Final Environmental Impact Report SEPV Dixieland East and West Solar Farm Projects Imperial County, California SCH No. 2015051043



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Prepared for

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LIST OF ACRONYMS

Α	
AB	Assembly Bill
ABPP	Avian and Bat Protection Plan
AC	Alternating current
	Area of Critical Environmental Concern
	Advisory Council on Historia
ACHF	Dresonvetion
	Preservation
ACM	Asbestos-containing material
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AEP	Annual exceedance probability
AF	Acre-feet
AF/AC	Acre-feet per acre
AFY	Acre-feet per year
ALUCP	Airport Land Use Compatibility Plan
AP	Alguist-Priolo
AP Act	Alguist-Priolo Special Studies Zone Act
	Avian Powerline Interaction Committee
	Assessor's Derest Number
	Assessor's Parcer Number
AQAP	Air Quality Attainment Plan
AQMP	Air Quality Management Plan
ARB	Air Resources Board
AST	Aboveground storage tank
ASTM	American Society of Testing and
	Materials
AWSC	All-Way Stop Controlled
-	
В	
BGEPA	Bald and Golden Eagle Protection Act
bhp	brake horsepower
BLM	Bureau of Land Management
BMP	Best Management Practice
BMSL	Below mean sea level
BUOW	Burrowing owl
BTR	Biological Technical Report
BIIK	Biological Foormidal Report
С	
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAAQS	California Ambient Air Quality Standards
CAFÉ	Corporate Average Fuel Economy
Cal-OSHA	California Occupational Safety and
	California Agaidantal Balagga
GalARF	Drevention
0.1554	Prevention
CalEPA	California EPA
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers
	Association
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCCC	California Climate Change Center
CCR	California Code of Regulations
CDFA	California Department of Food and
	Agriculture
	Agriculture California Department of Fish and
050	vviidille California Enormi Commission
UEU	California Energy Commission

C (continu	ed)
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental
	Response, Compensation and
	Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
	Methane
	Congestion Management Agency
CIVIP	Colifernia Nativa American Triba
CNEL	Community Noise Equivalent Level
County	Imperial County
CO	Carbon dioxide
CO₂e	Carbon dioxide equivalent
CPUC	California Public Utilities Commission
CPV	concentrated photovoltaic
CRB	Colorado River Basin
CRHR	California Register of Historic
	Resources
CTR	California Toxics Rule
cu-ft	cubic feet
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
р	
	Decibel
dBA	A-weighted decibel
DBF	Design basis earthquake
DC	Direct current
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenylethylene
DDT	Dichