / Nevada (555.130)[3] Noxious Weed
Polygonum aviculare	prostrate knotweed	Not Rated	--	--
Portulaca oleracea	common purslane	Not Rated	--	--
Sisymbrium altissimum	tall tumblemustard	Not Rated	--	--
Sisymbrium orientale	Indian hedgemustard	Not Rated	--	--
Sonchus oleraceus	common sow thistle	Not Rated	--	--
Trifolium repens	white clover	Not Rated	--	--
Triticum aestivum	common wheat	Not Rated	--	--

Notes:
1 Federal Noxious Weed List. https://www.aphis.usda.gov/plant_health/plant_pest_info/weeds/downloads/weedlist.pdf
2 California Noxious Weed List, CCR 4500. https://www.cdfa.ca.gov/plant/ipc/encycloweedia/pdf/CaliforniaNoxiousWeeds.pdf
3 Nevada Noxious Weed List, NRS 555.130.
https://agri.nv.gov/uploadedFiles/agrinvgov/Content/Plant/Noxious_Weeds/Documents/NVNoxiousWeedList_by%20category_2012.pdf
NDA Categories:
A = limited distribution B = scattered distribution C =widespread

3.1.1 Invasive Plants and Noxious Weeds Occurring within EPL Project Areas

Arcadis performed botanical surveys in 2017 and 2018 within the EPL Project area with a focus on special-status plant species (Arcadis 2020). A comprehensive list of incidentally observed plant species was compiled during these surveys and was the basis for inclusion of non-native species in Table 3-1. Focused weed surveys to document the occurrence of invasive and noxious non-native species have not yet been conducted for the EPL Project, nor have points and polygons of observed invasive plants have been mapped.

Results from the 2017 and 2018 botanical surveys inform Table 3-2 Invasive and Noxious Nonnative Plant Species Identified in the EPL Project Area, below, which includes all the invasive nonnative plants rated by Cal-IPC and federal- or state-designated noxious weeds that were identified in the EPL Project area. If any additional invasive plants or noxious weeds are identified during invasive plant and noxious weed surveys (to be scheduled) or during pre-construction clearance surveys within the Project area, SCE will update this document by adding information on the species to Table 3-2, below, and Table 4-2 (Treatment Methods and Goals for Invasive and Noxious Nonnative Plants Identified in the EPL Project Area) in Section 4 (IPMP Implementation) of this IPMP.

3.1.2 Invasive Plant Zones

Two invasive plant zones have been identified for the EPL Project: Invasive Plant Zone 1 corresponds to Project Segments 1 and 2; Invasive Plant Zone 2 corresponds to Project Segments 3, 4, 5, and 6.

Table 3-2 lists the Invasive and Noxious Nonnative plant species observed in the EPL Project area and includes the corresponding Invasive Plant Zones documented to date along with Cal-IPC, CDFA, NDA, and federal ratings.

Table 3-2. Invasive and Noxious Nonnative Plant Species Observed in the EPL Project Area

Scientific Name	Common Name	Invasive Plant Zone(s)	Cal-IPC Rating	CDFA Pest Rating[1]	NDA Category	Federal[2]/ California (CCR 4500)[3] /Nevada (NRS 555.130)[4] Noxious Weed
Trees						
Tamarix aphylla	athel tamarisk	1, 2	Limited	B	C	California/Nevada Noxious
Shrubs						
Caesalpinia gilliesii	bird of paradise	1	Not Rated	--	--	--
Tamarix ramosissima	saltcedar	1, 2	High	--	C	California/Nevada Noxious
Herbaceous Species (annuals, biennials, perennials, graminoids)						
Avena barbata	slender wild oat	1	Moderate	--	--	--
Bassia hyssopifolia	five-horned bassia	1	Limited	--	--	--
Brassica tournefortii	Sahara mustard	1, 2	High	C	B	Nevada Noxious
Bromus madritensis subsp. *rubens*	red brome	1, 2	High	--	--	--
Bromus tectorum	cheatgrass	1, 2	High	C	--	--
Chenopodium album	lambsquarters	1, 2	Not Rated	--	--	--
Cycloloma atriplicifolium	winged pigweed	1	Not Rated	--	--	--
Cynodon dactylon	Bermuda-grass	1	Moderate	--	--	--
Descurainia sophia	flix weed	1, 2	Limited	--	--	--
Erodium cicutarium	red-stemmed filaree	1, 2	Limited	--	--	--
Eruca vesicaria	garden rocket	1	Not Rated	--	--	--
Festuca myuros	rattail fescue	1	Moderate	--	--	--
Halogeton glomeratus	halogeton, saltlover	1, 2	Moderate	B	--	California Noxious
Hirschfeldia incana	summer mustard, short-pod mustard	1	Moderate	--	--	--
Hordeum murinum	foxtail barley, hare barley	1, 2	Moderate	--	--	--
Lepidium perfoliatum	clasping pepperweed	1	Not Rated	--	--	--
Malva parviflora	cheeseweed	1	Not Rated	--	--	--
Medicago polymorpha	burclover	1	Limited	--	--	--
Mesembryanthemum nodiflorum	slender-leaved ice plant	1	Limited	--	--	--
Phalaris aquatica	Harding grass	1	Moderate	--	--	--
Polygonum acivulare	prostrate knotweed	1	Not Rated	--	--	--
Salsola tragus	Russian-thistle	1, 2	Limited	C	--	California Noxious
Schismus barbatus	Mediterranean grass	1, 2	Limited	--	--	--
Sisymbrium altissimum	tall tumblemustard	1, 2	Not Rated	--	--	--
Sisymbrium irio	London rocket	1, 2	Limited	--	--	--
Sisymbrium orientale	Indian hedgemustard	1, 2	Not Rated	--	--	--
Solanum elaeagnifolium	horse nettle	1, 2	Not Rated	--	B	Nevada Noxious
Triticum aestivum	common wheat	1	Not Rated	--	--	--

Scientific Name	Common Name	Invasive Plant Zone(s)	Cal-IPC Rating	CDFA Pest Rating[1]	NDA Category	Federal[2]/ California (CCR 4500)[3] /Nevada (NRS 555.130)[4] Noxious Weed

Notes:
1 California Department of Food and Agriculture Pest Rating. https://www.cdfa.ca.gov/plant/ipc/encycloweedia/pdf/CaliforniaNoxiousWeeds.pdf
2 Federal Noxious Weed List. https://www.aphis.usda.gov/plant_health/plant_pest_info/weeds/downloads/weedlist.pdf
3 California Noxious Weed List, CCR 4500. https://www.cdfa.ca.gov/plant/ipc/encycloweedia/pdf/CaliforniaNoxiousWeeds.pdf
TBD – location to be determined during invasive plant survey. Species noted without location data in 2017-2018 botanical surveys
4 Nevada Noxious Weed List, NRS 555.130.
https://agri.nv.gov/uploadedFiles/agrinvgov/Content/Plant/Noxious_Weeds/Documents/NVNoxiousWeedList_by%20category_2012.pdf
CDFA Pest Ratings: A = not known to be established or limited, prohibited from entering the state-enforced eradication, quarantine; B = if present, limited distribution, eligible to enter the state-enforced eradication; C = widespread, eligible to enter the state, no state eradication enforcement
NDA Categories: A = limited distribution B = scattered distribution C =widespread

SCE recognizes that certain ubiquitous weed species, such as short-pod mustard (*Hirschfeldia incana*), Saharan mustard (*Brassica tournefortii*), and Mediterranean grass (*Schismus arabicus* and *S. barbatus*) have such widespread distributions in the region that control of these species is not feasible (DiTomaso, Kyser et al., 2013), and meaningful control of such ubiquitous species is beyond the scope of the Plan. Discrete populations of these weed species can be controlled within targeted EPL Project restoration areas during the early phases of the restoration program when native seedlings and/or small container plants are becoming established to prevent damage to the restoration plantings during weed removal events.

Brief descriptions of each invasive plant species observed within the EPL Project area will be adopted from Cal-IPC Inventory (Cal-IPC 2022) and will be included in Appendix A along with representative photos, after invasive plant and noxious weed surveys (to be scheduled) have been completed.

4.0 Invasive Plant Management Implementation

This section describes the methods of invasive plant and noxious weed control and avoidance of their introduction within temporary impact areas of the Project. The following general control measures will be applied as appropriate during construction and post-construction restoration program:

Prevention: Apply best practices to minimize the transport of propagules and conditions conducive to the establishment of new infestations. Prevention methods targeting one species would likely also prevent other species.

Containment: Minimize infestation spread, but not necessarily reduce infestation density, until suppression or eradication can be implemented.

Suppression: Reduce infestation density, but not necessarily infestation area, where eradication cannot be achieved.

Eradication: Eliminate invasive plant species newly introduced within the Project disturbance areas and otherwise not widespread. Eradication of ubiquitous invasive plant populations cannot be achieved.

Control measures will be applied to mitigate spread of invasive plants and will focus on prevention first and foremost through implementing the preventive measures detailed in Section 4.1. If evidence of introduction of invasive plants or noxious weed species is found in the Project disturbance areas not subject to an existing infestation, SCE will implement treatment methods

to eradicate the occurrence(s) with the goal of containment, suppression, or eradication, as detailed in Section 4.2.

4.1 Preventive Measures

Prevention of the spread of invasive plants is the most effective management approach.

SCE will provide information and training to all Project personnel regarding invasive plant management in terms of regulatory drivers, preventive measures, and weed zones during worker environmental awareness plan (WEAP) training. Prior to the initiation of any ground-disturbing activities and prior to any individuals beginning work on the Project, Project personnel will be required to attend a WEAP training which, among other objectives, will serve to inform the workers of their responsibilities with regard to permit conditions and other project requirements, including methods in the Plans such as the responsibility to wash vehicles and equipment. Ongoing tailboard meetings (i.e., meetings held prior to the start of work each day) will give biological monitors and other Project personnel an opportunity to remind the construction crews of these responsibilities and to detail specific site conditions, if needed.

Biological monitors are responsible for ensuring the preventive measures are implemented by construction personnel.

If, during pre-construction clearance surveys, new populations or species of invasive plants have become established or the spread of existing invasive plant populations is observed prior to construction, invasive plant areas will be flagged. The flagging will alert construction personnel and prevent access until invasive plant management control measures have been implemented by the construction contractor or SCE designated contractor.

During construction and the five-year restoration program, the following preventive measures will be implemented as applicable and feasible, to prevent the spread of target invasive plant and noxious weed species. Monitors will perform inspections to track compliance with these measures as described in Section 4.4:

- All vehicles and equipment will be cleaned prior to arrival at the Project site and when traveling between invasive plant zones. Cleaning will concentrate on tracks, feet, or tires and on the undercarriage. Interiors will be swept out and refuse will be disposed of in waste receptacles. Vehicles and equipment will be maintained free of soil and debris capable of transporting invasive plant and noxious weed seeds, roots, or rhizomes. Vehicles and equipment that are not in compliance shall be refused entry.
- Ground-disturbing equipment will be cleaned and washed at designated material yards or off-site commercial wash facilities. Vehicles and equipment washing will be completed outside the boundaries of BLM and NPS lands to the maximum extent feasible. Any invasive plant establishment resulting from washing vehicles/equipment on site will be controlled per treatment methods and management goals in Table 4-2.
- Other vehicles (e.g., pick-up trucks) that will be frequently entering and exiting the site will be inspected and washed at designated material yards or off-site commercial wash facilities. Non-SCE delivery vehicles may be exempt from this requirement.
- Concrete trucks are dispatched from local concrete batch plants, where they are regularly washed to remove concrete splash from the vehicle. Concrete trucks travel to the sites via public paved streets and established, non-vegetated Project access roads. Like delivery vehicles, concrete trucks are rubber-tired, not involved in ground-disturbing activities, and spend relatively limited periods of time on the Project sites. For concrete pouring activities,

concrete trucks are typically positioned on the established Project access roads or site locations cleared of vegetation and, in some cases, graded to accommodate construction (e.g., crane pads, areas that become the Operations and Maintenance [O&M] work area). For these reasons, concrete trucks would be exempt.

- Tools associated with ground-disturbing activities and/or vegetation trimming/removal activities will be cleaned prior to use in areas containing natural vegetation. Chainsaws and other tools and equipment will be cleaned with compressed air, water, cloth, and/or wire brush as appropriate.
- After conducting work with tools involving ground-disturbing activities and/or vegetation trimming/removal activities in areas infested with invasive plants and noxious weeds, tools must be cleaned before they are removed from the infested area.
- "Flag and Avoid." New target infestations identified after construction commences will be flagged in the field by biological monitors and reported to construction supervisor(s). The flagging will alert construction personnel and is intended to prevent access into areas slated for disturbance until control measures have been implemented.
- Straw bales, straw wattles, mats, and other plant materials used for erosion control or other purposes must be obtained from certified sources that are free of weed seeds. Additional products such as gravel, mulch, and soil, may also carry weed seeds. Such products will be obtained from suppliers who can provide weed-free materials.
- To prevent contamination of construction supplies such as "weed-free" sediment barriers, weeds will be treated in construction yards, preventing weeds from setting seed within the yards.
- On-site storage or disposal of mulch or green waste that may contain weed material will be prohibited. Mulch or green waste will be removed from Project areas in a covered vehicle to prevent seed dispersal and transported to a licensed landfill or composting facility.
- Weeds will be controlled in stockpiles of gravel and soil. During storage, they will be inspected for invasive plants and noxious weeds on a regular basis (twice a year during the growing season). If stockpiles are found to be infested, control will be per treatment methods and management goals in Table 4-2.
- Locally salvaged topsoil may be stored in shallow stockpiles in locations free of weed infestations, over a short as time as possible. It may be used locally or in another segment of the Project, as needed. Stockpiles would be subject to inspection for weeds twice a year during the growing season and prior to use. If stockpiles are found to be infested, control will be per treatment methods and management goals in Table 4-2.
- Ground disturbance to vegetation will be limited to the minimum necessary to safely perform construction activities. Activities that will create invasive plant-promoting soil conditions will be minimized.

4.2 Treatment Methods

If new populations of invasive plants become established or the spread of existing invasive plant populations are observed within the Project temporary impact areas during implementation of construction activities and the restoration program, SCE will implement invasive plant control measures. On federal lands, invasive plant control measures will be in accordance with existing BLM and NPS regulations.

Treatment methods will be based on species-specific and area-specific conditions. All treatment methods are designed to minimize the extent of disturbance to native vegetation, limit ingress and egress to defined access routes, and avoid damage from herbicide use or other control methods to environmentally sensitive areas (ESAs) identified within or adjacent to the Project ROW. The most recent maps of ESAs and biological constraints will be reviewed by SCE prior to implementing any treatment methods, to ensure that sensitive resources are avoided, as necessary.

For the purposes of this Plan, treatment methods have been organized into two categories: physical and chemical. Physical treatment methods include manual removal using hand tools and mechanical removal using motorized tools. Chemical treatment methods include herbicide application.

4.2.1 Physical Treatment

Physical removal of invasive plants or noxious weeds is employed for localized, discrete weed treatment. Typically, physical treatment methods uproot, girdle, or cut plants through manual hand-pulling or use of power tools. Several types of physical removal techniques are recommended, including the following: hand-pulling, lever arms, weed whipping, hoeing, and mowing.

Hand-pulling should be focused on discrete populations of weed species that have a single-root mass. Hand- pulling is particularly effective to remove annual species after germination and prior to seed set, when the stems are not as easily broken, so that root mass is left behind. Broken root pieces and other fragments of weedy species can resprout and recolonize cleared areas. Hand-pulling is less effective in large areas and with weed species that spread through an underground root system (for example, Bermuda-grass).

The Weed Wrench and Root Jack are types of lever arm devices that secure stems. They are readily procured at plant nurseries and can be used to pull out and remove woody shrubs such as saltcedar. This effort should be focused on weed species that have a single-root mass.

Hoeing and weed whipping may be used to treat herbaceous weeds in limited discrete areas before seed has set. Care must be taken not to damage adjacent native plants. Hoeing and weed whipping are most effective on small weeds with single root masses. Larger weeds are more likely to regenerate from cut roots. Additional physical treatment methods include the following:

- Cover all loads while removing vegetation using a tarpaulin. Caution must be taken to contain all plant stem and root fragments because they may recolonize cleared areas and can invade new areas if not disposed of properly.
- Avoid contact with established native shrub and grass species.
- Temporarily discontinue weed abatement work in the event of rainfall.
- Cut plant material will be bagged and removed to prevent resprout and seed maturation. Seed heads and plants will be removed from the site in a covered vehicle to prevent seed dispersal and transported to a licensed landfill or composting facility.
- Soil and spoils may not be transported offsite from any Project work site infested with weeds not considered ubiquitous in the region.

4.2.2 Chemical Treatment

Herbicide application is a method to treat and eradicate infestations of invasive plants and noxious weed species. Herbicides, when applied with wands or wicks, may be used to remove weeds with minimal disturbance to native seedings and the surrounding soils.

When carefully and appropriately applied, herbicides can be used to selectively treat discrete but significant infestations where manual and mechanical (physical) treatment methods are ineffective. Herbicide drift will be minimized by accounting for winds.

Prior to application of herbicide, contractors must demonstrate that they possess required permits from state and local authorities. Herbicides will be applied by a Licensed Qualified Applicator. All herbicides will be applied in accordance with applicable laws, regulations, and permit stipulations and U.S. Environmental Protection Agency (USEPA) label instructions. Only herbicides and adjuvants approved by the State of California, State of Nevada, BLM California State and BLM Nevada State Offices, and NPS will be used within or adjacent to the Project area. On BLM-administered lands, only BLM-approved herbicides/adjuvants will be used according to the BLM Vegetation Treatments using Herbicide documents (BLM 2007) and (BLM 2016), including stipulations and mitigations.

SCE has submitted to the BLM and NPS a Pesticide Use Proposal (PUP) for applications of herbicides in the Project restoration program areas. Herbicide use may promote the success of the restoration program through more efficient and less impactful weed management (compared to hand weeding alone). Any use of herbicides will be predicated on compliance with all applicable regulations and securing any required authorizations from BLM, NPS, and the City of Boulder City.

4.2.3 Recommended Treatment Methods by Species

The treatment methods are summarized in Table 4-1. Treatment should be based on the weed species, location of weeds, and the time of year that weed control operations occur and may include more than one treatment method. Some treatment methods, such as flooding, steaming, soil solarization, and biological control, are not included because they are either not practical to implement at this scale or are not appropriate for the area. All herbicide treated areas will be identified and mapped to record treatment type and extent to assess effectiveness.

Weed infestations must be controlled or eradicated as soon as possible upon discovery, and before they go to seed, or when appropriate with the goal to prevent further spread. All proposed weed control methods must minimize disturbance to native vegetation, limit ingress and egress to defined routes, and avoid damage to any ESAs identified within or adjacent to the ROW. New infestations by weed species of concern will be treated at a minimum of once annually until eradication, suppression, or containment goals are met. For eradication, when no new seedlings or resprouts are observed for three consecutive years, but are observed in reference populations, the weed occurrence can be considered eradicated and weed control efforts may cease for the site.

Table 4-2 identifies the recommended Treatment Method and Management Goals for weed (invasive plant and noxious weed) species identified in the EPL Project area. If evidence of introduction of invasive plants is found in the Project disturbance areas, SCE will implement treatment methods to eradicate the occurrence with the understanding that achieving the management goal of eradication may not be feasible for all species.

Weed zones will be updated in Table 4-2 after invasive plant and noxious weed surveys (to be scheduled) have been completed.

Table 4-1. Invasive Plant and Noxious Weed Treatment Methods

Treatment Method	Description	Appropriate Target	Key Considerations
Physical Control			
Manual Removal			
Pulling	Removing the plant from the ground by hand or using hand tools (e.g., weeder, pry bar, Weed Wrench).	Taprooted and shallow rooted plants (annuals and some perennials) unable to re-sprout from roots or other vegetative organs.	Plants need to be large enough to be grasped, and soils should be damp or loose enough to release roots. Labor intensive, may need to be repeated. Appropriate where weeds are interspersed with native plants Minimal disturbance.
Hoeing	Scraping seedlings at the soil line or cutting off small plants just below the ground surface.	Annual and perennial plants (seedlings and small plants) unable to re-sprout from roots or other vegetative organs.	Applicable for seedlings and small plants. Labor intensive, may need to be repeated. Can also affect interspersed native individuals. Moderate disturbance.
Digging	Removing a plant from the ground using trowels, spades, picks, or other tools to loosen the plant's roots from the soil. Often combined with pulling.	Taprooted and shallow rooted plants (annuals and some perennials) unable to re-sprout from roots or other vegetative organs.	Labor intensive, may need to be repeated. Can also affect interspersed native individuals. Moderate disturbance.
Mechanical Removal			
Trimming/Brush Cutting	Using handheld string trimmers or other motorized handheld tools to cut off plants at the ground surface.	Plants that reproduce primarily by seed. Effective on plants less than two inches in stem diameter.	Conduct during the bolting/budding stage of target plants, before seed development. Labor intensive. Can also affect interspersed native individuals.
Chemical Control			
Herbicide Application			
Foliar Treatment	Applying herbicide to the leaves of plants using a spray bottle or backpack applicator (spot application); by wiping using a hand, trail, or vehicle mounted wick.	Low-growing annual and perennial plants, shrubs, and saplings where little non-target vegetation exists.	Apply when plants are actively growing, and after full leaf expansion. Requires complete coverage to be effective. Ineffective on plants with waxy cuticles. May require several applications. Overspray /wind drift may affect adjacent native plants. Spot spraying and hand wicking are labor intensive.

Treatment Method	Description	Appropriate Target	Key Considerations
Basal Bark	Applying herbicide in a band encircling the base of the trunk.	Woody vines, shrubs, and trees.	Can be conducted at any time of year. Little chance of impacting adjacent desirable plants. Labor intensive.
Hack and Squirt	Cutting the bark using an axe, or similar tool, at selected points around the base of the stem/trunk. Cuts should angle downward, be less than 1 inch apart, and extend into the sapwood. Apply herbicide to each cut.	Woody vines, shrubs, and trees.	Can be conducted at any time of year. Little chance of impacting adjacent native plants. Labor intensive.
Cut Stump	Painting herbicide on the stump immediately after a tree or shrub has been cut. Herbicide must be applied within 5 minutes of being cut.	Woody vines, shrubs, and trees.	Delayed treatment may reduce effectiveness. Labor intensive.

Sources: Bell & Lehman 2005, Cal-IPC 2022, DiTomaso, Kyser et al. 2013.

Table 4-2. Treatment Method and Management Goals for Weed Species Identified in the EPL Project Area

Scientific Name	Common Name	Invasive Plant Zone(s)	Treatment Methods	Management Goals
Trees				
Tamarix aphylla	athel tamarisk	1, 2	Pulling: Pull to remove saplings. Cut Stump: Cut stems of mature trees as low to the ground early in the spring and again at the end of the growing season (late spring or early summer). Apply herbicide on the stump immediately after cutting.	Eradication/Suppression. Monitor for occurrence year-round and treat for eradication/suppression as required in areas where this weed has been located as well as in any new locations as part of the early detection rapid response (EDRR) approach to managing invasive plants. May provide important habitat feature. Consult with biologist prior to removal.
Shrubs				
Caesalpinia gilliesii	bird of paradise	1	Pulling: Pull to remove saplings. Cut Stump: Cut stems of mature trees as low to the ground early in the spring and again at the end of the growing season (late spring or early summer). Apply herbicide on the stump immediately after cutting.	Eradication/Suppression. Monitor for occurrence year-round and treat for eradication/suppression as required in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants. May provide important habitat feature. Consult with biologist prior to removal.
Tamarix ramosissima	saltcedar	1, 2	Pulling: Pull to remove saplings. Cut Stump: Cut stems of mature trees as low to the ground early in the spring and again at the end of the growing season (late spring or early summer). Apply herbicide on the stump immediately after cutting.	Eradication/Suppression. Monitor for occurrence year-round and treat for eradication/suppression as required in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants. May provide important habitat feature. Consult with biologist prior to removal.

Scientific Name	Common Name	Invasive Plant Zone(s)	Treatment Methods	Management Goals
Herbaceous Species (annuals, biennials, perennials, graminoids)				
Avena barbata	slender wild oat	1	Implement preventive measures from Section 4.1. : Ubiquitous. Control infeasible; prevention is optimal control method. For small infestations, remove using Physical Treatments outlined in Section 4.2.1.	Prevention. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Bassia hyssopifolia	five-horned bassia	1	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Brassica tournefortii	Sahara mustard	1, 2	Pulling: Non-ubiquitous: pull out entire plant and root before seed is set and bag for proper disposal. Prevention Only: Ubiquitous. Control infeasible; prevention is optimal control method. Foliar treatment: Control with various herbicides during vegetative growth stage.	Suppression. Monitor for occurrence December - April prior to seed set as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants. Eradicate localized populations if feasible.
Bromus madritensis subsp. *rubens*	red brome	1, 2	Implement preventive measures from Section 4.1. : Ubiquitous. Control infeasible; prevention is optimal control method. For small infestations, remove using Physical Treatments outlined in Section 4.2.1.	Prevention. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Bromus tectorum	cheatgrass	1, 2	Implement preventive measures from Section 4.1. : Ubiquitous. Control infeasible; prevention is optimal control method. For small infestations, remove using Physical Treatments outlined in Section 4.2.1.	Prevention. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Chenopodium album	lambsquarters	1, 2	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.

Scientific Name	Common Name	Invasive Plant Zone(s)	Treatment Methods	Management Goals
Cycloloma atriplicifolium	winged pigweed	1	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Cynodon dactylon	Bermudagrass	1	Implement preventive measures from Section 4.1. : Ubiquitous. Control infeasible; prevention is optimal control method. For small infestations, remove using Physical Treatments outlined in Section 4.2.1.	Prevention. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as EDRR approach to managing invasive plants.
Descurainia sophia	flix weed	1, 2	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Erodium cicutarium	red-stemmed filaree	1, 2	Prevention Only: Ubiquitous. Control infeasible; prevention is optimal control method.	Prevention. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Eruca vesicaria	garden rocket	1	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Festuca myuros	rattail fescue	1	Prevention Only: Ubiquitous. Control infeasible; prevention is optimal control method.	Prevention. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.

Scientific Name	Common Name	Invasive Plant Zone(s)	Treatment Methods	Management Goals
Halogeton glomeratus	halogeton, saltlover	1, 2	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Hirschfeldia incana	summer mustard, short-pod mustard	1	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Hordeum murinum	foxtail barley, hare barley	1, 2	Prevention Only: Ubiquitous. Control infeasible; prevention is optimal control method.	Prevention. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Lepidium perfoliatum	clasping pepperweed	1	Prevention Only: Ubiquitous. Control infeasible; prevention is optimal control method.	Prevention. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Malva parviflora	cheeseweed	1	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.

Scientific Name	Common Name	Invasive Plant Zone(s)	Treatment Methods	Management Goals
Medicago polymorpha	burclover	1	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Mesembryanthemum nodiflorum	slender-leaved ice plant	1	Pulling & Digging: Pull or dig to remove plants after rains loosen the soil; cut the stems and, being careful not to disperse fragments, dig up the roots using hand tools or heavy equipment (only successful on seedling and sapling sprouts in isolated conditions). Foliar Treatment: Apply foliar spray herbicide after the plant flowers and before summer or winter dormancies. Cut Stump: Cut and treat the cut stems with herbicide.	Suppression. Monitor for occurrence, and control during late-spring or fall as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants. If not considered ubiquitous in the region, soil and spoils may not be transported offsite from any project work site infested with this species.
Phalaris aquatica	Harding grass	1	Pulling & Digging: Pull or dig to remove plants after rains loosen the soil; cut the stems and, being careful not to disperse fragments, dig up the roots using hand tools or heavy equipment (only successful on seedling and sapling sprouts in isolated conditions). Because this species spreads laterally by rhizomes, all treatment areas should be revisited to remove resprouts. Foliar Treatment: Apply foliar spray herbicide after the plant flowers and before summer or winter dormancies. Cut Stump: Cut and treat the cut stems with herbicide.	Suppression. Monitor for occurrence, and control during late-spring or fall as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants. If not considered ubiquitous in the region, soil and spoils may not be transported offsite from any project work site infested with this species.
Polygonum acivulare	prostrate knotweed	1	Hoeing & Trimming: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.

Scientific Name	Common Name	Invasive Plant Zone(s)	Treatment Methods	Management Goals
Salsola tragus	Russian-thistle	1, 2	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Schismus barbatus	Mediterranean grass	1, 2	Prevention Only: Ubiquitous. Control infeasible; prevention is optimal control method.	Prevention. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the early detection rapid response EDRR to managing invasive plants.
Sisymbrium altissimum	tall tumblemustard	1, 2	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Sisymbrium irio	London rocket	1, 2	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Sisymbrium orientale	Indian hedgemustard	1, 2	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.

Scientific Name	Common Name	Invasive Plant Zone(s)	Treatment Methods	Management Goals
Solanum elaeagnifolium	horse nettle	1, 2	Pulling: pull out entire plant and root before seed is set and bag for proper disposal. Hoeing & Trimming/Brush Cutting: Mow, scrape, cut, or trim seedlings and mature plants at or just below ground surface prior to seed dispersal. Foliar Treatment: Control with various herbicides during vegetative growth stage.	Prevention/Containment. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.
Triticum aestivum	common wheat	1, 2	Prevention Only: Ubiquitous. Control infeasible; prevention is optimal control method.	Prevention. Monitor for occurrence year-round and treat as needed in areas where this weed has been located as well as in any new locations as part of the EDRR approach to managing invasive plants.

4.3 Monitoring

SCE will conduct monitoring for invasive plant and noxious weeds and effectiveness of treatment options in conjunction with pre-construction clearance surveys by environmental compliance monitors in temporary impact areas. Monitors will note the presence of invasive plants and noxious weeds listed in this Plan compared to the results of the baseline surveys to determine if infestations are occurring.

During construction, monitoring of infestations will be performed by the biological monitor, who will be on site daily throughout construction. The monitor should have specific knowledge of the weeds on the Project site and be able to distinguish weeds from native plants in all developmental stages. Monitoring will consist of performing visual inspections of construction activities and equipment to determine if preventive measures identified in Section 4.1 are needed and being followed. If the preventive measures in Section 4.1 are insufficient, monitors will determine whether treatment methods identified in Section 4.2 would be necessary. Monitoring will also consist of visual assessments and will focus on identifying the location and species composition of invasive plants or noxious weeds and any new or repeated infestations and the need for treatment. Occurrences of new discreet infestations of target species in this Plan will be documented, mapped by a global positioning system (GPS), and identified on an aerial photograph or other base map in SCE's Field Reporting Environmental Database (FRED). Photographs may also be taken when appropriate. Monitoring personnel will notify the Lead Biological Monitor to review the infestation and plan for removal or treatment of the infested area. Monitors will immediately notify SCE of any new weed discoveries so that treatment can be scheduled as soon as possible. Infestations will be included in the monitor's daily biological monitoring report entered in FRED.

Monitoring during the restoration program as defined in the Project's Habitat Restoration Plan (HRP; SCE 2023) will identify any areas of localized infestation on and adjacent to the Project temporary impact areas that need to be treated to promote the success of the restoration program. Treatment will occur as needed per the guidance in Section 4.2.

In addition to monitoring during construction activities, Project-wide invasive plant and noxious weed annual surveys will be conducted. The data will be used to update the invasive plants map. During the construction phase Project-wide invasive plants map will be updated annually. The map will include the extent and location of baseline and new infestations of target species.

4.4 Reporting

All restoration monitoring and reporting will be done according to the Project's HRP. The report will also include the treatments applied and their effectiveness.

5.0 Herbicide Application, Handling, Spills, and Cleanup

5.1 Herbicide Application and Handling

Treatment of some weeds may be most effectively accomplished through herbicide application. Any adjuvants, dyes, and surfactants used in tandem with the herbicide will be least toxic to the environment. All adjuvants, dyes, and surfactants will be added to the correct herbicide following

instructions and proportions specified on the herbicide label. The application of general use herbicides will follow all federal, state, and local laws and regulations. Most chemical weed treatment would take place with glyphosate-based herbicides. Glyphosate is a polar compound that works to kill target plant material by disrupting a plant enzyme, which is not present in humans or animals. This non-selective herbicide provides effective control of many species, including grasses, forbs, vines, shrubs, and trees.

The following five other herbicides would be used in a limited fashion for treatment of weeds in specific cases, as follows:

- Chlorsulfuron has a specific mode of action: the inhibition of the amino acid acetolactate synthase. This herbicide is broad-leaved selective and has little effect on grasses and other monocots.
- Clopyralid is an auxin-mimicking herbicide that stimulates rapid cell elongation, which destroys cell walls by rupturing them. It is a selective post-emergent herbicide that is often used to control members of the sunflower family (for example, thistles).
- Imazapyr works by inhibiting the synthesis of branched-chain amino acids. Imazapyr is generally used for the control of terrestrial annual and perennial grasses and woody species. It also has limited activity on some broad-leaved herbs. Triclopyr is a selective systemic herbicide used to control woody and herbaceous broad-leaf plants but does not harm monocots (grasses).
- Triclopyr works by mimicking the plant hormone auxin, causing uncontrollable growth in targeted weeds. It is typically used to control annual and perennial broadleaf plants, particularly woody species (i.e., shrubs and trees).
- Fusilade II/DX (Active ingredient: Fluazifop-P-butyl) is a selective herbicide which controls grasses and select broadleaves. Local agencies have found this herbicide to be very effective at controlling cheatgrass (*Bromus tectorum*), Mediterranean grass, and red-stemmed filaree (*Erodium cicutarium*).

SCE has developed a PUP for the EPL Project and has submitted it to BLM and NPS for use in each agency's project review and approval processes.

Application of herbicides would be suspended when any of the following conditions exists:

- Wind velocity exceeds 10 miles per hour; or
- Precipitation is occurring or is imminent.

Calibration checks of equipment would be conducted at the beginning of spraying and periodically to ensure that proper application rates are achieved. Herbicides would be transported to the Project area daily with the following provisions:

- Only the quantity needed for that day's work would be transported.
- Concentrate would be transported in approved containers only and in a manner that would prevent tipping or spilling and in a compartment that is isolated from food, clothing, and safety equipment.
- Mixing would be done off-site and at a distance greater than 200 feet from open or flowing water, wetlands, or other sensitive resources.
- All herbicide equipment and containers would be inspected on a regular basis for leaks.
- All labels on herbicide equipment will be legible to avoid misidentification.

All herbicide applications would follow USEPA label instructions.

Herbicide treatment would be implemented by a Licensed Qualified Applicator. Weed treatment crews must be familiar with the detailed requirements for weed control as specified in this Plan. All herbicide applications would follow USEPA label instructions and be in accordance with federal, state, and local laws and regulations. Herbicides would be applied using backpack sprayers, or possibly utility terrain vehicle (UTV)-mounted boom sprayers, to treat weed species. A backpack sprayer is typically a 5-gallon backpack worn by the applicator and used for spot application of herbicides to allow for an accurate application process. This method would be used to target individual weed occurrences, or to apply herbicide to small or scattered weed populations. UTV-mounted sprayers can carry a larger capacity of herbicide (up to 50 gallons) and may be used to treat larger areas of infestation.

5.2 Herbicide Spills and Cleanup

All reasonable precautions would be taken to avoid herbicide spills. In the event of a spill, cleanup would be immediate. Contractors would keep spill kits in their vehicles and in herbicide storage areas to allow for quick and effective response to spills. Response to an herbicide spill would vary with the size and location of the spill, but general procedures include:

- Traffic control
- Dressing the cleanup team in protective clothing
- Stopping the leaks and containing the spilled material
- Cleaning up and removing the spilled herbicide and contaminated adsorptive material and soil, and
- Transporting the spilled herbicide and contaminated material to an authorized disposal site.

5.3 Worker Safety and Spill Reporting

All herbicide contractors will obtain and have readily available copies of the appropriate safety data sheets for the herbicides used. All personnel who apply herbicides will wear appropriate Personal Protective Equipment (PPE) at all times when working with herbicides. All herbicide spills will be reported in accordance with applicable laws and requirements.

6.0 References

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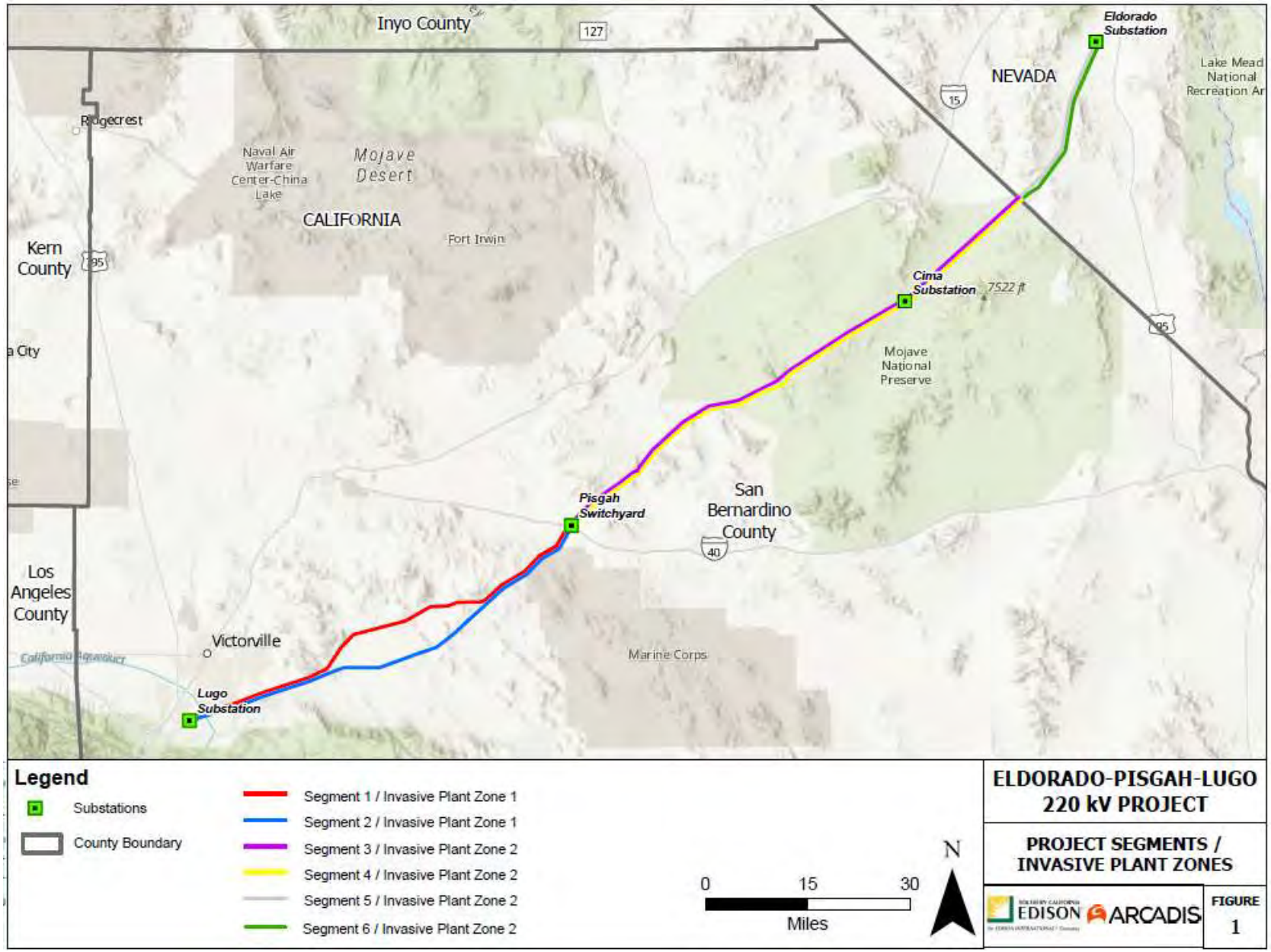
7.0 Revisions

Date	Description of Revision	Contact

FIGURES


Inyo County
127
Eldorado Substation
NEVADA
Lake Mead National Recreation Ar
15
Ridgecrest
Naval Air Warfare Center-China Lake
Mojave Desert
CALIFORNIA
Fort Irwin
Kern County
395
Cima Substation
7522 ft
95
Mojave National Preserve
Pisgah Switchyard
San Bernardino County
40
Los Angeles County
Victorville
California Aqueduct
Marine Corps
Lugo Substation
Legend
Substations
County Boundary
Segment 1 / Invasive Plant Zone 1
Segment 2 / Invasive Plant Zone 1
Segment 3 / Invasive Plant Zone 2
Segment 4 / Invasive Plant Zone 2
Segment 5 / Invasive Plant Zone 2
Segment 6 / Invasive Plant Zone 2
0
15
30
Miles
N
ELDORADO-PISGAH-LUGO
220 kV PROJECT
PROJECT SEGMENTS /
INVASIVE PLANT ZONES
SOUTHERN CALIFORNIA EDISON
ARCADIS
FIGURE
1

APPENDICES
(to be developed)

APPENDIX V

FAA Notice and Criteria Tool Results

Southern California Edison

FAA Filing Determination

Eldorado-Pisgah-Lugo Project

December 2022

FAA Filing Determination

Eldorado-Pisgah-Lugo Project

December 2022

Prepared By:
Arcadis U.S., Inc.
320 Commerce, Suite 200
Irvine
California 92602
Phone: 714 730 9052
Fax: 714 730 9345

Prepared For:
David De Leon
Major Construction Project Manager
Southern California Edison
2 Innovation Way
Pomona, CA 91768

Contents

Tables

Acronyms and Abbreviations

AGL	Above Ground Level
CFR	Code of Federal Regulations
DOD	Department of Defense
EPL	Eldorado-Pisgah-Lugo
FAA	Federal Aviation Administration
ft.	feet
NAS	National Airspace

Executive Summary

Arcadis reviewed the proposed engineering design for the Eldorado-Pisgah-Lugo Project to determine which structures and conductor spans (catenaries), if any, will require filing with the Federal Aviation Administration (FAA) for obstruction evaluation.

The evaluation addressed the installation of new infrastructure in areas that are both in the vicinity of an airport, and those that are outside the vicinity of an airport.

There are no structures proposed for installation under the Eldorado-Pisgah-Lugo Project that will require an FAA filing. There is one cable catenary span and one proposed new transmission structure that will require an FAA filing.

1 Project Description

The Eldorado-Pisgah-Lugo Project (EPL Project) includes the installation of new transmission structures, the replacement of existing electrical conductor and overhead groundwire supported by existing transmission structures with new electrical conductor and overhead groundwire on the same existing transmission structures, and the replacement of hardware of some other existing structures. This work will be performed in portions of two existing transmission lines located between the Lugo Substation in the City of Hesperia (California) and the Eldorado Substation in the City of Boulder City (Nevada).

1.1 Airport in the Vicinity of the EPL Project

As shown in Figure 1, one airport is located within 20,000 feet of the EPL Project alignment: Hesperia Airport.

2 Regulatory Framework

Title 14 Code of Federal Regulations (CFR) Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace, Section 9, Construction, or alteration requiring notice, requires that any type of construction or alteration of a structure that may affect the National Airspace System (NAS) must be noticed to the Federal Aviation Administration (FAA) by completing the Notice of Proposed Construction or Alteration form (FAA Form 7460-1). Section 9 also details the dimensions and locations of structures that require filing. Federal Aviation Administration Advisory Circular 70/7460-1L sets forth standards for marking and lighting obstructions that have been deemed to be a hazard to navigable airspace.

14 CFR § 77.9 Construction or alteration requiring notice states:

> If requested by the FAA, or if you propose any of the following types of construction or alteration, you must file notice with the FAA of:
>
> (a) Any construction or alteration that is more than 200 ft. AGL at its site.
>
> (b) Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:
>
> > (1) 100 to 1 for a horizontal distance of 20,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway more than 3,200 ft. in actual length, excluding heliports.
> >
> > (2) 50 to 1 for a horizontal distance of 10,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway no more than 3,200 ft. in actual length, excluding heliports.
> >
> > (3) 25 to 1 for a horizontal distance of 5,000 ft. from the nearest point of the nearest landing and takeoff area of each heliport described in paragraph (d) of this section.
>
> (c) Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object that would normally traverse the road,

whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, would exceed a standard of paragraph (a) or (b) of this section.

(d) Any construction or alteration on any of the following airports and heliports:

(1) A public use airport listed in the Airport/Facility Directory, Alaska Supplement, or Pacific Chart Supplement of the U.S. Government Flight Information Publications;

(2) A military airport under construction, or an airport under construction that will be available for public use;

(3) An airport operated by a Federal agency or the DOD.

(4) An airport or heliport with at least one FAA-approved instrument approach procedure.

(e) You do not need to file notice for construction or alteration of:

(1) Any object that will be shielded by existing structures of a permanent and substantial nature or by natural terrain or topographic features of equal or greater height, and will be located in the congested area of a city, town, or settlement where the shielded structure will not adversely affect safety in air navigation;

(2) Any air navigation facility, airport visual approach or landing aid, aircraft arresting device, or meteorological device meeting FAA-approved siting criteria or an appropriate military service siting criteria on military airports, the location and height of which are fixed by its functional purpose;

(3) Any construction or alteration for which notice is required by any other FAA regulation.

(4) Any antenna structure of 20 feet or less in height, except one that would increase the height of another antenna structure.

3 Filing Analysis Methodology

The EPL Project does not propose any work addressed under 14 CFR § 77.9(c) or (d), and none of the parts of (e) are relevant or applicable to the EPL Project.

Analyses were performed to determine if any of the work proposed under the EPL Project would meet the definitions contained in 14 CFR § 77.9(a) or (b), and thus would require that notice be filed with the FAA. These analyses were performed as described below.

3.1 14 CFR § 77.9(a) Analysis Methodology

SCE's engineering contractor for the EPL Project, Sargent & Lundy Engineering, performed an analysis of each span of the transmission lines where the existing conductor and overhead groundwire would be replaced. The analysis was performed using PLS-CADD software. No analysis was performed on the proposed new transmission structures under 14 CFR 77.9(a) as the tallest of the proposed new transmission structures is 115 feet above ground level.

3.2 14 CFR § 77.9(b) Analysis Methodology

Arcadis performed a GIS-based analysis of each of the proposed new transmission structures proposed to be installed under the EPL Project. Each structure was evaluated using the criteria in 14 CFR 77.9(b).

Each structure was evaluated to determine if the structure exceeds an imaginary surface extending outward and upward at any of the following slopes:

(1) 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each airport described in Section 1.1 with its longest runway more than 3,200 feet in actual length, excluding heliports.

(2) 50 to 1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each airport described in Section 1.1 with its longest runway no more than 3,200 feet in actual length, excluding heliports.

(3) 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport described in Section 1.1.

4 Results and Analysis of Structures and Catenaries

4.1 14 CFR § 77.9(a) Analysis Results

As presented in Section 3.1, no proposed transmission structures under the EPL Project exceed 200 feet in height.

In one catenary span, the new conductor and overhead groundwire to be installed under the EPL Project would exceed a height of 200 feet above ground level. The location of this catenary span is shown in Figure 1; details regarding this catenary span are shown below in Table 1. SCE will electronically file FAA form 7460-1, "Notice of Proposed Construction or Alteration" to address this catenary span.

4.2 14 CFR § 77.9(b) Analysis Results

A single new transmission structure (M193-H1A) is proposed to be installed within 20,000 feet Hesperia Airport; the location of this transmission structure is shown in Figure 1. The height of proposed structure M193-H1A is 70 feet above ground level. Proposed structure M193-H1A is located 2,290 feet from the nearest point of the nearest runway of Hesperia Airport. Proposed structure M193-H1A exceeds the imaginary surface extending outward and upward as described in 14 CFR § 77.9(b). Details regarding this structure is shown below in Table 1. SCE will electronically file FAA form 7460-1, "Notice of Proposed Construction or Alteration" to address this structure.

Table 1. FAA Request for Study Data Sheet

FAA Request for Study

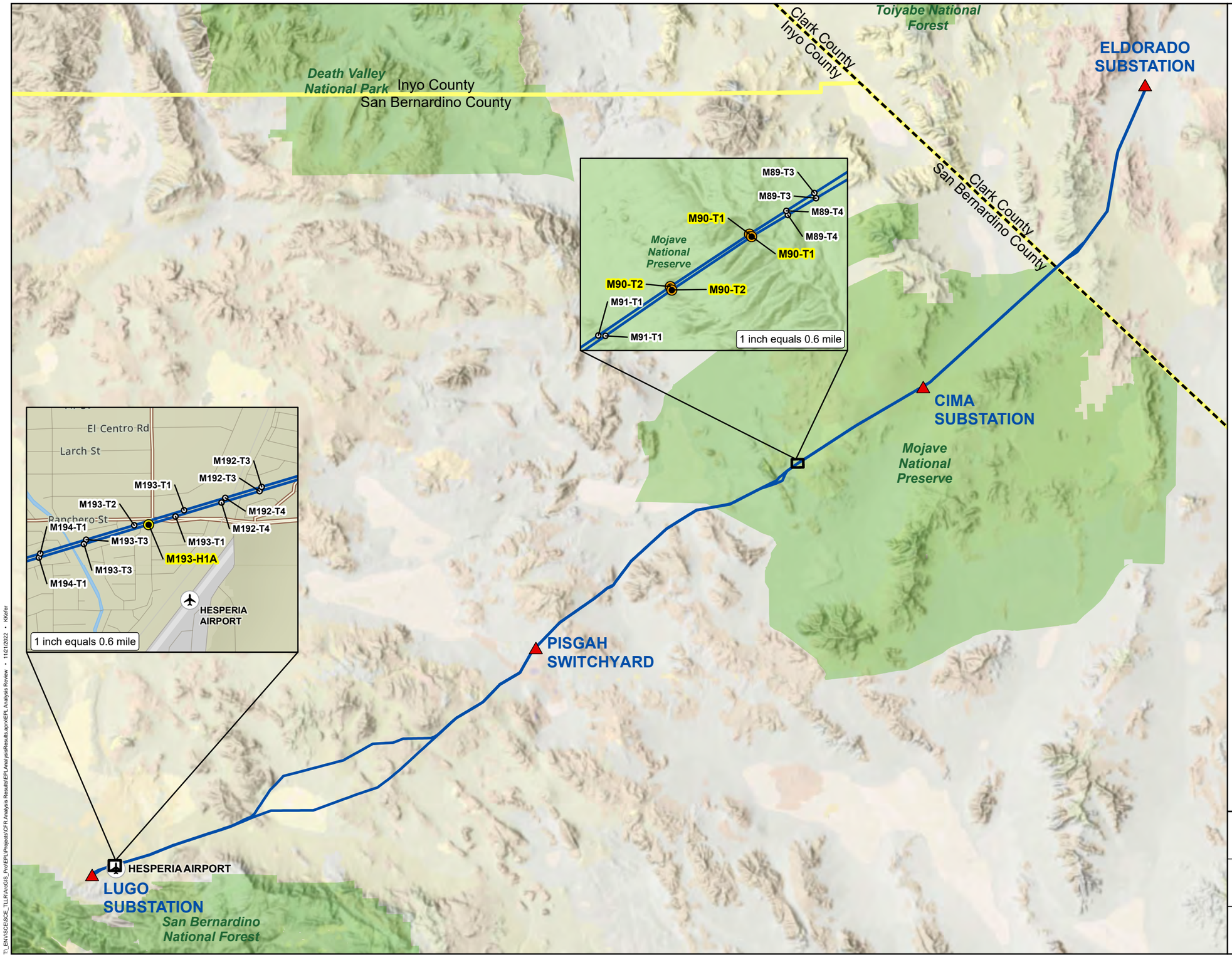
E-mail to FAA Administrator

FAA Administrator	Michael Hubbell	**PAX**	63521
Contact E-mail	michael.hubbell@sce.com	**Cell**	626-483-2136
Project Information			
Project Name	Eldorado-Pisah-Lugo	**PAX**	
Point of Contact Name	David De Leon	**Cell**	619-894-1775
Point of Contact E-Mail	David.Deleon@sce.com	**SAP #**	

Project Description: Eldorado-Pisgah-Lugo, Cima-Eldorado-Pisah No.2 220 kV Transmission Line

Tower/Span ID	Latitude (Deg-Min-Sec)	Longitude (Deg-Min-Sec)	Ground Elevation (AMSL)	Structure Height (AGL)	Total Height (AMSL)	Height Change/New Pole
M90-T1 to M90-T2	35° 6' 47.418"N	-115° 47' 57.011" W	3212.9	206	3418.9	10.3
M193-H1A	34° 22' 58.54933"N	-117° 19' 12.00432" W	3317.2	70	3387.2	70

Figure



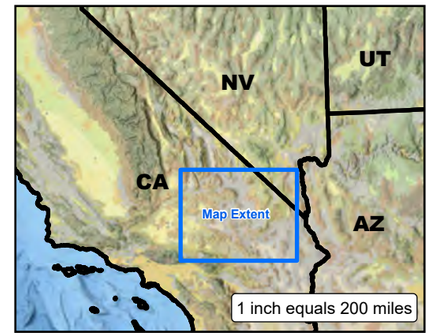
LEGEND

- SCE SUBSTATION
- ELDORADO-PISGAH-LUGO PROJECT
- M90-T1/M90-T2 STRUCTURE
- PROPOSED STRUCTURE: M193-H1A
- STRUCTURE
- NATIONAL PARK, FOREST, OR PRESERVE
- STATE BOUNDARY
- COUNTY BOUNDARY
- HESPERIA AIRPORT

Notes

- Base map source: ESRI National Geographic Style.

Project Location



N

0 3 6 12 Miles

1 inch equals 12 miles

Eldorado-Pisgah-Lugo (EPL) 220 kV Project

14 CFR § 77.9(b) Analysis Results

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE 1

Arcadis U.S., Inc.
320 Commerce, Suite 200
Irvine
California 92602
Phone: 714 730 9052
Fax: 714 730 9345
www.arcadis.com

APPENDIX W

300' List

APN_FORMAT	MAILING_ADDRESS	MAILING_CITY	MAILING_STATE	MAILING_ZIP
0357-441-23-0000	13312 Ranchero Rd., Ste. 18 PMB #261	Oak Hills	CA	92344
0357-441-24-0000	9718 Ravari Dr.	Cypress	CA	90630
0357-451-02-0000	6525 Escondido Ave.	Oak Hills	CA	92345
0357-471-22-0000	6546 Escondido Ave.	Oak Hills	CA	92344
0357-671-23-0000	P.O. Box 410	Long Beach	CA	90801
0357-671-24-0000	PO BOX 800	Rosemead	CA	91770
0357-671-25-0000	PO BOX 800	Rosemead	CA	91770
0357-671-26-0000	P.O. Box 410	Long Beach	CA	90801
0357-671-27-0000	PO BOX 800	Rosemead	CA	91770
0357-671-28-0000	PO BOX 800	Rosemead	CA	91770
0357-671-29-0000	PO BOX 800	Rosemead	CA	91770
0357-671-31-0000	527 Willow Pl.	La Verne	CA	91750
0357-671-37-0000	13289 Stuveling St.	Oak Hills	CA	92344
0357-671-41-0000	2 Innovation Way	Pomona	CA	91768
0357-671-42-0000	6025 Escondido Ave.	Hesperia	CA	92345
0397-141-01-0000	287 Tennessee St.	Redlands	CA	92374
0397-141-02-0000	7250 7th Ave.	Hesperia	CA	92345
0397-141-03-0000	7234 7th Ave.	Hesperia	CA	92345
0397-141-04-0000	7218 7th Ave.	Hesperia	CA	92345
0397-142-01-0000	287 Tennessee St.	Redlands	CA	92374
0397-142-02-0000	P.O. Box 407000	Hesperia	CA	92340
0397-142-04-0000	P.O. Box 407000	Hesperia	CA	92340
0397-142-05-0000	P.O. Box 407000	Hesperia	CA	92340
0397-142-06-0000	9700 7th Ave.	Hesperia	CA	92345
0397-142-07-0000	9700 Seventh Ave.	Hesperia	CA	92345
0397-142-08-0000	9700 Seventh Ave.	Hesperia	CA	92345
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0397-142-18-0000	15814 Arbury St.	Hesperia	CA	92345
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0397-142-20-0000	15786 Arbury St.	Hesperia	CA	92345
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0397-145-02-0000	15763 Arbury St.	Hesperia	CA	92345
0397-201-01-0000	P.O. Box 400505	Hesperia	CA	92340
0397-201-02-0000	14704 Mulberry St.	Hesperia	CA	92345
0397-201-03-0000	P.O. Box 1088	Walnut	CA	91788
0397-201-04-0000	15461 Via Bahia St.	Hesperia	CA	92345
0397-201-05-0000	15445 Via Bahia St.	Hesperia	CA	92345
0397-201-06-0000	2925 Calle Frontera	San Clemente	CA	92673
0397-201-07-0000	15411 Via Bahia St.	Hesperia	CA	92345
0397-201-08-0000	7240 Via Antiqua	Hesperia	CA	92345
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0397-201-16-0000	15478 Via Bahia St.	Hesperia	CA	92345
0397-201-17-0000	15486 Via Bahia St.	Hesperia	CA	92345
0397-201-18-0000	15502 Via Bahia St.	Hesperia	CA	92345

0397-201-19-0000	15418 Kimball St.	Hesperia	CA	92345
0397-211-01-0000	7237 Via Quintana St.	Hesperia	CA	92345
0397-211-02-0000	4232 Village Dr. #A	Chino Hills	CA	91709
0397-211-03-0000	15581 Via Bahia	Hesperia	CA	92345
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0397-211-15-0000	15688 Via Cartagena	Hesperia	CA	92345
0397-211-16-0000	15685 Via Cartagena St.	Hesperia	CA	92345
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0397-211-20-0000	15601 Via Cartagena	Hesperia	CA	92345
0397-211-21-0000	15619 Via Cartagena St.	Hesperia	CA	92345
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0397-291-01-0000	5495 Mansion Ct.	La Verne	CA	91750
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0397-292-07-0000	15442 Cromdale St.	Hesperia	CA	92345
0397-292-08-0000	12421 Stuveling St.	Oak Hills	CA	92344
0398-031-40-0000	517 Fifteen Mile Dr.	Roseville	CA	95678
0398-042-01-0000	16888 Danbury Ave.	Hesperia	CA	92345
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0398-071-01-0000	17488 Seaforth St.	Hesperia	CA	92345
0398-071-02-0000	8960 Laramie Dr.	Rancho Cucamonga	CA	91737
0398-071-03-0000	17460 Seaforth St.	Hesperia	CA	92345
0398-071-04-0000	17446 Seaforth St.	Hesperia	CA	92345
0398-071-05-0000	P.O. Box 401852	Hesperia	CA	92340
0398-071-06-0000	17418 Seaforth St.	Hesperia	CA	92345
0398-071-07-0000	1916 Armacost Ave.	Los Angeles	CA	90025
0398-071-08-0000	17384 Seaforth St.	Hesperia	CA	92345
0398-071-09-0000	17370 Seaforth St.	Hesperia	CA	92345
0398-071-10-0000	17356 Seaforth St.	Hesperia	CA	92345
0398-071-11-0000	17342 Seaforth St.	Hesperia	CA	92345
0398-071-12-0000	17328 Seaforth St.	Hesperia	CA	92345
0398-071-13-0000	17316 Seaforth St.	Hesperia	CA	92345
0398-071-14-0000	17298 Seaforth St.	Hesperia	CA	92345
0398-071-15-0000	17286 Seaforth St.	Hesperia	CA	92345
0398-071-16-0000	17274 Seaforth St.	Hesperia	CA	92345
0398-071-17-0000	17254 Seaforth St.	Hesperia	CA	92345
0398-071-18-0000	287 Tennessee St.	Redlands	CA	92374
0398-072-01-0000	287 Tennessee St.	Redlands	CA	92374
0398-072-02-0000	1249 S. Diamond Bar Blvd. #366	Diamond Bar	CA	91765
0398-072-03-0000	17590 Seaforth St.	Hesperia	CA	92345
0398-072-04-0000	17580 Seaforth St.	Hesperia	CA	92345
0398-072-05-0000	17564 Seaforth St.	Hesperia	CA	92345
0398-072-06-0000	17550 Seaforth St.	Hesperia	CA	92345
0398-072-07-0000	P.O. Box 401036	Hesperia	CA	92340
0398-072-08-0000	P.O. Box 421163	Los Angeles	CA	90042
0398-072-09-0000	7765 Newhall Ave.	Hesperia	CA	92345
0398-081-03-0000	17060 Danbury Ave.	Hesperia	CA	92345
0398-081-04-0000	17050 Danbury Ave.	Hesperia	CA	92345
0398-081-05-0000	17040 Danbury St.	Hesperia	CA	92345
0398-081-06-0000	17030 Danbury Ave.	Hesperia	CA	92345
0398-081-07-0000	287 Tennessee St.	Redlands	CA	92374
0398-081-08-0000	16944 Danbury Ave.	Hesperia	CA	92345
0398-081-09-0000	16932 Danbury Ave.	Hesperia	CA	92345
0398-081-10-0000	420 N. Bixel St.	Los Angeles	CA	90026
0398-081-11-0000	18112 Harvest Ave.	Cerritos	CA	90703
0398-081-12-0000	16912 Danbury Ave.	Hesperia	CA	92345
0398-082-01-0000	16275 Kasota Rd.	Apple Valley	CA	92307
0398-082-02-0000	7237 Evening Star Rose Ct.	Hesperia	CA	92345
0398-082-03-0000	17204 Seaforth St.	Hesperia	CA	92345
0398-082-04-0000	17190 Seaforth St.	Hesperia	CA	92345
0398-082-05-0000	17180 Seaforth St.	Hesperia	CA	92345
0398-082-06-0000	17168 Seaforth St.	Hesperia	CA	92345
0398-082-07-0000	6522 Joy Ct.	Chino	CA	91710
0398-082-08-0000	17140 Seaforth St.	Hesperia	CA	92345

0398-082-09-0000	17124 Seaforth St.	Hesperia	CA	92345
0398-082-10-0000	17108 Seaforth St.	Hesperia	CA	92345
0398-082-11-0000	17090 Seaforth St.	Hesperia	CA	92345
0398-082-12-0000	17080 Seaforth St.	Hesperia	CA	92345
0398-082-13-0000	17068 Seaforth St.	Hesperia	CA	92345
0398-082-14-0000	17054 Seaforth Ave.	Hesperia	CA	92345
0398-082-15-0000	17050 Seaforth St.	Hesperia	CA	92345
0398-082-19-0000	7569 Earhart Ave.	Hesperia	CA	92345
0398-082-20-0000	7585 Earhart Ave.	Hesperia	CA	92345
0398-082-21-0000	287 Tennessee St.	Redlands	CA	92374
0398-082-22-0000	17101 Danbury Ave.	Hesperia	CA	92345
0398-082-23-0000	17109 Danbury Ave.	Hesperia	CA	92345
0398-082-24-0000	17121 Danbury Ave.	Hesperia	CA	92345
0398-082-25-0000	17135 Danbury Ave.	Hesperia	CA	92345
0398-082-26-0000	190 N. Winchester Blvd. #2206	Santa Clara	CA	95050
0398-082-27-0000	P.O. Box 403688	Hesperia	CA	92340
0398-082-28-0000	17185 Redding St.	Hesperia	CA	92345
0398-082-29-0000	17199 Redding St.	Hesperia	CA	92345
0398-097-01-0000	17215 Redding St.	Hesperia	CA	92345
0398-097-02-0000	17229 Redding St.	Hesperia	CA	92345
0398-097-03-0000	2380 Diamond Ave.	Barstow	CA	92311
0398-097-04-0000	17261 Redding St.	Hesperia	CA	92345
0398-097-05-0000	17275 Redding St.	Hesperia	CA	92345
0398-097-06-0000	17299 Redding St.	Hesperia	CA	92345
0398-097-07-0000	17315 Redding St.	Hesperia	CA	92345
0398-097-08-0000	2455 S. Park Ave.	Pomona	CA	91766
0398-097-09-0000	17345 Redding St.	Hesperia	CA	92345
0398-097-10-0000	17361 Redding St.	Hesperia	CA	92345
0398-097-11-0000	17375 Redding St.	Hesperia	CA	92345
0398-097-12-0000	17387 Redding St.	Hesperia	CA	92345
0398-097-13-0000	17399 Redding St.	Hesperia	CA	92345
0398-108-01-0000	17483 Redding St.	Hesperia	CA	92345
0398-108-02-0000	17497 Redding St.	Hesperia	CA	92345
0398-108-03-0000	17515 Redding St.	Hesperia	CA	92345
0398-108-04-0000	17531 Redding St.	Hesperia	CA	92345
0398-108-05-0000	17547 Redding St.	Hesperia	CA	92345
0398-108-06-0000	17561 Redding St.	Hesperia	CA	92345
0398-108-07-0000	17575 Redding St.	Hesperia	CA	92345
0398-108-08-0000	7876 I Ave.	Hesperia	CA	91345
0398-109-01-0000	17409 Redding St.	Hesperia	CA	92345
0398-109-02-0000	17421 Redding St.	Hesperia	CA	92345
0398-109-03-0000	17435 Redding St.	Hesperia	CA	92345
0398-109-04-0000	17451 Redding St.	Hesperia	CA	92345
0398-131-01-0000	7880 Windsor Ave.	Hesperia	CA	92345
0398-131-02-0000	17860 Seaforth St.	Hesperia	CA	92345
0398-131-03-0000	17844 Seaforth St.	Hesperia	CA	92345
0398-131-04-0000	6279 Eaglemont Dr.	Fontana	CA	92336
0398-131-05-0000	17812 Seaforth St.	Hesperia	CA	92345
0398-131-06-0000	11863 8th Ave.	Hesperia	CA	92345
0398-131-07-0000	3463 State St. #513	Santa Barbara	CA	93105
0398-131-08-0000	17764 Seaforth St.	Hesperia	CA	92345
0398-131-09-0000	17748 Seaforth St.	Hesperia	CA	92345

0398-131-10-0000	4166 Lexington Ave.	Chino	CA	91710
0398-131-11-0000	17716 Seaforth St.	Hesperia	CA	92345
0398-131-12-0000	P.O. Box 401543	Hesperia	CA	92340
0398-131-13-0000	17690 Seaforth St.	Hesperia	CA	92345
0398-131-14-0000	17676 Seaforth St.	Hesperia	CA	92345
0398-131-15-0000	2015 Manhattan Beach Blvd. #100	Redondo Beach	CA	90278
0398-131-16-0000	722 Champagne St.	Tulare	CA	92374
0398-131-17-0000	287 Tennessee St.	Redlands	CA	92374
0398-132-01-0000	18010 Seaforth St.	Hesperia	CA	92345
0398-132-02-0000	17996 Seaforth St.	Hesperia	CA	92345
0398-132-03-0000	17980 Seaforth St.	Hesperia	CA	92345
0398-132-04-0000	17964 Seaforth St.	Hesperia	CA	92345
0398-132-05-0000	18474 Mecca St.	Hesperia	CA	92345
0398-132-06-0000	17930 Seaforth St.	Hesperia	CA	92345
0398-132-07-0000	17914 Seaforth St.	Hesperia	CA	92345
0398-132-08-0000	17898 Seaforth St.	Hesperia	CA	92345
0398-132-09-0000	287 Tennessee St.	Redlands	CA	92374
0398-157-01-0000	17865 Redding St.	Hesperia	CA	92345
0398-157-02-0000	17881 Redding St.	Hesperia	CA	92345
0398-157-03-0000	17899 Redding St.	Hesperia	CA	92345
0398-157-04-0000	17915 Redding St.	Hesperia	CA	92345
0398-157-05-0000	17931 Redding St.	Hesperia	CA	92345
0398-157-06-0000	4216 N. 2475 West	Cedar City	UT	84721
0398-157-07-0000	17963 Redding St.	Hesperia	CA	92345
0398-157-08-0000	15812 Hill St.	La Puente	CA	91744
0398-158-01-0000	4861 Trail St.	Norco	CA	92860
0398-158-02-0000	817 N. Muscatel Ave.	Rosemead	CA	91770
0398-158-03-0000	17639 Redding St.	Hesperia	CA	92345
0398-158-04-0000	881 Victory Dr.	Hollister	CA	95023
0398-158-05-0000	17671 Redding St.	Hesperia	CA	92345
0398-158-06-0000	17685 Redding St.	Hesperia	CA	92345
0398-158-07-0000	17699 Redding St.	Hesperia	CA	92345
0398-158-08-0000	17715 Redding St.	Hesperia	CA	92345
0398-158-09-0000	17731 Redding St.	Hesperia	CA	92345
0398-158-10-0000	17745 Redding St.	Hesperia	CA	92345
0398-158-11-0000	17761 Redding St.	Hesperia	CA	92345
0398-158-12-0000	17775 Redding St.	Hesperia	CA	92345
0398-158-13-0000	17789 Redding St.	Hesperia	CA	92345
0398-158-14-0000	17801 Redding St.	Hesperia	CA	92345
0398-158-15-0000	17817 Redding St.	Hesperia	CA	92345
0398-158-16-0000	17833 Redding St.	Hesperia	CA	92345
0398-158-17-0000	7920 Windsor Ave.	Hesperia	CA	92345
0398-171-01-0000	287 Tennessee St.	Redlands	CA	92374
0398-171-02-0000	7918 El Cerrito	Hesperia	CA	92345
0398-171-03-0000	9739 Ortano Ln.	Cypress	CA	90630
0398-171-04-0000	9086 Quincey	Hesperia	CA	92345
0398-172-01-0000	2456 Hope St.	Huntington Beach	CA	90255
0398-172-02-0000	18272 Seaforth St.	Hesperia	CA	92345
0398-172-03-0000	8354 Alston Ave.	Hesperia	CA	92345
0398-172-04-0000	18240 Seaforth St.	Hesperia	CA	92345
0398-172-05-0000	18224 Seaforth St.	Hesperia	CA	92345
0398-172-06-0000	P.O. Box 402829	Hesperia	CA	92340

0398-172-07-0000	18196 Seaforth St.	Hesperia	CA	92345
0398-172-08-0000	18180 Seaforth St.	Hesperia	CA	92345
0398-172-09-0000	18166 Seaforth St.	Hesperia	CA	92345
0398-172-10-0000	1280 W. 33rd St.	Long Beach	CA	90810
0398-172-11-0000	18140 Seaforth St.	Hesperia	CA	92345
0398-172-12-0000	18124 Seaforth St.	Hesperia	CA	92345
0398-172-13-0000	18108 Seaforth St.	Hesperia	CA	92345
0398-172-14-0000	1884 W. Paseo Reforma N	Tucson	AZ	85705
0398-172-15-0000	18068 Seaforth St.	Hesperia	CA	92345
0398-172-16-0000	287 Tennessee St.	Redlands	CA	92374
0398-173-01-0000	18370 Seaforth St.	Hesperia	CA	92345
0398-173-02-0000	18354 Seaforth St.	Hesperia	CA	92345
0398-173-03-0000	18338 Seaforth St.	Hesperia	CA	92345
0398-173-04-0000	31500 Grape St. #3-283	Lake Elsinore	CA	92532
0398-173-05-0000	287 Tennessee St.	Redlands	CA	92374
0398-227-01-0000	18087 Redding St.	Hesperia	CA	92345
0398-227-02-0000	18103 Redding St.	Hesperia	CA	92345
0398-227-03-0000	P.O. Box 401181	Hesperia	CA	92340
0398-227-04-0000	18129 Redding St.	Hesperia	CA	92345
0398-227-05-0000	12551 Mystic Dr.	Victorville	CA	92392
0398-227-06-0000	18161 Redding St.	Hesperia	CA	92345
0398-227-07-0000	8230 Beverly Blvd. #12	Los Angeles	CA	90048
0398-227-08-0000	18185 Redding St.	Hesperia	CA	92345
0398-227-09-0000	18195 Redding St.	Hesperia	CA	92345
0398-227-10-0000	18205 Redding St.	Hesperia	CA	92345
0398-227-11-0000	18227 Redding St.	Hesperia	CA	92345
0398-227-12-0000	18227 Redding St.	Hesperia	CA	92345
0398-227-24-0000	8086 Peach Ave.	Hesperia	CA	92345
0398-227-25-0000	8068 Peach Ave.	Hesperia	CA	92345
0398-227-26-0000	8054 Peach Ave.	Hesperia	CA	92345
0398-228-01-0000	18027 Redding St.	Hesperia	CA	92345
0398-228-02-0000	18043 Redding St.	Hesperia	CA	92345
0398-228-03-0000	18061 Redding St.	Hesperia	CA	92345
0398-292-02-0000	8198 Lassen Ave.	Hesperia	CA	92345
0398-292-03-0000	8182 Lassen Ave.	Hesperia	CA	92345
0398-292-04-0000	9060 Roble Ave.	Hesperia	CA	92345
0398-292-05-0000	287 Tennessee St.	Redlands	CA	92374
0398-292-08-0000	435 Skylark Dr.	San Bernardino	CA	92405
0398-292-09-0000	18525 Yuba St.	Hesperia	CA	92345
0398-292-10-0000	18539 Yuba St.	Hesperia	CA	92345
0398-292-11-0000	18555 Yuba St.	Hesperia	CA	92345
0398-292-12-0000	P.O. Box 40089	Downey	CA	90239
0398-292-13-0000	18585 Yuba St.	Hesperia	CA	92345
0398-292-14-0000	9710 Fieldcrest Dr.	Dallas	TX	75238
0398-292-15-0000	18607 Yuba St.	Hesperia	CA	92345
0398-292-18-0000	8123 Arcadia Ave.	Hesperia	CA	92345
0398-292-19-0000	8311 Sweetwater Ave.	Victorville	CA	92344
0398-294-11-0000	825 E. 3rd St.	San Bernardino	CA	92415
0398-294-14-0000	18408 Yuba St.	Hesperia	CA	92345
0398-294-15-0000	18403 Yuba St.	Hesperia	CA	92345
0398-294-16-0000	18419 Yuba St.	Hesperia	CA	92345
0398-294-17-0000	18439 Yuba St.	Hesperia	CA	92345

0398-294-18-0000	18449 Yuba St.	Hesperia	CA	92345
0398-294-19-0000	287 Tennessee St.	Redlands	CA	92374
0398-294-20-0000	8071 Peach Ave.	Hesperia	CA	92345
0398-294-21-0000	8097 Peach Ave.	Hesperia	CA	92345
0398-294-22-0000	8109 Peach Ave.	Hesperia	CA	92345
0398-304-10-0000	18845 Danbury Ave.	Hesperia	CA	92345
0398-304-11-0000	7873 Spring Valley Pkwy.	Victorville	CA	92395
0398-304-12-0000	12245 E. Harvard Dr.	Aurora	CO	80014
0398-304-13-0000	12245 E. Harvard Dr.	Aurora	CO	80014
0398-304-14-0000	7873 Spring Valley Pkwy.	Victorville	CA	92395
0398-304-15-0000	7873 Spring Valley Pkwy.	Victorville	CA	92395
0398-304-16-0000	7873 Spring Valley Pkwy.	Victorville	CA	92395
0398-304-17-0000	287 Tennessee St.	Redlands	CA	92374
0398-304-18-0000	8169 Lassen Ave.	Hesperia	CA	92345
0398-304-19-0000	8185 Lassen Ave.	Hesperia	CA	92345
0398-304-20-0000	8201 Lassen Ave.	Hesperia	CA	92345
0398-304-22-0000	P.O. Box 403668	Hesperia	CA	92340
0398-304-23-0000	18729 Temecula Ave.	Hesperia	CA	92345
0398-304-24-0000	18745 Temecula Ave.	Hesperia	CA	92345
0398-304-25-0000	9700 Seventh Ave.	Hesperia	CA	92345
0398-304-26-0000	9700 Seventh Ave.	Hesperia	CA	92345
0398-304-31-0000	825 E. 3rd St.	San Bernardino	CA	92415
0398-319-01-0000	18480 Seaforth St.	Hesperia	CA	92345
0398-319-02-0000	18466 Seaforth St.	Hesperia	CA	92345
0398-319-03-0000	644 S. 4th St.	Montebello	CA	90640
0398-319-04-0000	18436 Seaforth St.	Hesperia	CA	92345
0398-319-05-0000	18422 Seaforth	Hesperia	CA	92345
0398-319-06-0000	18406 Seaforth St.	Hesperia	CA	92345
0398-319-07-0000	18392 Seaforth Ave.	Hesperia	CA	92345
0398-321-01-0000	8190 Mono Dr.	Hesperia	CA	92345
0398-321-02-0000	8182 Mono Dr.	Hesperia	CA	92345
0398-321-03-0000	8176 Mono Dr.	Hesperia	CA	92345
0398-321-04-0000	8164 Mono Dr.	Hesperia	CA	92345
0398-321-05-0000	8158 Mono Dr.	Hesperia	CA	92345
0398-321-06-0000	P.O. Box 18	Hawthorne	CA	90250
0398-321-07-0000	8142 Mono Dr.	Hesperia	CA	92345
0398-321-08-0000	8134 Mono Dr.	Hesperia	CA	92345
0398-321-09-0000	7962 Gaylop Ave.	Hesperia	CA	92345
0398-321-10-0000	16585 Ash St.	Hesperia	CA	92345
0398-321-11-0000	21621 Sandia Rd., Spc. #78	Apple Valley	CA	92308
0398-321-12-0000	18716 Seaforth St.	Hesperia	CA	92345
0398-321-13-0000	18702 Seaforth St.	Hesperia	CA	92345
0398-321-14-0000	8101 Lassen Ave.	Hesperia	CA	92345
0398-326-01-0000	18660 Seaforth St.	Hesperia	CA	92345
0398-326-02-0000	18644 Seaforth St.	Hesperia	CA	92345
0398-326-03-0000	18630 Seaforth St.	Hesperia	CA	92345
0398-326-04-0000	18620 Seaforth St.	Hesperia	CA	92345
0398-326-05-0000	18612 Seaforth St.	Hesperia	CA	92345
0398-326-06-0000	18709 Centennial St.	Hesperia	CA	92345
0398-326-07-0000	18570 Seaforth Ave.	Hesperia	CA	92345
0398-326-08-0000	18570 Seaforth St.	Hesperia	CA	92345
0398-326-09-0000	18554 Seaforth St.	Hesperia	CA	92345

0398-326-10-0000	18540 Seaforth St.	Hesperia	CA	92345
0398-326-11-0000	18522 Seaforth St.	Hesperia	CA	92345
0398-326-12-0000	18510 Seaforth St.	Hesperia	CA	92345
0398-454-01-0000	17585 Lemon St.	Hesperia	CA	92345
0398-454-02-0000	15330 Ash St.	Hesperia	CA	92345
0398-454-03-0000	19076 Danbury Ave.	Hesperia	CA	92345
0398-454-04-0000	19066 Danbury Ave.	Hesperia	CA	92345
0398-454-05-0000	19054 Danbury St.	Hesperia	CA	92345
0398-454-06-0000	19044 Danbury Ave.	Hesperia	CA	92345
0398-463-06-0000	19146 Danbury Ave.	Hesperia	CA	92345
0398-463-07-0000	19138 Danbury St.	Hesperia	CA	92345
0398-463-08-0000	23580 Alessandro Blvd. #9818	Moreno Valley	CA	92552
0398-463-09-0000	P.O. Box 402422	Hesperia	CA	92340
0398-463-10-0000	13942 Sunrise Ct.	Oak Hills	CA	92344
0398-463-11-0000	19102 Danbury Ave.	Hesperia	CA	92345
0398-464-01-0000	25942 Matel Rd.	Valencia	CA	91355
0398-464-02-0000	19278 Danbury Dr.	Hesperia	CA	92345
0398-464-03-0000	19270 Danbury Ave.	Hesperia	CA	92345
0398-464-04-0000	23580 Alessandro Blvd. #9818	Moreno Valley	CA	92552
0398-464-05-0000	P.O. Box 402447	Hesperia	CA	92340
0398-464-06-0000	19242 Danbury Ave.	Hesperia	CA	92345
0398-464-07-0000	350 N. Rancho Ave.	San Bernardino	CA	92410
0398-464-08-0000	19222 Danbury	Hesperia	CA	92345
0398-464-09-0000	19214 Danbury Ave.	Hesperia	CA	92345
0398-464-10-0000	2415 11th #30	Everett	WA	98201
0398-464-11-0000	19196 Danbury Ave.	Hesperia	CA	92345
0398-464-12-0000	19186 Danbury Ave.	Hesperia	CA	92345
0398-464-13-0000	19176 Danbury Ave.	Hesperia	CA	92345
0398-464-14-0000	5474 Atlantic Ave.	Long Beach	CA	90805
0398-465-01-0000	15810 El Centro Rd.	Hesperia	CA	92345
0398-465-02-0000	19109 Danbury Ave.	Hesperia	CA	92345
0398-465-03-0000	19117 Danbury Ave.	Hesperia	CA	92345
0398-465-04-0000	23580 Alessandro Blvd. #9818	Moreno Valley	CA	92552
0398-465-05-0000	19135 Danbury St.	Hesperia	CA	92345
0398-465-06-0000	19143 Danbury Ave.	Hesperia	CA	92345
0398-465-07-0000	8968 Grapefruit Ave.	Hesperia	CA	92345
0398-465-08-0000	19161 Danbury Ave.	Hesperia	CA	92345
0398-465-09-0000	19171 Danbury Ave.	Hesperia	CA	92345
0398-465-10-0000	19270 Westlawn St.	Hesperia	CA	92345
0398-465-11-0000	14332 Pleasant Glenn Ct.	Hesperia	CA	92345
0398-465-12-0000	19199 Danbury	Hesperia	CA	92345
0398-465-13-0000	10628 Beak Ave.	South Gate	CA	90280
0398-465-14-0000	25942 Matel Rd.	Valencia	CA	91355
0398-465-15-0000	19223 Danbury Ave.	Hesperia	CA	92345
0398-465-16-0000	19233 Danbury	Hesperia	CA	92345
0398-465-17-0000	12449 Tesuque Rd.	Apple Valley	CA	92308
0398-465-18-0000	5415 S. Jack Rabbit Dr.	Fort Mohave	AZ	86426
0398-465-19-0000	19259 Danbury Ave.	Hesperia	CA	92345
0398-465-20-0000	264 Rancho Dr. #D	Chula Vista	CA	91911
0398-465-21-0000	19277 Danbury Ave.	Hesperia	CA	92345
0398-465-22-0000	P.O. Box 402447	Hesperia	CA	92340
0398-471-02-0000	16856 Olumpic Ct.	Fontana	CA	92336

0398-471-03-0000	7384 Lyons Ave.	Hesperia	CA	92345
0398-471-04-0000	8254 E. Arrowhead Lake Hwy.	Hesperia	CA	92345
0398-471-05-0000	8244 Arrowhead Lake Rd.	Hesperia	CA	92345
0398-471-06-0000	8251 Arrowhead Lake Rd.	Hesperia	CA	92345
0398-471-07-0000	12218 221st St.	Hawaiian Gardens	CA	90716
0398-471-08-0000	18989 Danbury Ave.	Hesperia	CA	92345
0398-471-09-0000	18999 Danbury Ave.	Hesperia	CA	92345
0398-471-12-0000	P.O. Box 290695	Phelan	CA	92329
0398-471-13-0000	8268 Royce Ave.	Hesperia	CA	92345
0398-471-14-0000	8263 Royce Ave.	Hesperia	CA	92345
0398-471-15-0000	19037 Danbury Ave.	Hesperia	CA	92345
0398-471-16-0000	19047 Danbury Ave.	Hesperia	CA	92345
0398-471-19-0000	19075 Danbury Ave.	Hesperia	CA	92345
0398-471-20-0000	19085 Danbury Ave.	Hesperia	CA	92345
0398-471-21-0000	19093 Danbury Ave.	Hesperia	CA	92345
0398-471-22-0000	19057 Danbury Ave.	Hesperia	CA	92345
0398-471-23-0000	19007 Danbury Ave.	Hesperia	CA	92345
0398-481-01-0000	8150 Julie Ct.	Hesperia	CA	92345
0398-481-02-0000	8162 Julie Ct.	Hesperia	CA	92345
0398-481-03-0000	942 Spring Meadow Dr.	West Covina	CA	91791
0398-481-04-0000	8167 Julie Ct.	Hesperia	CA	92345
0398-481-05-0000	18988 Mono Dr.	Hesperia	CA	92345
0398-481-08-0000	8160 April Ave.	Hesperia	CA	92345
0398-481-09-0000	8168 April Ave.	Hesperia	CA	92345
0398-481-10-0000	8172 April Ave.	Hesperia	CA	92345
0398-481-11-0000	19048 June St.	Hesperia	CA	92345
0398-481-12-0000	19062 June St.	Hesperia	CA	92345
0398-481-13-0000	8665 E. Hartford Dr. #200	Scottsdale	AZ	85255
0398-491-01-0000	19088 June St.	Hesperia	CA	92345
0398-491-02-0000	19100 June St.	Hesperia	CA	92345
0398-491-03-0000	19114 June St.	Hesperia	CA	92345
0398-491-04-0000	1323 Yaupon Loop	New Braunfels	TX	78132
0398-491-05-0000	19142 June St.	Hesperia	CA	92345
0398-491-06-0000	19156 June St.	Hesperia	CA	92345
0398-491-07-0000	19170 June St.	Hesperia	CA	92345
0398-491-08-0000	19184 June St.	Hesperia	CA	92345
0398-491-09-0000	19200 June St.	Hesperia	CA	92345
0398-491-10-0000	19216 June St.	Hesperia	CA	92345
0398-491-11-0000	19232 June St.	Hesperia	CA	92345
0398-491-12-0000	19266 June St.	Hesperia	CA	92345
0398-491-13-0000	19280 June St.	Hesperia	CA	92345
0398-491-14-0000	19294 June St.	Hesperia	CA	92345
0405-144-18-0000	P.O. Box 403751	Hesperia	CA	92340
0405-144-20-0000	2423 N. Riverside Ave.	Rialto	CA	92377
0405-144-21-0000	4426 Greenbrier Rd.	Lompoc	CA	93436
0405-144-22-0000	2058 N. Mills Ave. #450	Claremont	CA	91711
0405-144-23-0000	13312 Ranchero Rd., Ste. 18 PMB #34	Oak Hills	CA	92344
0405-144-24-0000	14276 Jenny St.	Oak Hills	CA	92344
0405-144-26-0000	6738 Tamarisk Pl.	Oak Hills	CA	92344
0405-144-27-0000	14302 Greenwood St.	Hesperia	CA	92344
0405-144-28-0000	42421 Shaw Ln.	Murrieta	CA	92562
0405-144-29-0000	6880 Maple Ave.	Hesperia	CA	92344

0405-144-30-0000	9131 Ocotillo Ave.	Hesperia	CA	92344
0405-144-31-0000	14434 Greenwood St.	Hesperia	CA	92344
0405-144-32-0000	14460 Greenwood St.	Hesperia	CA	92344
0405-144-33-0000	14342 Jenny St.	Oak Hills	CA	92344
0405-144-34-0000	14386 Jenny St.	Oak Hills	CA	92344
0405-144-36-0000	527 Riverfront Dr.	Bullhead City	AZ	86442
0405-144-37-0000	560 Salerno Cir.	Mesquite	NV	89027
0405-144-52-0000	5826 Tumbleweed St.	Riverside	CA	92509
0405-144-54-0000	13738 Whitehaven St.	Oak Hills	CA	92344
0405-144-55-0000	6568 Mirasol Ct.	Oak Hills	CA	92345
0405-144-56-0000	6567 Mirasol Ct.	Hesperia	CA	92345
0405-144-57-0000	13826 Whitehaven St.	Hesperia	CA	92345
0405-144-70-0000	11014 Waterwood St.	Apple Valley	CA	92308
0405-144-71-0000	7945 Sherry Ln.	Riverside	CA	92509
0405-144-72-0000	11014 Waterwood St.	Apple Valley	CA	92308
0405-144-73-0000	PO BOX 800	Rosemead	CA	91770
0405-144-75-0000	PO BOX 800	Rosemead	CA	91770
0405-144-76-0000	PO BOX 800	Rosemead	CA	91770
0405-144-77-0000	PO BOX 800	Rosemead	CA	91770
0405-144-78-0000	PO BOX 800	Rosemead	CA	91770
0405-144-79-0000	PO BOX 800	Rosemead	CA	91770
0405-144-80-0000	PO BOX 800	Rosemead	CA	91770
0405-144-89-0000	287 Tennessee St.	Redlands	CA	92374
0405-144-92-0000	10019 Muroc St. #9	Bellflower	CA	90706
0405-144-93-0000	6749 Opal Ave.	Oak Hills	CA	92344
0405-144-94-0000	13312 Ranchero Rd. #140	Oak Hills	CA	92344
0405-144-95-0000	14288 Jenny St.	Oak Hills	CA	92344
0405-253-01-0000	14890 Wilson St.	Hesperia	CA	92345
0405-253-02-0000	14878 Wilson St.	Hesperia	CA	92345
0405-253-03-0000	14868 Wilson St.	Hesperia	CA	92345
0405-253-04-0000	14848 Wilson St.	Hesperia	CA	92345
0405-253-05-0000	14828 Wilson St.	Hesperia	CA	92345
0405-253-06-0000	11420 Stuveling St.	Oak Hills	CA	92345
0405-253-09-0000	14756 Wilson St.	Hesperia	CA	92345
0405-253-10-0000	13490 Greenwood St.	Oak Hills	CA	92344
0405-253-11-0000	6924 Wilson Way	Hesperia	CA	92345
0405-253-13-0000	6919 Redwood Ave.	Hesperia	CA	92345
0405-253-14-0000	15321 Kimball St.	Hesperia	CA	92345
0405-253-15-0000	6949 Redwood Ave.	Hesperia	CA	92345
0405-253-16-0000	7029 Redwood Ave.	Hesperia	CA	92345
0405-253-17-0000	14737 Kimball St.	Hesperia	CA	92345
0405-253-18-0000	P.O. Box 400666	Hesperia	CA	92340
0405-253-19-0000	119 E. Linfied St.	Glendora	CA	91740
0405-253-20-0000	14773 Kimball St.	Hesperia	CA	92345
0405-253-21-0000	14789 Kimball St.	Hesperia	CA	92345
0405-253-22-0000	5752 Meinhardt Rd.	Westminster	CA	92683
0405-253-23-0000	14811 Kimball St.	Hesperia	CA	92345
0405-253-24-0000	14821 Kimball St.	Hesperia	CA	92345
0405-253-25-0000	14847 Kimball St.	Hesperia	CA	92345
0405-253-26-0000	14867 Kimball St.	Hesperia	CA	92345
0405-253-27-0000	14881 Kimball St.	Hesperia	CA	92345
0405-253-28-0000	287 Tennessee St.	Redlands	CA	92374

0405-253-30-0000	14786 Wilson St.	Hesperia	CA	92345
0405-253-31-0000	14766 Wilson St.	Hesperia	CA	92345
0405-391-39-0000	4516 30th St. NW	Washington	DC	20008
0405-391-40-0000	4516 30th St. NW	Washington	DC	20008
0405-391-41-0000	4516 30th St. NW	Washington	DC	20008
0405-391-42-0000	4516 30th St. NW	Washington	DC	20008
0405-441-23-0000	18517 Devlin Ave.	Artesia	CA	90701
0405-441-25-0000	2595 Wagon Train Ln.	Diamond Bar	CA	91765
0405-441-26-0000	287 Tennessee St.	Redlands	CA	92374
0405-441-27-0000	PO BOX 800	Rosemead	CA	91770
0405-441-28-0000	287 Tennessee St.	Redlands	CA	92374
0405-441-38-0000	7025 Maple Ave.	Hesperia	CA	92344
0405-441-39-0000	7021 Maple Ave.	Hesperia	CA	92345
0405-841-01-0000	15351 Kimball St.	Hesperia	CA	92345
0405-841-02-0000	9184 10th Ave.	Hesperia	CA	92345
0405-841-03-0000	15381 Kimball St.	Hesperia	CA	92345
0405-851-01-0000	15015 Kimball St.	Hesperia	CA	92345
0405-851-02-0000	15027 Kimball St.	Hesperia	CA	92345
0405-851-03-0000	15041 Kimball St.	Hesperia	CA	92345
0405-851-04-0000	15055 Kimball St.	Hesperia	CA	92344
0405-851-05-0000	15071 Kimball St.	Hesperia	CA	92345
0405-851-06-0000	15087 Kimball St.	Hesperia	CA	92345
0405-851-07-0000	15105 Kimball St.	Hesperia	CA	92345
0405-851-08-0000	15119 Kimball St.	Hesperia	CA	92345
0405-851-09-0000	15133 Kimball St.	Hesperia	CA	92345
0405-851-10-0000	15149 Kimball St.	Hesperia	CA	92345
0405-851-11-0000	15167 Kimball St.	Hesperia	CA	92345
0405-851-34-0000	15181 Kimball St.	Hesperia	CA	92345
0405-851-35-0000	15195 Kimball St.	Hesperia	CA	92345
0405-861-01-0000	15211 Kimball St.	Hesperia	CA	92345
0405-861-02-0000	15225 Kimball St.	Hesperia	CA	92345
0405-861-03-0000	15239 Kimball St.	Hesperia	CA	92345
0405-861-04-0000	15257 Kimball St.	Hesperia	CA	92345
0405-861-05-0000	15273 Kimball St.	Hesperia	CA	92345
0405-861-06-0000	15289 Kimball St.	Hesperia	CA	92345
0405-861-07-0000	7255 Redwood Ave.	Hesperia	CA	92345
0405-861-08-0000	15321 Kimball St.	Hesperia	CA	92345
0405-861-09-0000	15335 Kimball St.	Hesperia	CA	92345
0405-861-12-0000	3032 N. Pinewood St.	Orange	CA	92865
0405-861-13-0000	15168 Cromdale St.	Hesperia	CA	92345
0405-861-14-0000	15176 Cromdale St.	Hesperia	CA	92345
0405-861-15-0000	15188 Cromdale St.	Hesperia	CA	92345
0405-861-16-0000	15196 Cromdale St.	Hesperia	CA	92345
0405-861-17-0000	15212 Cromdale St.	Hesperia	CA	92345
0405-861-18-0000	10177 Coral Ln.	Moreno Valley	CA	92557
0405-861-19-0000	11761 Garret Ln.	Victorville	CA	92392
0405-861-20-0000	11356 Musgrave Rd.	Oak Hills	CA	92344
0405-861-21-0000	15268 Cromdale St.	Hesperia	CA	92345
0405-861-22-0000	15274 Cromdale St.	Hesperia	CA	92345
0405-861-23-0000	15286 Cromdale St.	Hesperia	CA	92345
0405-861-24-0000	15298 Cromdale St.	Hesperia	CA	92345
0405-861-25-0000	15310 Cromdale St.	Hesperia	CA	92345

0405-861-26-0000	15324 Cromdale St.	Hesperia	CA	92345
0405-861-27-0000	15134 Cromdale St.	Hesperia	CA	92345
0405-881-01-0000	7033 Cottonwood Ave.	Hesperia	CA	92345
0405-881-02-0000	P.O. Box 402208	Hesperia	CA	92340
0405-881-03-0000	14926 Cromdale St.	Hesperia	CA	92345
0405-881-04-0000	14940 Cromdale St.	Hesperia	CA	92345
0405-881-05-0000	14954 Cromdale St.	Hesperia	CA	92345
0405-881-06-0000	14972 Cromdale St.	Hesperia	CA	92345
0405-881-07-0000	14832 Willow St.	Hesperia	CA	92345
0405-881-08-0000	15008 Cromdale St.	Hesperia	CA	92345
0405-881-09-0000	15020 Cromdale St.	Hesperia	CA	92345
0405-881-10-0000	15032 Cromdale St.	Hesperia	CA	92345
0405-881-11-0000	15046 Cromdale St.	Hesperia	CA	92345
0405-881-12-0000	7255 Redwood Ave.	Hesperia	CA	92345
0405-881-13-0000	15078 Cromdale St.	Hesperia	CA	92345
0405-881-14-0000	7071 Garden Ct.	Hesperia	CA	92345
0405-881-18-0000	7070 Garden Ct.	Hesperia	CA	92345
0405-881-19-0000	7021 Flora Ct.	Hesperia	CA	92345
0405-881-21-0000	12840 Mar Vista Dr.	Apple Valley	CA	92308
0405-881-22-0000	15098 Cromdale St.	Hesperia	CA	92345
0405-881-23-0000	15110 Cromdale Ave.	Hesperia	CA	92345
0405-881-24-0000	15122 Cromdale St.	Hesperia	CA	92345
0405-881-27-0000	446 Towne Ave.	Los Angeles	CA	90013
0405-891-05-0000	15267 Cromdale St.	Hesperia	CA	92345
0405-891-14-0000	7098 Arbor Ct.	Hesperia	CA	92345
0405-891-15-0000	7095 Alondra Ave.	Hesperia	CA	92345
0405-891-25-0000	7088 Alondra Ave.	Hesperia	CA	92345
0405-891-26-0000	10670 Civic Center Dr.	Rancho Cucamonga	CA	91730
0405-891-27-0000	7081 Loma Vista Ave.	Hesperia	CA	92345
0405-901-15-0000	6990 Flora Ct.	Hesperia	CA	92345
0405-931-01-0000	14511 Farmington St.	Hesperia	CA	92345
0405-931-02-0000	14533 Farmington St.	Hesperia	CA	92345
0405-931-03-0000	14555 Farmington St.	Hesperia	CA	92345
0405-931-04-0000	14567 Farmington St.	Hesperia	CA	92345
0405-931-07-0000	14534 Teak Ct.	Hesperia	CA	92345
0405-931-08-0000	14510 Teak Ct.	Hesperia	CA	92345
0405-931-20-0000	6889 Banyan Ave.	Hesperia	CA	92345
0412-171-01-0000	7476 3rd Ave.	Hesperia	CA	92345
0412-171-11-0000	7440 3rd Ave.	Hesperia	CA	92345
0412-171-12-0000	7450 3rd Ave.	Hesperia	CA	92345
0412-172-02-0000	7409 3rd Ave.	Hesperia	CA	92345
0412-172-03-0000	1016 E. 67th	Long Beach	CA	90805
0412-172-04-0000	7419 3rd St.	Hesperia	CA	92345
0412-172-05-0000	7421 3rd Ave.	Hesperia	CA	92345
0412-172-07-0000	10675 E Ave.	Hesperia	CA	92345
0412-172-08-0000	7499 3rd Ave.	Hesperia	CA	92345
0412-172-09-0000	10675 E Ave. #1	Hesperia	CA	92345
0412-172-10-0000	P.O. Box 407000	Hesperia	CA	92340
0412-172-12-0000	14091 Buckbrush Ct.	Hesperia	CA	92344
0412-172-13-0000	14091 Buckbrush Ct.	Hesperia	CA	92344
0412-182-15-0000	13302 Ranchero Rd.	Oak Hills	CA	92344
0412-182-16-0000	15684 Ranchero Rd.	Hesperia	CA	92345

0412-182-17-0000	13637 Ashmont St.	Victorville	CA	92392
0412-182-18-0000	15632 Ranchero Rd.	Hesperia	CA	92345
0412-182-19-0000	1245 S. Kenmore Ave.	Los Angeles	CA	90006
0412-233-01-0000	273 S. Grand	Glendora	CA	91741
0412-233-02-0000	7555 C Ave.	Hesperia	CA	92345
0412-233-03-0000	7565 C Ave.	Hesperia	CA	92345
0412-233-04-0000	7585 C Ave.	Hesperia	CA	92345
0412-233-05-0000	7595 C Ave.	Hesperia	CA	92345
0412-234-15-0000	16445 El Centro St.	Hesperia	CA	92345
0412-234-16-0000	16406 Larch St.	Hesperia	CA	92345
0412-234-17-0000	16396 Larch St.	Hesperia	CA	92345
0412-241-02-0000	P.O. Box 3103	Ontario	CA	91761
0412-241-03-0000	16175 Rodeo St.	Hesperia	CA	92345
0412-241-04-0000	16189 Rodeo St.	Hesperia	CA	92345
0412-241-05-0000	16201 Rodeo St.	Hesperia	CA	92345
0412-241-06-0000	16215 Rodeo St.	Hesperia	CA	92345
0412-241-07-0000	1142 S. Diamond Bar Blvd. #400	Diamond Bar	CA	91765
0412-241-08-0000	16243 Rodeo St.	Hesperia	CA	92345
0412-241-09-0000	16255 Rodeo St.	Hesperia	CA	92345
0412-241-10-0000	16265 Rodeo St.	Hesperia	CA	92345
0412-241-11-0000	16275 Rodeo St.	Hesperia	CA	92345
0412-241-12-0000	16281 Rodeo St.	Hesperia	CA	92345
0412-241-13-0000	2115 Eagar Rd.	League City	TX	77573
0412-241-14-0000	8055 Dinsdale St.	Downey	CA	90240
0412-241-15-0000	10762 Essex Pl.	Rancho Cucamonga	CA	91730
0412-241-16-0000	16361 Larch St.	Hesperia	CA	92345
0412-241-17-0000	16381 Larch St.	Hesperia	CA	92345
0412-241-18-0000	4918 Acacia Ave.	Pico Rivera	CA	90660
0412-241-19-0000	16346 Ranchero	Hesperia	CA	92345
0412-241-20-0000	P.O. Box 1613	Bellflower	CA	90707
0412-241-21-0000	16320 Old Ranchero Rd.	Hesperia	CA	92345
0412-241-22-0000	16310 Old Ranchero Rd.	Hesperia	CA	92345
0412-241-23-0000	16294 Ranchero Rd.	Hesperia	CA	92345
0412-241-24-0000	418 Oakford Dr.	Los Angeles	CA	90022
0412-241-25-0000	16248 Grevillea St.	Hesperia	CA	92345
0412-241-26-0000	16236 Grevillea St.	Hesperia	CA	92345
0412-241-27-0000	16222 Grevillea St.	Hesperia	CA	92345
0412-241-28-0000	16210 Grevillea St.	Hesperia	CA	92345
0412-241-29-0000	P.O. Box 1644	Beverly Hills	CA	90213
0412-241-30-0000	16186 Grevillea St.	Hesperia	CA	92345
0412-241-31-0000	16174 Grevillea St.	Hesperia	CA	92345
0412-241-32-0000	16164 Grevillea St.	Hesperia	CA	92345
0412-241-33-0000	7635 Calpella Ave.	Hesperia	CA	92345
0412-241-34-0000	16140 Grevillea St.	Hesperia	CA	92345
0412-241-36-0000	287 Tennessee St.	Redlands	CA	92374
0412-242-01-0000	962 E. Imperial Hwy.	Los Angeles	CA	90059
0412-242-02-0000	7445 C Ave.	Hesperia	CA	92345
0412-245-02-0000	3770 E Washington Boulevard	Los Angeles	CA	90058
0412-245-04-0000	3770 E Washington Boulevard	Los Angeles	CA	90058
0412-245-06-0000	15776 Main St.	Hesperia	CA	92345
0412-245-07-0000	15776 Main St.	Hesperia	CA	92345
0412-304-01-0000	7721 Chase Ave.	Hesperia	CA	92345

0412-304-02-0000	7733 Chase Ave.	Hesperia	CA	92345
0412-311-09-0000	7537 Chase Ave.	Hesperia	CA	92345
0412-311-10-0000	7557 Chase St.	Hesperia	CA	92345
0412-311-11-0000	1270 Sierra Madre Blvd.	San Marino	CA	91108
0412-311-12-0000	6760 Lureland Ave.	Hesperia	CA	92345
0412-311-13-0000	287 Tennessee St.	Redlands	CA	92374
0412-311-15-0000	7687 Chase Ave.	Hesperia	CA	92345
0412-311-16-0000	18140 Oxnard St. #61	Tarzana	CA	91356
0412-311-17-0000	7671 Chase Ave.	Hesperia	CA	92345
0412-311-18-0000	15834 La Paz Dr.	Victorville	CA	92395
0412-312-03-0000	7505 Bangor Ave.	Hesperia	CA	92345
0412-312-06-0000	7547 Bangor Ave.	Hesperia	CA	92345
0412-312-07-0000	287 Tennessee St.	Redlands	CA	92374
0412-312-08-0000	7637 Bangor Ave.	Hesperia	CA	92345
0412-312-09-0000	7657 Bangor Ave.	Hesperia	CA	92345
0412-312-10-0000	7669 Bangor Ave.	Hesperia	CA	92345
0412-312-11-0000	7677 Bangor Ave.	Hesperia	CA	92345
0412-312-12-0000	7687 Bangor Ave.	Hesperia	CA	92345
0412-312-14-0000	7660 Chase Ave.	Hesperia	CA	92345
0412-312-15-0000	7640 Chase Ave.	Hesperia	CA	92345
0412-312-16-0000	7630 Chase Ave.	Hesperia	CA	92345
0412-312-17-0000	7548 Chase Ave.	Hesperia	CA	92345
0412-312-18-0000	313 Howard St.	Corona	CA	92879
0412-312-19-0000	7520 Chase Ave.	Hesperia	CA	92345
0412-312-20-0000	7506 Chase Ave.	Hesperia	CA	92345
0412-312-21-0000	7494 Chase Ave.	Hesperia	CA	92345
0412-312-27-0000	9266 Espada Ave.	Hesperia	CA	92345
0412-312-28-0000	7515 Bangor Ave.	Hesperia	CA	92345
0412-313-01-0000	287 Tennessee St.	Redlands	CA	92374
0412-313-02-0000	7575 Alston Ave.	Hesperia	CA	92345
0412-313-03-0000	7595 Alston Ave.	Hesperia	CA	92345
0412-313-04-0000	7621 Alston Ave.	Hesperia	CA	92345
0412-313-05-0000	7633 Alston Ave.	Hesperia	CA	92345
0412-313-06-0000	7643 Alston Ave.	Hesperia	CA	92345
0412-313-16-0000	825 E. 3rd St.	San Bernardino	CA	92415
0412-313-22-0000	7650 Bangor Ave.	Hesperia	CA	92345
0412-313-23-0000	7636 Bangor	Hesperia	CA	92345
0412-313-24-0000	15358 Valley Blvd.	Fontana	CA	92335
0412-313-25-0000	P.O. Box 401305	Hesperia	CA	92340
0412-313-26-0000	287 Tennessee St.	Redlands	CA	92374
0412-313-27-0000	30002 Avenida Classica	Rancho Palos Verdes	CA	90275
0412-313-28-0000	15575 Cactus St.	Hesperia	CA	92345
0412-313-29-0000	7490 Bangor Ave.	Hesperia	CA	92345
0412-313-30-0000	7480 Bangor Ave.	Hesperia	CA	92345
0412-314-17-0000	7590 Alston Ave.	Hesperia	CA	92345
0412-314-18-0000	7580 Alston Ave.	Hesperia	CA	92345
0412-314-19-0000	14191 Cornish Crest Rd.	Whittier	CA	90604
0412-314-20-0000	2 Innovation Way, 2nd Floor	Pomona	CA	91768
0412-314-21-0000	P.O. Box 402652	Hesperia	CA	92340
0412-314-22-0000	21971 Ocotillo Way	Apple Valley	CA	92308
0412-316-03-0000	7245 Navajo Rd. #D200	San Diego	CA	92119
0412-322-01-0000	7560 E Ave.	Hesperia	CA	92345

0412-322-02-0000	2 Innovation Way, 2nd Floor	Pomona	CA	91768
0412-322-03-0000	8128 Pismo Ave.	Hesperia	CA	92345
0412-322-04-0000	7492 Alston Ave.	Hesperia	CA	92345
0412-322-05-0000	7488 Alston Ave.	Hesperia	CA	92345
0412-322-06-0000	7474 Alston Ave.	Hesperia	CA	92345
0412-322-07-0000	7468 Alston Ave.	Hesperia	CA	92345
0412-322-08-0000	7452 Alston Ave.	Hesperia	CA	92345
0412-322-09-0000	7444 Alston Ave.	Hesperia	CA	92345
0412-322-10-0000	7436 Alston Ave.	Hesperia	CA	92345
0412-322-11-0000	7416 Alston Ave.	Hesperia	CA	92345
0412-323-01-0000	825 E. 3rd St.	San Bernardino	CA	92415
0412-323-02-0000	7474 Bangor Ave.	Hesperia	CA	92345
0433-013-14-0000	P.O. Box 1834	Apple Valley	CA	92308
0433-013-15-0000	P.O. Box 1834	Apple Valley	CA	92307
0433-013-16-0000	P.O. Box 1834	Apple Valley	CA	92307
0433-013-17-0000	P.O. Box 1834	Apple Valley	CA	92307
0433-013-18-0000	P.O. Box 1834	Apple Valley	CA	92307
0433-013-19-0000	25815 McBean Pkwy.	Valencia	CA	91355
0433-013-24-0000	8858 Kiowa Rd.	Apple Valley	CA	92308
0433-013-27-0000	P.O. Box 3483	Los Angeles	CA	90078
0433-013-28-0000	860 Vinemead Dr.	Whittier	CA	90601
0433-013-29-0000	P.O. Box 1834	Apple Valley	CA	92307
0433-013-30-0000	P.O. Box 1834	Apple Valley	CA	92307
0433-013-31-0000	P.O. Box 1834	Apple Valley	CA	92307
0433-013-32-0000	P.O. Box 1102	Apple Valley	CA	92307
0433-013-33-0000	P.O. Box 1102	Apple Valley	CA	92307
0433-013-34-0000	P.O. Box 1543	Sun Valley	ID	83353
0433-014-04-0000	825 East Third Street	San Bernardino	CA	92415
0433-014-25-0000	13846 Conference Center Dr.	Apple Valley	CA	92307
0433-014-27-0000	8674 Deep Creek Rd.	Apple Valley	CA	92308
0433-014-28-0000	8626 Deep Creek Rd.	Apple Valley	CA	92308
0433-014-29-0000	8077 Langdon Ave.	Hesperia	CA	92345
0433-014-30-0000	8077 Langdon Ave.	Hesperia	CA	92345
0433-014-31-0000	8077 Langdon Ave.	Hesperia	CA	92345
0433-014-32-0000	8510 Deep Creek Rd.	Apple Valley	CA	92308
0433-014-33-0000	2032 S. Helen Ave.	Ontario	CA	91762
0433-014-34-0000	19875 Castle Rock Rd.	Apple Valley	CA	92308
0433-014-35-0000	1027 E. 42nd St.	Los Angeles	CA	90011
0433-014-38-0000	4112 Olive Ave. #518	Huntington Beach	CA	92648
0433-014-49-0000	1537 S. Commonwealth Ave.	Fullerton	CA	92831
0433-014-53-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0433-014-74-0000	8674 Deep Creek Rd.	Apple Valley	CA	92308
0433-221-04-0000	1425 W. Foothill Blvd. #115	Upland	CA	91786
0435-062-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0435-062-06-0000	PO BOX 800	Rosemead	CA	91770
0435-062-07-0000	PO BOX 800	Rosemead	CA	91770
0435-062-08-0000	PO BOX 800	Rosemead	CA	91770
0435-062-09-0000	PO BOX 800	Rosemead	CA	91770
0435-062-10-0000	3441 Pedley Ave.	Norco	CA	92860
0435-062-11-0000	4702 Merlin St.	Longview	WA	98632
0435-062-12-0000	1187 Surfwood Ln.	San Diego	CA	92154
0435-062-13-0000	230 O'Connor Ridge Blvd. #115	Irving	TX	75038

0435-062-14-0000	16654 Soledad Canyon Rd. #163	Canyon Country	CA	91387
0435-062-15-0000	175 Calvert Dr #205	Cupertino	CA	95014
0435-062-16-0000	10817 E. Shale Dr.	Yuma	AZ	85365
0435-062-17-0000	PO BOX 800	Rosemead	CA	91770
0435-062-18-0000	16654 Soledad Canyon Rd. #163	Canyon Country	CA	91387
0435-062-19-0000	PO BOX 800	Rosemead	CA	91770
0435-062-20-0000	PO BOX 800	Rosemead	CA	91770
0435-062-23-0000	8566 Trinity Cir. #820D	Huntington Beach	CA	92646
0435-062-24-0000	450 E. 246th Pl.	Carson	CA	90745
0435-062-25-0000	1484 N. Altadena Dr.	Pasadena	CA	91107
0435-062-26-0000	P.O. Box 608	Apple Valley	CA	92307
0435-062-28-0000	PO BOX 800	Rosemead	CA	91770
0435-062-29-0000	PO BOX 800	Rosemead	CA	91770
0435-062-30-0000	PO BOX 800	Rosemead	CA	91770
0435-062-31-0000	PO BOX 800	Rosemead	CA	91770
0435-062-32-0000	PO BOX 800	Rosemead	CA	91770
0435-062-33-0000	PO BOX 800	Rosemead	CA	91770
0435-062-34-0000	PO BOX 800	Rosemead	CA	91770
0435-062-35-0000	PO BOX 800	Rosemead	CA	91770
0435-062-36-0000	PO BOX 800	Rosemead	CA	91770
0435-062-37-0000	PO BOX 800	Rosemead	CA	91770
0435-062-38-0000	PO BOX 800	Rosemead	CA	91770
0435-062-39-0000	PO BOX 800	Rosemead	CA	91770
0435-062-40-0000	PO BOX 800	Rosemead	CA	91770
0435-062-41-0000	PO BOX 800	Rosemead	CA	91770
0435-062-42-0000	PO BOX 800	Rosemead	CA	91770
0435-062-43-0000	PO BOX 800	Rosemead	CA	91770
0435-062-44-0000	PO BOX 800	Rosemead	CA	91770
0435-062-45-0000	PO BOX 800	Rosemead	CA	91770
0435-062-46-0000	PO BOX 800	Rosemead	CA	91770
0435-062-47-0000	PO BOX 800	Rosemead	CA	91770
0435-062-48-0000	PO BOX 800	Rosemead	CA	91770
0435-062-49-0000	3641 N. Garey Ave.	Pomona	CA	91767
0435-062-50-0000	11143 Jacob Crossing Dr.	Richmond	TX	77406
0435-062-51-0000	6644 Golden Oak Ln.	Fontana	CA	92336
0435-062-52-0000	708 S. Osage Ave.	Inglewood	CA	90301
0435-062-53-0000	602 Commerce Ave. #F	Palmdale	CA	93551
0435-062-54-0000	1048 W. 4200 S	Ogden	UT	84405
0435-062-55-0000	740 Wind River Dr.	Las Vegas	NV	89110
0435-062-56-0000	24231 Paulson Dr.	Loma Linda	CA	92354
0435-072-03-0000	15542 Starview St.	Lake Elsinore	CA	92530
0435-072-04-0000	15542 Starview St.	Lake Elsinore	CA	92530
0435-072-08-0000	1060 Radcliff Pl.	La Habra	CA	90631
0435-072-09-0000	PO BOX 800	Rosemead	CA	91770
0435-072-10-0000	PO BOX 800	Rosemead	CA	91770
0435-072-15-0000	P.O. Box 933	Apple Valley	CA	92307
0435-072-16-0000	26606 Phantom Ln.	Apple Valley	CA	92307
0435-072-17-0000	853 Mission St.	South Pasadena	CA	91030
0435-072-18-0000	853 Mission St.	South Pasadena	CA	91030
0435-073-01-0000	1200 E. First St.	Los Angeles	CA	90033
0435-073-09-0000	P.O. Box 6548	Burbank	CA	91510
0435-073-13-0000	9262 Nautilus Dr.	Huntington Beach	CA	92646

0435-073-15-0000	24812 Eaton Ln.	Laguna Niguel	CA	92677
0435-073-16-0000	P.O. Box 800	Rosemead	CA	91770
0435-073-19-0000	6644 Golden Oak Ln.	Fontana	CA	92336
0435-073-47-0000	35 Oxbow Creek Ln.	Laguna Hills	CA	92653
0435-073-48-0000	28196 Via Seca St.	Apple Valley	CA	92308
0435-073-49-0000	23425 Stafford St.	Perris	CA	92570
0435-073-50-0000	3179 N. Ashford Ave.	Rialto	CA	92377
0435-073-51-0000	8267 Mill Pond Dr.	North	VA	23128
0435-073-52-0000	8267 Mill Pond Dr.	North	VA	23128
0435-073-54-0000	PO BOX 800	Rosemead	CA	91770
0435-073-55-0000	PO BOX 800	Rosemead	CA	91770
0435-073-59-0000	P.O. Box 742	Bremerton	WA	98337
0435-073-63-0000	PO BOX 800	Rosemead	CA	91770
0435-073-78-0000	2883 Greco Ct.	Palm Springs	CA	92264
0435-081-08-0000	1850 Loma Vista Dr.	Beverly Hills	CA	90210
0435-081-34-0000	630 E. Foothill Blvd.	San Dimas	CA	91773
0435-081-36-0000	25984 Desert View Rd.	Apple Valley	CA	92308
0435-081-38-0000	25812 Desert View Ave.	Apple Valley	CA	92308
0435-081-39-0000	4312 W. Pico Blvd.	Los Angeles	CA	90019
0435-081-41-0000	P.O. Box 410	Long Beach	CA	90801
0435-081-42-0000	PO BOX 800	Rosemead	CA	91770
0435-081-43-0000	PO BOX 800	Rosemead	CA	91770
0435-081-44-0000	PO BOX 800	Rosemead	CA	91770
0435-081-45-0000	PO BOX 800	Rosemead	CA	91770
0435-081-46-0000	PO BOX 800	Rosemead	CA	91770
0435-081-47-0000	15025 Ramona	Apple Valley	CA	92308
0435-081-48-0000	PO BOX 800	Rosemead	CA	91770
0435-081-50-0000	25984 Desert View Ave.	Apple Valley	CA	92308
0435-081-52-0000	2606 S. 216th Ln.	Buckeye	AZ	85326
0435-081-54-0000	25860 Desert View Ave.	Apple Valley	CA	92308
0435-081-56-0000	25882 Desert View Ave.	Apple Valley	CA	92308
0435-081-57-0000	P.O. Box 800	Rosemead	CA	91770
0435-081-58-0000	P.O. Box 800	Rosemead	CA	91770
0435-081-59-0000	P.O. Box 800	Rosemead	CA	91770
0435-081-60-0000	P.O. Box 800	Rosemead	CA	91770
0435-081-61-0000	P.O. Box 800	Rosemead	CA	91770
0435-081-63-0000	PO BOX 800	Rosemead	CA	91770
0435-083-21-0000	3324 N. Verdugo Rd.	Glendale	CA	91208
0435-083-22-0000	3324 N. Verdugo Rd.	Glendale	CA	91208
0435-083-23-0000	P.O. Box 800	Rosemead	CA	91770
0435-083-24-0000	P.O. Box 800	Rosemead	CA	91770
0435-083-25-0000	3324 N. Verdugo Rd.	Glendale	CA	91208
0435-083-36-0000	PO BOX 800	Rosemead	CA	91770
0435-083-37-0000	PO BOX 800	Rosemead	CA	91770
0435-083-38-0000	PO BOX 800	Rosemead	CA	91770
0435-083-46-0000	5841 Allison Cir.	Westminster	CA	92683
0435-083-48-0000	3324 N. Verdugo Rd.	Glendale	CA	91208
0435-083-49-0000	3107 Mace Ave. B	Costa Mesa	CA	92626
0435-083-62-0000	P.O. Box 1895	Apple Valley	CA	92307
0435-083-66-0000	PO BOX 800	Rosemead	CA	91770
0435-083-76-0000	P.O. Box 410	Long Beach	CA	90801
0435-083-77-0000	3107 Mace Ave. B	Costa Mesa	CA	92626

0435-083-81-0000	P.O. Box 282	Apple Valley	CA	92307
0435-083-82-0000	P.O. Box 45	Apple Valley	CA	92307
0435-104-05-0000	13454 Tolton Ave.	Corona	CA	92879
0435-104-06-0000	13988 Camino Lindo St.	Victorville	CA	92392
0435-104-13-0000	PO BOX 800	Rosemead	CA	91770
0435-104-14-0000	PO BOX 800	Rosemead	CA	91770
0435-104-15-0000	PO BOX 800	Rosemead	CA	91770
0435-104-16-0000	PO BOX 800	Rosemead	CA	91770
0435-104-17-0000	PO BOX 800	Rosemead	CA	91770
0435-104-18-0000	1008 Douglas St.	Los Angeles	CA	90026
0435-104-20-0000	9065 Ventura Ct.	Hesperia	CA	92344
0435-104-21-0000	8165 Paso Robles Ave.	Van Nuys	CA	91406
0435-104-22-0000	P.O. Box 4012	Menlo Park	CA	94026
0435-104-23-0000	28815 N. Seco Canyon Rd.	Saugus	CA	91350
0435-104-24-0000	1894 Arabian Ln.	Gardnerville	NV	89410
0435-104-25-0000	53 N. Newport Dr.	Napa	CA	94559
0435-104-58-0000	2480 Joel Rd.	Rowland Heights	CA	91748
0435-104-59-0000	6115 Lindenhurst	Los Angeles	CA	90048
0435-106-07-0000	P.O. Box 800	Rosemead	CA	91770
0435-106-09-0000	P.O. Box 800	Rosemead	CA	91770
0435-106-10-0000	P.O. Box 800	Rosemead	CA	91770
0435-106-11-0000	140 W. Tiller Ave.	Anaheim	CA	92802
0435-106-12-0000	6448 Densmore Ave.	Van Nuys	CA	91406
0435-106-13-0000	1888 Century Park E #1010 M80	Los Angeles	CA	90067
0435-106-14-0000	3770 E Washington Boulevard	Los Angeles	CA	90058
0435-106-15-0000	P.O. Box 800	Rosemead	CA	91770
0435-106-16-0000	PO BOX 800	Rosemead	CA	91770
0435-106-17-0000	PO BOX 800	Rosemead	CA	91770
0435-106-18-0000	P.O. Box 800	Rosemead	CA	91770
0435-106-19-0000	P.O. Box 800	Rosemead	CA	91770
0435-106-20-0000	P.O. Box 800	Rosemead	CA	91770
0435-106-23-0000	PO BOX 800	Rosemead	CA	91770
0435-106-26-0000	P.O. Box 800	Rosemead	CA	91770
0435-106-31-0000	PO BOX 800	Rosemead	CA	91770
0435-106-32-0000	PO BOX 800	Rosemead	CA	91770
0435-106-33-0000	2913 Corral Canyon	Malibu	CA	90265
0435-106-34-0000	2260 Canehill Ave.	Long Beach	CA	90815
0435-106-35-0000	270 Roswell Ave.	Long Beach	CA	90803
0435-106-39-0000	9877 Chapman Ave. #156	Garden Grove	CA	92841
0435-106-40-0000	166 W. Washington St. #730	Chicago	IL	60602
0435-111-01-0000	10461 Milpas Dr.	Apple Valley	CA	92308
0435-111-02-0000	P.O. Box 905	Apple Valley	CA	92307
0435-191-04-0000	30143 Sierra Ridge Way	Menifee	CA	92585
0435-191-05-0000	PO BOX 800	Rosemead	CA	91770
0435-191-06-0000	2012 N. Stanley Pl.	Signal Hill	CA	90755
0435-191-08-0000	18428 Hidden Ranch Rd.	Riverside	CA	92508
0435-191-10-0000	30143 Sierra Ridge Way	Menifee	CA	92585
0435-192-01-0000	29991 Canyon Hills Rd. #1709	Lake Elsinore	CA	92532
0435-192-02-0000	4754 Preston St.	Mira Loma	CA	91752
0435-192-03-0000	1543 S. Pepperwood St.	Canby	OR	97013
0435-203-09-0000	PO BOX 800	Rosemead	CA	91770
0435-203-19-0000	P.O. Box 410	Long Beach	CA	90801

0435-203-20-0000	P.O. Box 800, c/o Tax Dept.	Rosemead	CA	91770
0435-203-21-0000	P.O. Box 800, c/o Tax Dept.	Rosemead	CA	91770
0435-203-22-0000	P.O. Box 800, c/o Tax Dept.	Rosemead	CA	91770
0435-203-23-0000	PO BOX 800	Rosemead	CA	91770
0435-203-24-0000	PO BOX 800	Rosemead	CA	91770
0435-203-25-0000	PO BOX 800	Rosemead	CA	91770
0435-203-26-0000	PO BOX 800	Rosemead	CA	91770
0435-203-27-0000	PO BOX 800	Rosemead	CA	91770
0435-204-15-0000	P.O. Box 800	Rosemead	CA	91770
0435-204-16-0000	10725 Estrella Ave.	Apple Valley	CA	92308
0435-204-17-0000	P.O. Box 410	Long Beach	CA	90801
0435-631-22-0000	P.O. Box 800	Rosemead	CA	91770
0435-631-23-0000	P.O. Box 800	Rosemead	CA	91770
0435-631-24-0000	PO BOX 800	Rosemead	CA	91770
0435-631-25-0000	P.O. Box 800	Rosemead	CA	91770
0435-631-26-0000	PO BOX 800	Rosemead	CA	91770
0435-631-27-0000	PO BOX 800	Rosemead	CA	91770
0438-073-05-0000	1212 S. Rigby Rd.	Kaysville	UT	84037
0438-073-06-0000	11011 Tujunga Rd.	Apple Valley	CA	92308
0438-073-07-0000	13621 Monroe St.	Westminster	CA	92683
0438-073-09-0000	22590 Deprad St.	Perris	CA	92570
0438-073-12-0000	15009 Sultana St.	Hesperia	CA	92345
0438-073-13-0000	1033 Buzzys Ranch Rd.	Carson City	NV	89701
0438-073-14-0000	30 Anita Dr.	East Hanover	NJ	07936
0438-073-15-0000	885 E. Mead Dr.	Chandler	AZ	85249
0438-073-16-0000	11945 Japatul Rd.	Apple Valley	CA	92308
0438-073-39-0000	18659 Verano St.	Hesperia	CA	92345
0438-073-40-0000	1200 E. 1st St.	Los Angeles	CA	90033
0438-073-41-0000	3796 Alabama St. #102	San Diego	CA	92104
0438-073-42-0000	P.O. Box 2843	Apple Valley	CA	92307
0438-073-43-0000	21143 Rancherias Rd.	Apple Valley	CA	92307
0438-073-44-0000	19885 Sunset Ln.	Apple Valley	CA	92308
0438-091-38-0000	3371 Roberts Creek Rd.	Roseburg	OR	97470
0438-104-01-0000	8367 San Clemente Way	Buena Park	CA	90620
0438-104-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-104-03-0000	1508 Columbine Way	Upland	CA	91786
0438-104-04-0000	P.O. Box 173	Lucerne Valley	CA	92356
0438-104-05-0000	1508 Columbine Way	Upland	CA	91786
0438-104-06-0000	23221 Ocotillo Way	Apple Valley	CA	92307
0438-104-07-0000	23245 Ocotillo Way	Apple Valley	CA	92308
0438-104-08-0000	23273 Ocotillo Way	Apple Valley	CA	92308
0438-104-09-0000	23289 Ocotillo Way	Apple Valley	CA	92308
0438-104-10-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-104-11-0000	9794 Cerra Vista St.	Apple Valley	CA	92308
0438-104-12-0000	9625 Cerra Vista St.	Apple Valley	CA	92308
0438-104-19-0000	18789 Albany St.	Hesperia	CA	92345
0438-104-20-0000	9557 Bella Vista Rd.	Apple Valley	CA	92308
0438-104-21-0000	P.O. Box 656	Apple Valley	CA	92307
0438-104-22-0000	22979 Rancho St.	Apple Valley	CA	92308
0438-112-05-0000	9429 Cerra Vista	Apple Valley	CA	92308
0438-112-06-0000	22620 Rancho St.	Apple Valley	CA	92308
0438-112-07-0000	22622 Rancho St.	Apple Valley	CA	92308

0438-112-08-0000	22670 Rancho St.	Apple Valley	CA	92308
0438-112-09-0000	9626 Flora Vista Rd.	Apple Valley	CA	92308
0438-112-12-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-112-13-0000	9549 Central Rd.	Apple Valley	CA	92308
0438-112-14-0000	9506 Flora Vista Rd.	Apple Valley	CA	92308
0438-112-15-0000	22717 Ocotillo Way	Apple Valley	CA	92308
0438-112-16-0000	22809 Ocotillo Way	Apple Valley	CA	92308
0438-112-17-0000	22831 Ocotillo Way	Apple Valley	CA	92308
0438-112-18-0000	9674 Bella Vista St.	Apple Valley	CA	92308
0438-112-20-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-112-21-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-112-23-0000	9570 Bella Vista St.	Apple Valley	CA	92308
0438-112-24-0000	3477 Greenwood Ave.	Los Angeles	CA	90066
0438-112-25-0000	9475 Central Rd.	Apple Valley	CA	92308
0438-112-26-0000	9425 Central Rd.	Apple Valley	CA	92308
0438-112-47-0000	9585 Central Rd.	Apple Valley	CA	92308
0438-112-49-0000	P.O. Box 132	Apple Valley	CA	92307
0438-112-67-0000	1018 N. Bender Ave.	Covina	CA	91724
0438-112-68-0000	22625 Laramie St.	Apple Valley	CA	92308
0438-112-72-0000	9467 Pauhaska Rd.	Apple Valley	CA	92308
0438-112-74-0000	9629 Flora Vista Rd.	Apple Valley	CA	92308
0438-112-75-0000	22716 Rancho St.	Apple Valley	CA	92308
0438-112-76-0000	22732 Rancho St.	Apple Valley	CA	92308
0438-112-77-0000	22758 Rancho St.	Apple Valley	CA	92308
0438-112-86-0000	9515 Flora Vista Rd.	Apple Valley	CA	92308
0438-112-87-0000	9515 Flora Vista Rd.	Apple Valley	CA	92308
0438-143-10-0000	9239 Joshua St.	Apple Valley	CA	92308
0438-143-11-0000	9230 Sagebrush St.	Apple Valley	CA	92308
0438-143-12-0000	1428 W. Park Ave.	Anaheim	CA	92801
0438-143-14-0000	9161 Juniper Rd.	Apple Valley	CA	92308
0438-143-15-0000	9160 Joshua St.	Apple Valley	CA	92308
0438-143-17-0000	9145 Juniper	Apple Valley	CA	92308
0438-143-18-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-143-19-0000	9060 Joshua St.	Apple Valley	CA	92308
0438-143-20-0000	9070 Joshua St.	Apple Valley	CA	92308
0438-143-21-0000	9060 Joshua St.	Apple Valley	CA	92308
0438-143-22-0000	9071 Joshua St.	Apple Valley	CA	92308
0438-143-23-0000	9076 Sagebrush St.	Apple Valley	CA	92308
0438-143-24-0000	9021 Joshua St.	Apple Valley	CA	92308
0438-143-26-0000	8958 Joshua St.	Apple Valley	CA	92308
0438-143-39-0000	8209 Alder Ave.	Fontana	CA	92335
0438-143-40-0000	P.O. Box 4262	Ontario	CA	91761
0438-144-01-0000	9277 Sagebrush Rd.	Apple Valley	CA	92308
0438-144-02-0000	1312 W. M St.	Wilmington	CA	90744
0438-144-03-0000	21677 Roundup Way	Apple Valley	CA	92308
0438-144-04-0000	9718 Norlain Ave.	Downey	CA	90240
0438-144-05-0000	9222 Yucca St.	Apple Valley	CA	92308
0438-144-06-0000	16322 Cajon St.	Hesperia	CA	92345
0438-144-07-0000	7030 Granger Ave.	Bell Gardens	CA	90201
0438-144-08-0000	13951 Falling Leaf Rd.	Apple Valley	CA	92307
0438-144-09-0000	9111 Sagebrush St.	Apple Valley	CA	92308
0438-144-10-0000	9140 Yucca St.	Apple Valley	CA	92308

0438-144-11-0000	9125 Yucca St.	Apple Valley	CA	92307
0438-144-17-0000	23360 Haskell Vista Ln.	Newhall	CA	91321
0438-154-49-0000	1428 W. Park Ave.	Anaheim	CA	92801
0438-154-59-0000	17310 Bear Valley Rd. #10	Victorville	CA	92395
0438-154-65-0000	9079 Candlelight St.	Apple Valley	CA	92308
0438-154-66-0000	22428 Valley View Rd.	Apple Valley	CA	92308
0438-154-67-0000	14608 Pendleton St.	Hesperia	CA	92345
0438-154-72-0000	2310 W. Main St.	Houston	TX	77098
0438-154-73-0000	12807 Ranchero St.	Oak Hills	CA	92344
0438-154-74-0000	21020 Santa Rosa Rd.	Apple Valley	CA	92308
0438-154-75-0000	21080 Santa Rosa Rd.	Apple Valley	CA	92308
0438-154-76-0000	7763 Thompson Creek Rd.	Applegate	OR	97530
0438-154-84-0000	P.O. Box 1236	Marana	AZ	85653
0438-163-06-0000	9365 Spring Valley Pkwy.	Victorville	CA	92395
0438-163-56-0000	17612 Danbury Ave.	Hesperia	CA	92345
0438-163-61-0000	P.O. Box 403543	Hesperia	CA	92340
0438-163-62-0000	P.O. Box 403543	Hesperia	CA	92340
0438-163-63-0000	P.O. Box 403543	Hesperia	CA	92340
0438-221-33-0000	1781 Sanchez St.	San Francisco	CA	94131
0438-221-35-0000	1957 E. 114th St.	Los Angeles	CA	90059
0438-221-37-0000	9829 Alta Vista Rd.	Apple Valley	CA	92308
0438-221-42-0000	3700 S. Westport Ave. #2208	Sioux Falls	SD	57106
0438-221-43-0000	9770 Bonita Vista Ave.	Apple Valley	CA	92308
0438-221-56-0000	9783 Cerra Vista St.	Apple Valley	CA	92308
0438-221-57-0000	16322 Cajon St.	Hesperia	CA	92345
0438-221-84-0000	6000 Corrales Rd.	Corrales	NM	87048
0438-221-85-0000	7660 N. Valley Dr.	Las Cruces	NM	88007
0438-231-01-0000	11515 214th St.	Lakewood	CA	90715
0438-231-02-0000	23 Terraza Dr.	Newport Coast	CA	92657
0438-231-47-0000	11515 E. 214th St.	Lakewood	CA	90715
0438-251-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-251-03-0000	22027 Roundup Way	Apple Valley	CA	92308
0438-251-04-0000	9276 Mesa Vista St.	Apple Valley	CA	92308
0438-251-06-0000	9223 Allegra Vista St.	Apple Valley	CA	92308
0438-251-07-0000	9238 Allegra Vista St.	Apple Valley	CA	92308
0438-251-09-0000	5226 Sulphur Dr.	Jurupa Valley	CA	91752
0438-251-10-0000	5226 Sulphur Dr.	Jurupa Valley	CA	91752
0438-251-13-0000	445 S. Figueroa St.	Los Angeles	CA	90071
0438-251-22-0000	13250 Cornell Cir.	Victorville	CA	92392
0438-251-23-0000	445 S. Figueroa St.	Los Angeles	CA	90071
0438-251-26-0000	4734 W. 170th St.	Lawndale	CA	90260
0438-251-27-0000	22027 Roundup Way	Apple Valley	CA	92308
0438-251-32-0000	9589 Spring Valley Pkwy.	Victorville	CA	92395
0438-251-33-0000	14308 Cronese Rd.	Apple Valley	CA	92307
0438-251-35-0000	9776 Merino Ave.	Apple Valley	CA	92308
0438-271-01-0000	9475 Mesa Vista	Apple Valley	CA	92308
0438-271-04-0000	201 S. O'Malley Ave.	Azusa	CA	91702
0438-271-05-0000	4743 Jackson St. #67	Riverside	CA	92503
0438-271-06-0000	9440 Central Rd.	Apple Valley	CA	92308
0438-271-07-0000	9425 Buena Vista Rd.	Apple Valley	CA	92308
0438-271-08-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-271-09-0000	9435 Mesa Vista St.	Apple Valley	CA	92308

0438-271-10-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-271-11-0000	9370 Buena Vista	Apple Valley	CA	92308
0438-271-19-0000	9476 Buena Vista St.	Apple Valley	CA	92038
0438-271-20-0000	9383 Buena Vista St.	Apple Valley	CA	92308
0438-271-26-0000	9375 Mesa Vista Rd.	Apple Valley	CA	92307
0438-271-27-0000	9382 Buckbrush Rd.	Apple Valley	CA	92308
0438-271-29-0000	22140 Roundup Way	Apple Valley	CA	92308
0438-271-30-0000	16461 Spruce St. #A	Hesperia	CA	92345
0438-281-05-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-281-10-0000	P.O. Box 1222	Apple Valley	CA	92307
0438-281-11-0000	16365 Yucca Ave.	Victorville	CA	92395
0438-281-12-0000	5008 Towers St.	Torrance	CA	90503
0438-281-14-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-281-15-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-281-16-0000	9775 Spring Valley Pkwy.	Victorville	CA	92395
0438-281-20-0000	15370 Wells Fargo St.	Hesperia	CA	92345
0438-281-21-0000	22030 Roundup Way	Apple Valley	CA	92308
0438-281-22-0000	22050 Roundup Way	Apple Valley	CA	92308
0438-301-13-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-301-14-0000	10600 Wilshire Blvd. #409	Los Angeles	CA	90024
0438-301-15-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0438-301-20-0000	9576 Central Rd.	Apple Valley	CA	92308
0438-321-28-0000	9315 Yucca St.	Apple Valley	CA	92308
0448-011-03-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0448-011-05-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-011-06-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-021-01-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0448-021-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-021-06-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-031-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-041-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-041-03-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-041-11-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-041-16-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-041-17-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-051-05-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-051-10-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-223-05-0000	840 W. Foothill Blvd. #C	Monrovia	CA	91016
0448-223-06-0000	3910 Roadrunner Ln.	Chino Valley	AZ	86323
0448-223-07-0000	3910 Roadrunner Ln.	Chino Valley	AZ	86323
0448-233-01-0000	15629 Big Ridge Rd.	Biloxi	MS	39532
0448-233-02-0000	29055 Avenida Gaviota	Menifee	CA	92587
0448-233-03-0000	298 Poplar Crest Ave.	Thousand Oaks	CA	91320
0448-233-10-0000	81 Legacy Blvd. SE #1412	Calgary	AB	T2X 2B9
0448-233-11-0000	PO BOX 800	Rosemead	CA	91770
0448-233-12-0000	PO BOX 800	Rosemead	CA	91770
0448-701-06-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0448-702-33-0000	PO BOX 800	Rosemead	CA	91770
0448-702-34-0000	PO BOX 800	Rosemead	CA	91770
0451-011-09-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0451-011-11-0000	P.O. Box 723	Bonsall	CA	92003
0451-011-13-0000	1201 Bird Center Driver	Palm Springs	CA	92262

0451-011-15-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0451-011-17-0000	19650 Yanan Rd.	Apple Valley	CA	92307
0451-011-18-0000	19650 Yanan Rd.	Apple Valley	CA	92356
0451-011-20-0000	PO BOX 800	Rosemead	CA	91770
0451-011-23-0000	PO BOX 800	Rosemead	CA	91770
0451-011-25-0000	810 Tinaldo Rd.	Arcadia	CA	91006
0451-011-27-0000	PO BOX 800	Rosemead	CA	91770
0451-011-29-0000	PO BOX 800	Rosemead	CA	91770
0451-011-30-0000	PO BOX 800	Rosemead	CA	91770
0451-011-32-0000	PO BOX 800	Rosemead	CA	91770
0451-011-33-0000	30453 Holmes Rd.	Lucerne Valley	CA	92356
0451-011-35-0000	19650 Yanan Rd.	Apple Valley	CA	92307
0451-011-62-0000	10172 Malinda Ln.	Garden Grove	CA	92840
0452-011-05-0000	8120 Beverly Hills Ave. NE	Albuquerque	NM	87122
0452-011-06-0000	6755 Rose Ave.	Long Beach	CA	90805
0452-011-09-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0452-011-10-0000	1712 N. Beverly Glen Blvd.	Los Angeles	CA	90077
0452-011-12-0000	2809 147th St.	Urbandale	IA	50323
0452-011-14-0000	26444 Community Blvd.	Barstow	CA	92311
0452-011-17-0000	P.O. Box 537	Big Bear Lake	CA	92315
0452-011-22-0000	PO BOX 800	Rosemead	CA	91770
0452-011-24-0000	PO BOX 800	Rosemead	CA	91770
0452-011-25-0000	22877 Miriam Way	Grand Terrace	CA	92313
0452-011-30-0000	PO BOX 800	Rosemead	CA	91770
0452-011-31-0000	PO BOX 800	Rosemead	CA	91770
0452-011-32-0000	PO BOX 800	Rosemead	CA	91770
0452-011-36-0000	PO BOX 800	Rosemead	CA	91770
0452-011-37-0000	PO BOX 800	Rosemead	CA	91770
0452-021-39-0000	PO BOX 800	Rosemead	CA	91770
0452-021-40-0000	PO BOX 800	Rosemead	CA	91770
0452-021-41-0000	PO BOX 800	Rosemead	CA	91770
0452-021-44-0000	PO BOX 800	Rosemead	CA	91770
0452-041-17-0000	1015 W. 68th Ter.	Kansas City	MO	64113
0452-041-18-0000	29458 Via Espada	Murrieta	CA	92563
0452-041-45-0000	18615 Los Leones St.	Fountain Valley	CA	92708
0452-041-46-0000	PO BOX 800	Rosemead	CA	91770
0452-041-47-0000	PO BOX 800	Rosemead	CA	91770
0452-041-48-0000	PO BOX 800	Rosemead	CA	91770
0452-041-51-0000	PO BOX 800	Rosemead	CA	91770
0452-041-59-0000	PO BOX 800	Rosemead	CA	91770
0452-041-61-0000	P.O. Box 800	Rosemead	CA	91770
0452-041-62-0000	P.O. Box 800	Rosemead	CA	91770
0452-041-65-0000	PO BOX 800	Rosemead	CA	91770
0452-051-03-0000	9903 Santa Monica Blvd. #541	Beverly Hills	CA	90212
0452-051-04-0000	1206 Palm Ave.	San Gabriel	CA	91776
0452-051-15-0000	622 Huylars Ln.	Santa Ana	CA	92703
0452-051-29-0000	10783 Hemlock Ave.	Hesperia	CA	92345
0452-051-31-0000	2320 Donella Cir.	Los Angeles	CA	90077
0452-051-33-0000	2320 Donella Cir.	Los Angeles	CA	90077
0452-051-34-0000	6378 Canvasback Way	Fontana	CA	92336
0452-051-35-0000	2320 Donella Cir.	Los Angeles	CA	90077
0452-051-44-0000	P.O. Box 7261	Salem	OR	97303

0452-051-49-0000	PO BOX 800	Rosemead	CA	91770
0452-051-50-0000	PO BOX 800	Rosemead	CA	91770
0452-051-51-0000	2 Innovation Way, 2nd Floor	Pomona	CA	91768
0452-051-52-0000	1988 Villa Del Dios Glen	Escondido	CA	92029
0452-121-11-0000	12585 Midway Ave.	Lucerne Valley	CA	92356
0452-121-12-0000	20300 S. Figueroa St.	Carson	CA	90745
0452-121-14-0000	P.O. Box 1767	Lucerne Valley	CA	92356
0452-121-18-0000	9860 Gidley St.	El Monte	CA	91731
0452-121-19-0000	25984 Desert View Rd.	Apple Valley	CA	92308
0452-121-20-0000	1245 Milam Pl.	Monterey Park	CA	91755
0452-121-36-0000	P.O. Box 1924	Lucerne Valley	CA	92356
0452-121-37-0000	14542 Golders Green Ln.	Westminster	CA	92683
0452-121-39-0000	9852 Katella Ave. #291	Anaheim	CA	92804
0452-121-42-0000	20300 Figueroa St.	Carson	CA	90745
0452-121-48-0000	9852 Katella Ave. #291	Anaheim	CA	92804
0452-121-56-0000	PO BOX 800	Rosemead	CA	91770
0452-121-57-0000	P.O. Box 800	Rosemead	CA	91770
0452-121-58-0000	PO BOX 800	Rosemead	CA	91770
0452-121-59-0000	PO BOX 800	Rosemead	CA	91770
0452-132-01-0000	12590 Douglas St.	Yucaipa	CA	92399
0452-132-02-0000	P.O. Box 672	Deming	NM	88031
0452-132-05-0000	2650 Foxborough Pl.	Fullerton	CA	92833
0452-132-06-0000	P.O. Box 381	Artesia	CA	90702
0452-132-07-0000	PO BOX 800	Rosemead	CA	91770
0452-173-46-0000	P.O. Box 1391	Lucerne Valley	CA	92356
0452-173-47-0000	22438 Broken Lance Ct.	Apple Valley	CA	92307
0452-181-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0452-312-01-0000	876 Wild Horse Valley Rd.	Wildwood	MO	63005
0452-312-02-0000	4450 Dunham St.	Los Angeles	CA	90023
0452-312-03-0000	4450 Dunham St.	Los Angeles	CA	90023
0452-312-04-0000	4450 Dunham St.	Los Angeles	CA	90023
0452-312-05-0000	P.O. Box 13129	San Bernardino	CA	92423
0452-312-06-0000	P.O. Box 13129	San Bernardino	CA	92423
0452-312-07-0000	P.O. Box 13129	San Bernardino	CA	92423
0452-312-08-0000	1001 Avenida Pico #C418	San Clemente	CA	92673
0452-312-09-0000	1523 S. Visalia Ave.	Compton	CA	90220
0452-312-10-0000	12786 Midway Ave.	Lucerne Valley	CA	92356
0452-411-11-0000	13272 Meyer Rd.	Whittier	CA	90605
0452-411-12-0000	P.O. Box 20060	San Bernardino	CA	92406
0452-411-13-0000	715 N. Nevada St.	Oceanside	CA	92054
0452-411-14-0000	PO BOX 800	Rosemead	CA	91770
0452-411-15-0000	PO BOX 800	Rosemead	CA	91770
0452-411-22-0000	1161 Wildwood Ct.	Chula Vista	CA	91913
0452-411-30-0000	1256 S. Central Ave.	Glendale	CA	91204
0452-411-31-0000	504 E. Palmer St.	Glendale	CA	91205
0452-421-03-0000	4921 Mamie Ave.	Lakewood	CA	90713
0452-421-05-0000	PO BOX 800	Rosemead	CA	91770
0452-421-07-0000	PO BOX 800	Rosemead	CA	91770
0452-421-09-0000	PO BOX 800	Rosemead	CA	91770
0452-421-10-0000	P.O. Box 800	Rosemead	CA	91770
0452-421-11-0000	13181 Camp Rock Rd.	Lucerne Valley	CA	92356
0452-421-12-0000	PO BOX 800	Rosemead	CA	91770

0452-421-13-0000	P.O. Box 800	Rosemead	CA	91770
0452-421-21-0000	18811 Galleano St.	La Puente	CA	91744
0452-421-22-0000	327 W. Orangethorpe Ave.	Fullerton	CA	92832
0452-421-23-0000	13157 9th #7	Chino	CA	91710
0452-421-26-0000	2122 E. Deodar Ave.	West Covina	CA	91791
0452-431-11-0000	4071 Peterlynn Ct.	San Diego	CA	92154
0452-431-12-0000	2712 Francancis Ave.	Hacienda Heights	CA	91745
0452-431-13-0000	1100 W. 101st St.	Los Angeles	CA	90044
0452-431-14-0000	P.O. Box 1041	Wrightwood	CA	92397
0452-431-15-0000	26609 Heirloom Pl.	Santa Clarita	CA	91350
0452-431-16-0000	37424 Hobart Rd.	Lucerne Valley	CA	92356
0452-431-17-0000	5311 Elmwood Rd.	San Bernardino	CA	92404
0452-431-18-0000	9016 Crenshaw Blvd.	Inglewood	CA	90305
0452-431-19-0000	2109 Dufour Ave. #B	Redondo Beach	CA	90278
0452-431-20-0000	P.O. Box 800	Rosemead	CA	91770
0452-431-21-0000	PO BOX 800	Rosemead	CA	91770
0452-431-22-0000	PO BOX 800	Rosemead	CA	91770
0452-431-23-0000	P.O. Box 800	Rosemead	CA	91770
0453-041-07-0000	22007 Hurons Ave.	Apple Valley	CA	92307
0453-051-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-051-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-051-03-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-051-04-0000	315 Avon Ct.	Dublin	OH	43017
0453-051-07-0000	10843 Rose Pl.	Adelanto	CA	92301
0453-051-10-0000	19002 Gledhill St.	Northridge	CA	91324
0453-071-07-0000	727 S. Ardmore Ave. #1006	Los Angeles	CA	90005
0453-071-15-0000	P.O. Box 455	Lucerne Valley	CA	92356
0453-071-20-0000	P.O. Box 682	Lucerne Valley	CA	92356
0453-071-29-0000	PO BOX 800	Rosemead	CA	91770
0453-071-30-0000	PO BOX 800	Rosemead	CA	91770
0453-071-31-0000	16355 Meridian Rd.	Lucerne Valley	CA	92356
0453-071-33-0000	25337 Renoit Ave.	Moreno Valley	CA	92553
0453-071-34-0000	1121 S. 200 W	Salt Lake City	UT	84101
0453-071-35-0000	P.O. Box 1144	Victorville	CA	92393
0453-071-50-0000	6971 Lurline Ave.	Canoga Park	CA	91306
0453-071-51-0000	20162 Hwy. 18, Ste. G PNB #208	Apple Valley	CA	92307
0453-081-08-0000	425 Deborah Dr.	Pomona	CA	91767
0453-081-10-0000	PO BOX 800	Rosemead	CA	91770
0453-081-11-0000	PO BOX 800	Rosemead	CA	91770
0453-081-12-0000	PO BOX 800	Rosemead	CA	91770
0453-081-15-0000	1720 Mosher Ave.	Modesto	CA	95358
0453-081-16-0000	10448 Des Moines Ave.	Northridge	CA	91326
0453-091-03-0000	16274 Meridian Rd.	Lucerne Valley	CA	92356
0453-091-05-0000	24455 Marie St.	Perris	CA	92570
0453-091-06-0000	848 N. Rainbow Blvd. #4855	Las Vegas	NV	89107
0453-091-07-0000	6277 Revere Ave.	Rancho Cucamonga	CA	91737
0453-091-09-0000	23607 Cassel-Fall River Rd.	Fall River Mills	CA	96028
0453-091-11-0000	19604 Rolling Greens Dr.	Apple Valley	CA	92308
0453-091-40-0000	15462 Bellflower St.	Adelanto	CA	92301
0453-091-42-0000	PO BOX 800	Rosemead	CA	91770
0453-091-43-0000	PO BOX 800	Rosemead	CA	91770
0453-091-45-0000	PO BOX 800	Rosemead	CA	91770

0453-091-48-0000	2006 Old Highway 395	Fallbrook	CA	92028
0453-091-50-0000	10843 Rose Pl.	Adelanto	CA	92301
0453-091-52-0000	P.O. Box 1799	Lucerne Valley	CA	92356
0453-091-56-0000	PO BOX 800	Rosemead	CA	91770
0453-091-57-0000	16298 Fern Rd.	Lucerne Valley	CA	92356
0453-091-58-0000	PO BOX 800	Rosemead	CA	91770
0453-091-73-0000	10843 Rose Pl.	Adelanto	CA	92301
0453-091-74-0000	10843 Rose Pl.	Adelanto	CA	92301
0453-151-04-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-161-05-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-161-07-0000	223 E. Magna Vista Ave.	Arcadia	CA	91006
0453-161-08-0000	3734 Elizabeth #A	Riverside	CA	92506
0453-161-11-0000	100 Howe Avenue, Suite 100	Sacramento	CA	95825
0453-193-15-0000	PO BOX 800	Rosemead	CA	91770
0453-193-16-0000	PO BOX 800	Rosemead	CA	91770
0453-381-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-381-03-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-381-04-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-381-05-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-381-06-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-381-07-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-381-08-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-381-09-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-381-10-0000	1201 Bird Center Driver	Palm Springs	CA	92262
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0453-621-04-0000	1201 Bird Center Driver	Palm Springs	CA	92262
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0453-621-14-0000	1201 Bird Center Driver	Palm Springs	CA	92262
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0453-641-03-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-641-04-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-641-06-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-641-08-0000	1201 Bird Center Driver	Palm Springs	CA	92262

0453-641-11-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-641-12-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-641-13-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-641-14-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-641-15-0000	1201 Bird Center Driver	Palm Springs	CA	92262
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0453-662-12-0000	PO BOX 800	Rosemead	CA	91770
0453-662-13-0000	1201 Bird Center Driver	Palm Springs	CA	92262
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0453-662-44-0000	1201 Bird Center Driver	Palm Springs	CA	92262
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0453-662-46-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0453-662-48-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0464-111-28-0000	29611 Exeter Rd.	Lucerne Valley	CA	92356
0464-132-11-0000	1560 Helen Ct.	Ontario	CA	91762
0464-132-12-0000	12277 Apple Valley Rd. #361	Apple Valley	CA	92308
0464-132-32-0000	PO BOX 800	Rosemead	CA	91770
0464-132-37-0000	PO BOX 800	Rosemead	CA	91770
0464-132-38-0000	PO BOX 800	Rosemead	CA	91770
0464-132-39-0000	PO BOX 800	Rosemead	CA	91770
0464-132-40-0000	PO BOX 800	Rosemead	CA	91770
0464-132-41-0000	13076 Waverly	Lucerne Valley	CA	92356
0464-132-42-0000	PO BOX 800	Rosemead	CA	91770
0464-132-43-0000	141 Morphy St.	Carleton Place	ON	K7C 2B3
0464-132-44-0000	PO BOX 800	Rosemead	CA	91770
0464-132-45-0000	30372 Cove Rd.	Lucerne Valley	CA	92356

0464-132-46-0000	P.O. Box 1174	Apple Valley	CA	93207
0464-141-03-0000	PO BOX 800	Rosemead	CA	91770
0464-141-08-0000	PO BOX 800	Rosemead	CA	91770
0464-141-12-0000	PO BOX 800	Rosemead	CA	91770
0464-141-13-0000	PO BOX 800	Rosemead	CA	91770
0464-141-14-0000	PO BOX 800	Rosemead	CA	91770
0464-141-15-0000	965 W. Chicago Ave.	Chicago	IL	60642
0464-141-19-0000	33939 Road 224	North Fork	CA	93643
0464-141-27-0000	29912 Exeter St.	Lucerne Valley	CA	92356
0464-151-01-0000	29611 Exeter Rd.	Lucerne Valley	CA	92356
0464-151-03-0000	PO BOX 800	Rosemead	CA	91770
0464-151-04-0000	PO BOX 800	Rosemead	CA	91770
0464-151-05-0000	PO BOX 800	Rosemead	CA	91770
0464-151-06-0000	P.O. Box 1983	Lucerne Valley	CA	92356
0464-151-07-0000	15427 14th Dr. SE	Mill Creek	WA	98012
0464-151-08-0000	3902 Vista Campana N	Oceanside	CA	92057
0464-151-09-0000	PO BOX 800	Rosemead	CA	91770
0464-161-01-0000	30125 Exeter St.	Lucerne Valley	CA	92356
0464-163-06-0000	16642 Graz Cir.	Huntington Beach	CA	92649
0464-163-07-0000	30425 Lake St.	Lucerne Valley	CA	92356
0464-163-08-0000	13805 Luna Rd.	Victorville	CA	92392
0464-163-10-0000	2015 Outpost Dr.	Los Angeles	CA	90068
0464-163-11-0000	13564 Sayre St.	Sylmar	CA	91342
0464-163-12-0000	114 Peppertree Ln.	Monrovia	CA	91016
0464-163-13-0000	30230 Buchanan St.	Lucerne Valley	CA	92356
0464-163-16-0000	PO BOX 800	Rosemead	CA	91770
0464-163-17-0000	PO BOX 800	Rosemead	CA	91770
0464-164-01-0000	2303 West Blvd.	Los Angeles	CA	90016
0464-164-10-0000	346 Grandview	Piscataway	NJ	08854
0464-164-11-0000	18475 Menahka Ct.	Apple Valley	CA	92307
0464-164-22-0000	3213 Wolfe St.	Lakewood	CA	90712
0464-164-24-0000	PO BOX 800	Rosemead	CA	91770
0464-164-25-0000	PO BOX 800	Rosemead	CA	91770
0464-164-26-0000	P.O. Box 410	Long Beach	CA	90801
0464-165-01-0000	30249 Buchanan	Lucerne Valley	CA	92356
0464-165-02-0000	30175 Buchanan St.	Lucerne Valley	CA	92356
0464-171-11-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0464-171-21-0000	PO BOX 800	Rosemead	CA	91770
0464-171-22-0000	PO BOX 800	Rosemead	CA	91770
0464-171-23-0000	PO BOX 800	Rosemead	CA	91770
0464-171-24-0000	1569 N. Lilac	Rialto	CA	92376
0464-171-25-0000	12829 Bear Valley Rd.	Victorville	CA	92392
0464-171-27-0000	31646 Loma Linda Rd.	Temecula	CA	92592
0464-171-28-0000	33775 Bethel Ave.	Hemet	CA	92545
0464-171-32-0000	9353 Otto St.	Downey	CA	90240
0464-171-37-0000	P.O. Box 410	Long Beach	CA	90801
0464-171-44-0000	PO BOX 800	Rosemead	CA	91770
0464-171-45-0000	PO BOX 800	Rosemead	CA	91770
0464-171-47-0000	12843 9th St. #3	Chino	CA	91710
0464-171-53-0000	PO BOX 800	Rosemead	CA	91770
0464-171-54-0000	PO BOX 800	Rosemead	CA	91770
0464-171-55-0000	PO BOX 800	Rosemead	CA	91770

0464-171-56-0000	3440 E. Prescott Cir.	Cuyahoga Falls	OH	44223
0464-181-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0464-181-02-0000	2530 School St.	Solvang	CA	93463
0464-191-01-0000	18183 Bear Valley Rd.	Hesperia	CA	92345
0464-191-02-0000	36430 Tansy Ct.	Lake Elsinore	CA	92532
0464-191-06-0000	1608 E. Redwood Ave.	Anaheim	CA	92805
0464-191-07-0000	P.O. Box 275	Lucerne Valley	CA	92356
0464-191-18-0000	1861 S. Haster St. #73	Anaheim	CA	92802
0464-191-24-0000	10487 11th Ave.	Hesperia	CA	92345
0464-191-25-0000	PO BOX 800	Rosemead	CA	91770
0464-191-26-0000	P.O. Box 1575	Lucerne Valley	CA	92356
0464-191-27-0000	P.O. Box 285	Lucerne Valley	CA	92356
0464-191-28-0000	946 W. F St.	Ontario	CA	91762
0464-191-29-0000	PO BOX 800	Rosemead	CA	91770
0464-191-30-0000	PO BOX 800	Rosemead	CA	91770
0464-191-33-0000	848 N. Rainbow Blvd. #2614	Las Vegas	NV	89107
0464-191-34-0000	PO BOX 800	Rosemead	CA	91770
0464-191-35-0000	PO BOX 800	Rosemead	CA	91770
0464-191-36-0000	PO BOX 800	Rosemead	CA	91770
0464-201-01-0000	PO BOX 800	Rosemead	CA	91770
0464-201-02-0000	PO BOX 800	Rosemead	CA	91770
0464-201-03-0000	PO BOX 800	Rosemead	CA	91770
0464-201-22-0000	26425 Wren St.	Apple Valley	CA	92308
0464-201-23-0000	10701 Cedar Ave Sp. 167	Bloomington	CA	92316
0464-201-24-0000	21821 Martin St.	Perris	CA	92570
0464-201-25-0000	36430 Tansy Ct.	Lake Elsinore	CA	92532
0464-201-26-0000	PO BOX 800	Rosemead	CA	91770
0464-201-27-0000	PO BOX 800	Rosemead	CA	91770
0464-201-28-0000	PO BOX 800	Rosemead	CA	91770
0464-201-29-0000	PO BOX 800	Rosemead	CA	91770
0464-201-34-0000	PO BOX 800	Rosemead	CA	91770
0464-201-35-0000	PO BOX 800	Rosemead	CA	91770
0464-201-37-0000	26025 Horizon St.	Apple Valley	CA	92308
0464-201-40-0000	P.O. Box 170	Lucerne Valley	CA	92356
0464-211-12-0000	7737 E. Brigade Dr.	Kingman	AZ	86401
0464-211-18-0000	PO BOX 800	Rosemead	CA	91770
0464-211-19-0000	PO BOX 800	Rosemead	CA	91770
0464-211-20-0000	PO BOX 800	Rosemead	CA	91770
0464-211-21-0000	PO BOX 800	Rosemead	CA	91770
0464-341-31-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0464-341-32-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0464-341-33-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0527-011-03-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-021-04-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-021-05-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-021-06-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-021-08-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-021-09-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-021-10-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-021-13-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0527-031-08-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-031-17-0000	1201 Bird Center Driver	Palm Springs	CA	92262

0527-031-18-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0527-031-19-0000	100 Howe Avenue, Suite 100	Sacramento	CA	95825
0527-031-20-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-031-21-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-031-22-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0527-071-03-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-071-04-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-071-05-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-071-09-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-071-10-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0527-071-11-0000	911 Wilshire Blvd.	Los Angeles	CA	90017
0527-071-12-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-071-14-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-071-15-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0527-071-16-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0527-091-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-111-06-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-111-07-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0527-111-08-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-111-09-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-111-15-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0527-111-16-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-121-02-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0527-121-03-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-121-11-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-121-12-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-121-13-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-281-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0527-281-02-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0527-281-12-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0529-241-15-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0529-241-18-0000	469 Old Trenton Rd.	East Windsor	NJ	08512
0529-251-04-0000	9329 Mariposa #210	Hesperia	CA	92344
0529-251-12-0000	9329 Mariposa #210	Hesperia	CA	92344
0529-251-14-0000	PO BOX 800	Rosemead	CA	91770
0529-261-09-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0542-201-02-0000	2025 E. Financial Way	Glendora	CA	91740
0542-201-21-0000	2025 E. Financial Way	Glendora	CA	91740
0542-201-22-0000	2025 E. Financial Way	Glendora	CA	91740
0542-201-23-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0542-201-24-0000	2025 E. Financial Way	Glendora	CA	91740
0542-201-25-0000	915 L Street	Sacramento	CA	95814
0542-201-28-0000	1807 Toyon Ln.	Newport Beach	CA	92660
0542-201-29-0000	2025 E. Financial Way	Glendora	CA	91740
0542-201-31-0000	915 L Street	Sacramento	CA	95814
0542-201-32-0000	915 L Street	Sacramento	CA	95814
0542-201-33-0000	2006 Old Highway 395	Fallbrook	CA	92028
0542-201-34-0000	2006 Old Highway 395	Fallbrook	CA	92028
0542-201-36-0000	2025 E. Financial Way	Glendora	CA	91740
0542-201-37-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0542-241-01-0000	915 L Street	Sacramento	CA	95814
0542-241-02-0000	915 L Street	Sacramento	CA	95814

0542-241-03-0000	915 L Street	Sacramento	CA	95814
0542-241-04-0000	P.O. Box 185	Shoshone	CA	92384
0542-241-06-0000	P.O. Box 2886, Dept. 22	Palm Desert	CA	92261
0542-241-12-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0542-241-16-0000	P.O. Box 1544	Joshua Tree	CA	92252
0542-241-17-0000	P.O. Box 1544	Joshua Tree	CA	92252
0542-241-20-0000	150 Coolwater Ln.	Barstow	CA	92311
0542-241-21-0000	150 Coolwater Ln.	Barstow	CA	92311
0542-251-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0542-251-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0542-251-07-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0542-261-05-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0542-271-01-0000	915 L Street	Sacramento	CA	95814
0542-271-02-0000	915 L Street	Sacramento	CA	95814
0542-271-03-0000	915 L Street	Sacramento	CA	95814
0542-271-04-0000	915 L Street	Sacramento	CA	95814
0542-271-05-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0542-271-06-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0542-271-07-0000	1302 Murphy Ln.	Warrington	PA	18976
0542-271-08-0000	P.O. Box 1544	Joshua Tree	CA	92252
0542-271-09-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0542-271-16-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0542-271-17-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0543-181-19-0000	No. 36 11F-2, Wuling Rd.	Hsinchu City	Taiwan	N/A
0543-181-20-0000	No. 36 11F-2, Wuling Rd.	Hsinchu City	Taiwan	N/A
0543-181-21-0000	6207 Temple City Blvd. #A	Temple City	CA	91780
0543-181-22-0000	6207 Temple City Blvd. #A	Temple City	CA	91780
0543-311-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0543-311-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0543-311-03-0000	P.O. Box 449	Redlands	CA	92373
0543-311-04-0000	P.O. Box 449	Redlands	CA	92373
0543-311-05-0000	P.O. Box 449	Redlands	CA	92373
0544-241-19-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0551-231-02-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0551-261-02-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-261-03-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-261-04-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-261-05-0000	9380 El Blanco Ave.	Fountain Valley	CA	92708
0551-261-06-0000	P.O. Box 1905	Bangor	ME	04402
0551-261-08-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-271-09-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-271-10-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-271-12-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-271-13-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-272-05-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-272-06-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-281-02-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-281-03-0000	1457 7th Ave.	Hacienda Heights	CA	91745
0551-281-05-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-281-06-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-281-07-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-281-08-0000	HCR #1 Box 6	Ludlow	CA	92338

0551-281-12-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-281-13-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-281-14-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-281-15-0000	HCR #1 Box 6	Ludlow	CA	92338
0551-281-16-0000	HCR #1 Box 6	Ludlow	CA	92338
0552-011-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-021-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-021-04-0000	3770 E Washington Boulevard	Los Angeles	CA	90058
0552-031-03-0000	201 Mission St.	San Francisco	CA	94105
0552-031-04-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-031-10-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0552-031-11-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-031-13-0000	58338 National Trails Hwy.	Barstow	CA	92366
0552-031-32-0000	PO BOX 800	Rosemead	CA	91770
0552-031-43-0000	22835 Calle San Juan De Los Lagos	Moreno Valley	CA	92553
0552-031-44-0000	22835 Calle San Juan De Los Lagos	Moreno Valley	CA	92553
0552-041-07-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0552-041-08-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-041-16-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-041-18-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-091-20-0000	100 Howe Avenue, Suite 100	Sacramento	CA	95825
0552-091-21-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0552-101-06-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0552-111-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-111-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-111-06-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-111-07-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0552-111-12-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-151-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-151-12-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0552-151-16-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-151-30-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0552-161-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-161-03-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0552-161-13-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-161-14-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-161-17-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0552-171-13-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-191-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-191-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-191-03-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0552-191-11-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0552-191-12-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-191-13-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-201-05-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-201-08-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-201-09-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-201-14-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0552-201-15-0000	100 Howe Avenue, Suite 100	Sacramento	CA	95825
0552-201-16-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-211-03-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-211-04-0000	6221 Box Springs Blvd.	Riverside	CA	92507

0552-211-05-0000	1932 Via Estudillo	Palos Verdes Estates	CA	90274
0552-211-06-0000	22825 Calle San Juan De Los Lagos	Moreno Valley	CA	92553
0552-211-07-0000	100 Howe Avenue, Suite 100	Sacramento	CA	95825
0552-211-08-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-221-01-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-221-02-0000	26877 Journey Rd.	Valencia	CA	91355
0552-221-03-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0552-221-04-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-221-05-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0552-221-06-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0552-221-08-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0552-221-09-0000	26877 Journey Rd.	Valencia	CA	91355
0552-251-04-0000	HCR #1 Box 6	Ludlow	CA	92338
0552-251-05-0000	HCR #1 Box 6	Ludlow	CA	92338
0552-251-12-0000	HCR #1 Box 6	Ludlow	CA	92338
0552-251-13-0000	HCR #1 Box 6	Ludlow	CA	92338
0553-011-05-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0553-011-06-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0553-011-18-0000	6221 Box Springs Blvd.	Riverside	CA	92507
0553-011-19-0000	100 Howe Avenue, Suite 100	Sacramento	CA	95825
0553-021-01-0000	915 L Street	Sacramento	CA	95814
0553-021-02-0000	10814 Beachcomer Dr.	Stockton	CA	92509
0553-021-04-0000	1201 Bird Center Drive	Palm Springs	CA	92262
0553-021-10-0000	P.O. Box 1544	Joshua Tree	CA	92252
0553-031-01-0000	214 S. Grove Ave.	Ontario	CA	91761
0553-031-02-0000	50 S. Jones Blvd. #100	Las Vegas	NV	89107
0553-031-04-0000	1580 Laurel St. #C	San Carlos	CA	94070
0553-031-05-0000	385 N. Arrowhead Avenue	San Bernardino	CA	92415
0553-032-01-0000	385 N. Arrowhead Avenue	San Bernardino	CA	92415
0553-033-01-0000	385 N. Arrowhead Avenue	San Bernardino	CA	92415
0553-033-02-0000	385 N. Arrowhead Avenue	San Bernardino	CA	92415
0553-033-03-0000	P.O. Box 1653	Corona	CA	91718
0553-051-01-0000	P.O. Box 66689	Scotts Valley	CA	95067
0553-061-01-0000	915 L Street	Sacramento	CA	95814
0553-061-02-0000	P.O. Box 66689	Scotts Valley	CA	95067
0553-061-03-0000	3019 NW. Stewart Pkwy. #304-3	Roseburg	OR	97471
0553-061-13-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0553-061-18-0000	60124 29 Palms Highway	Joshua Tree	CA	92252
0553-071-01-0000	915 L Street	Sacramento	CA	95814
0553-071-03-0000	2229 Bacon St. #B	San Diego	CA	92107
0553-071-04-0000	P.O. Box 389	Victorville	CA	92393
0553-071-05-0000	1542 Duane St.	Los Angeles	CA	90026
0553-071-07-0000	724 W. 17th St.	San Pedro	CA	90731
0553-081-03-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0553-081-08-0000	P.O. Box 66689	Scotts Valley	CA	95067
0553-081-09-0000	10814 Beachcomer Dr.	Stockton	CA	95209
0553-081-10-0000	915 L Street	Sacramento	CA	95814
0553-081-11-0000	915 L Street	Sacramento	CA	95814
0553-081-12-0000	P.O. Box 66689	Scotts Valley	CA	95067
0553-081-13-0000	915 L Street	Sacramento	CA	95814
0553-081-14-0000	2701 Barstow Road	Barstow	CA	92311
0553-091-04-0000	2701 Barstow Road	Barstow	CA	92311

0553-091-05-0000	915 L Street	Sacramento	CA	95814
0553-131-05-0000	2701 Barstow Road	Barstow	CA	92311
0553-131-06-0000	2701 Barstow Road	Barstow	CA	92311
0553-131-11-0000	2701 Barstow Road	Barstow	CA	92311
0553-131-12-0000	915 L Street	Sacramento	CA	95814
0553-141-01-0000	915 L Street	Sacramento	CA	95814
0553-141-02-0000	915 L Street	Sacramento	CA	95814
0553-141-03-0000	915 L Street	Sacramento	CA	95814
0553-141-04-0000	2701 Barstow Road	Barstow	CA	92311
0553-141-05-0000	2701 Barstow Road	Barstow	CA	92311
0553-141-06-0000	2701 Barstow Road	Barstow	CA	92311
0553-151-02-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0553-151-03-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0553-151-04-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0553-151-12-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0553-151-14-0000	1201 Bird Center Driver	Palm Springs	CA	92262
0553-161-09-0000	2701 Barstow Road	Barstow	CA	92311
0553-161-12-0000	2701 Barstow Road	Barstow	CA	92311
0553-161-13-0000	915 L Street	Sacramento	CA	95814
0553-161-14-0000	915 L Street	Sacramento	CA	95814
0553-161-15-0000	915 L Street	Sacramento	CA	95814
0553-161-16-0000	915 L Street	Sacramento	CA	95814
0553-161-17-0000	915 L Street	Sacramento	CA	95814
0553-161-18-0000	2701 Barstow Road	Barstow	CA	92311
0553-161-19-0000	915 L Street	Sacramento	CA	95814
0553-161-20-0000	2701 Barstow Road	Barstow	CA	92311
0553-161-21-0000	2701 Barstow Road	Barstow	CA	92311
0553-161-22-0000	600 Central Ave. #316	Highland Park	IL	60035
0553-161-24-0000	600 Central Ave. #316	Highland Park	IL	60035
0553-161-26-0000	2701 Barstow Road	Barstow	CA	92311
0553-161-27-0000	2701 Barstow Road	Barstow	CA	92311
0553-161-28-0000	P.O. Box 1544	Joshua Tree	CA	92252
0553-161-31-0000	P.O. Box 1544	Joshua Tree	CA	92252
0553-161-36-0000	P.O. Box 1544	Joshua Tree	CA	92252
0562-151-02-0000	2701 Barstow Road	Barstow	CA	92311
0562-151-03-0000	2701 Barstow Road	Barstow	CA	92311
0562-151-05-0000	2701 Barstow Road	Barstow	CA	92311
0562-161-04-0000	2701 Barstow Road	Barstow	CA	92311
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0562-161-06-0000	2701 Barstow Road	Barstow	CA	92311
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0562-161-13-0000	2701 Barstow Road	Barstow	CA	92311
0562-161-14-0000	2701 Barstow Road	Barstow	CA	92311
0562-161-15-0000	333 Bush St. #500	San Francisco	CA	94104
0562-161-17-0000	1111 Jackson St. #700	Oakland	CA	94607
0562-161-18-0000	1111 Jackson St. #700	Oakland	CA	94607
0562-161-19-0000	1097 Caton Dr.	Virginia Beach	VA	23454
0562-161-20-0000	1097 Caton Dr.	Virginia Beach	VA	23454
0562-171-01-0000	2701 Barstow Road	Barstow	CA	92311
0562-181-03-0000	2701 Barstow Road	Barstow	CA	92311

0562-181-04-0000	2701 Barstow Road	Barstow	CA	92311
0562-181-11-0000	2701 Barstow Road	Barstow	CA	92311
0562-181-12-0000	2701 Barstow Road	Barstow	CA	92311
0562-181-14-0000	2701 Barstow Road	Barstow	CA	92311
0562-181-15-0000	2701 Barstow Road	Barstow	CA	92311
0562-191-19-0000	PO BOX 800	Rosemead	CA	91770
0562-191-20-0000	25153 Cedar Ridge Ct.	Wildomar	CA	92595
0562-211-04-0000	2701 Barstow Road	Barstow	CA	92311
0562-211-07-0000	2701 Barstow Road	Barstow	CA	92311
0562-211-09-0000	2701 Barstow Road	Barstow	CA	92311
0562-211-10-0000	2701 Barstow Road	Barstow	CA	92311
0562-211-15-0000	100 Howe Avenue, Suite 100	Sacramento	CA	95825
0562-211-16-0000	2701 Barstow Road	Barstow	CA	92311
0562-211-17-0000	2701 Barstow Road	Barstow	CA	92311
0562-211-18-0000	2701 Barstow Road	Barstow	CA	92311
0562-261-20-0000	2701 Barstow Road	Barstow	CA	92311
0562-261-21-0000	2701 Barstow Road	Barstow	CA	92311
0562-261-22-0000	2701 Barstow Road	Barstow	CA	92311
0563-171-01-0000	2701 Barstow Road	Barstow	CA	92311
0563-171-02-0000	2701 Barstow Road	Barstow	CA	92311
0563-171-03-0000	2701 Barstow Road	Barstow	CA	92311
0563-171-10-0000	2701 Barstow Road	Barstow	CA	92311
0563-171-11-0000	2701 Barstow Road	Barstow	CA	92311
0567-011-05-0000	2701 Barstow Road	Barstow	CA	92311
0567-011-06-0000	2701 Barstow Road	Barstow	CA	92311
0567-011-11-0000	2701 Barstow Road	Barstow	CA	92311
0567-011-12-0000	2701 Barstow Road	Barstow	CA	92311
0567-021-01-0000	2701 Barstow Road	Barstow	CA	92311
0567-021-02-0000	2701 Barstow Road	Barstow	CA	92311
0567-031-05-0000	2701 Barstow Road	Barstow	CA	92311
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0567-031-08-0000	2701 Barstow Road	Barstow	CA	92311
0567-031-09-0000	2701 Barstow Road	Barstow	CA	92311
0567-031-10-0000	2701 Barstow Road	Barstow	CA	92311
0567-031-14-0000	2701 Barstow Road	Barstow	CA	92311
0567-031-15-0000	2135 Butano Dr.	Sacramento	CA	95825
0567-031-16-0000	2701 Barstow Road	Barstow	CA	92311
0567-031-19-0000	PO BOX 800	Rosemead	CA	91770
0567-041-03-0000	21601 Partridge St.	Trabuco Canyon	CA	92679
0567-041-24-0000	1111 Jackson St. #700	Oakland	CA	94610
0567-041-25-0000	1111 Jackson St. #700	Oakland	CA	94610
0567-041-28-0000	333 Bush St. #500	San Francisco	CA	94104
0567-041-38-0000	1111 Jackson St. #700	Oakland	CA	94607
0567-041-39-0000	333 Bush St. #500	San Francisco	CA	94104
0569-051-01-0000	2701 Barstow Road	Barstow	CA	92311
0569-051-02-0000	2701 Barstow Road	Barstow	CA	92311
0569-051-18-0000	2701 Barstow Road	Barstow	CA	92311
0569-151-04-0000	2701 Barstow Road	Barstow	CA	92311
0569-151-05-0000	2701 Barstow Road	Barstow	CA	92311
0569-151-06-0000	2701 Barstow Road	Barstow	CA	92311
0569-151-10-0000	2701 Barstow Road	Barstow	CA	92311
0569-151-11-0000	2701 Barstow Road	Barstow	CA	92311

0569-151-12-0000	2701 Barstow Road	Barstow	CA	92311
0569-151-16-0000	2701 Barstow Road	Barstow	CA	92311
0569-151-17-0000	2701 Barstow Road	Barstow	CA	92311
0569-151-18-0000	2701 Barstow Road	Barstow	CA	92311
0569-161-20-0000	2701 Barstow Road	Barstow	CA	92311
0569-161-21-0000	32 Blue Lagoon	Laguna Beach	CA	92651
0569-171-02-0000	2701 Barstow Road	Barstow	CA	92311
0569-171-03-0000	2701 Barstow Road	Barstow	CA	92311
0569-171-13-0000	2701 Barstow Road	Barstow	CA	92311
0569-171-14-0000	2701 Barstow Road	Barstow	CA	92311
0569-171-15-0000	2701 Barstow Road	Barstow	CA	92311
0570-221-01-0000	2701 Barstow Road	Barstow	CA	92311
0570-221-05-0000	2701 Barstow Road	Barstow	CA	92311
0570-221-06-0000	244 Monte Vista Ave.	Costa Mesa	CA	92627
0570-221-07-0000	2701 Barstow Road	Barstow	CA	92311
0570-221-10-0000	28921 Sprucegrove Dr.	Rancho Palos Verdes	CA	90275
0570-221-11-0000	2701 Barstow Road	Barstow	CA	92311
0570-221-13-0000	2701 Barstow Road	Barstow	CA	92311
0570-221-20-0000	PO BOX 800	Rosemead	CA	91770
0570-221-22-0000	1111 Jackson St. #700	Oakland	CA	94607
0570-221-27-0000	P.O. Box 303	Bishop	CA	93515
0570-221-28-0000	P.O. Box 646	Sedro-Woolley	WA	98284
0570-221-29-0000	P.O. Box 1544	Joshua Tree	CA	92252
0570-221-30-0000	P.O. Box 1544	Joshua Tree	CA	92252
0570-221-31-0000	PO BOX 800	Rosemead	CA	91770
0570-221-34-0000	P.O. Box 1544	Joshua Tree	CA	92252
0570-221-36-0000	333 Bush St. #500	San Francisco	CA	94104
0570-221-41-0000	P.O. Box 326	Baker	CA	92309
0570-231-01-0000	2701 Barstow Road	Barstow	CA	92311
0570-241-07-0000	2701 Barstow Road	Barstow	CA	92311
0570-241-17-0000	2701 Barstow Road	Barstow	CA	92311
0570-241-18-0000	2701 Barstow Road	Barstow	CA	92311
0570-241-27-0000	2701 Barstow Road	Barstow	CA	92311
0570-241-28-0000	2701 Barstow Road	Barstow	CA	92311
0573-031-06-0000	2701 Barstow Road	Barstow	CA	92311
0573-031-07-0000	2701 Barstow Road	Barstow	CA	92311
0573-031-13-0000	2701 Barstow Road	Barstow	CA	92311
0573-031-14-0000	2701 Barstow Road	Barstow	CA	92311
0573-051-01-0000	2701 Barstow Road	Barstow	CA	92311
0573-051-02-0000	2701 Barstow Road	Barstow	CA	92311
0573-051-04-0000	2701 Barstow Road	Barstow	CA	92311
0573-051-05-0000	2701 Barstow Road	Barstow	CA	92311
0573-071-07-0000	2701 Barstow Road	Barstow	CA	92311
0573-071-08-0000	HCR #1 Box 364	Nipton	CA	92364
0573-071-13-0000	108107 Nipton Rd.	Nipton	CA	92365
0573-071-20-0000	4625 S. Polaris #112	Las Vegas	NV	89103
0573-291-17-0000	HCR #1 Box 364	Nipton	CA	92364
0573-291-19-0000	P.O. Box 19487	Jean	NV	89019
0573-291-20-0000	HCR #1 Box 347	Nipton	CA	92364
0573-291-32-0000	P.O. Box 823	Searchlight	NV	89046
0573-291-33-0000	HCR #1 Box 364	Nipton	CA	92364
214-00-001-006	P.O. Box 61350	Boulder City	NV	89006-1350

214-00-001-011	P.O. Box 61350	Boulder City	NV	89006-1350
214-00-001-021	P.O. Box 61350	Boulder City	NV	89006-1350
214-00-001-028	101 W. Broadway #1120	San Diego	CA	92101
214-00-001-037	P.O. Box 61350	Boulder City	NV	89006-1350
214-00-002-004	P.O. Box 61350	Boulder City	NV	89006-1350
214-00-002-005	P.O. Box 61350	Boulder City	NV	89006-1350
214-00-002-010	P.O. Box 61350	Boulder City	NV	89006-1350
214-00-002-015	P.O. Box 61350	Boulder City	NV	89006-1350
214-00-002-016	P.O. Box 61350	Boulder City	NV	89006-1350
226-00-001-003	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
226-00-001-008	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
226-00-001-009	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
226-00-001-014	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
226-00-001-015	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
226-00-002-002	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
226-00-002-008	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
226-00-002-013	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
226-00-002-014	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
234-00-001-005	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
234-00-001-006	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
234-00-001-007	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
234-00-001-018	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
234-00-002-001	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
234-00-002-012	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
235-00-002-007	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
235-00-002-017	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
235-00-002-018	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
240-25-000-002	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
240-36-000-001	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-02-000-001	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-10-000-001	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-11-000-001	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-15-000-001	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-16-000-001	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-20-000-001	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-20-000-002	P.O. Box 61	Searchlight	NV	89046-0061
241-20-000-003	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-21-000-001	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-29-000-001	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-29-000-002	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-29-000-003	P.O. Box 61	Searchlight	NV	89046-0061
241-30-000-001	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-30-000-002	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130
241-31-000-001	4701 N. Torrey Pines Dr.	Las Vegas	NV	89130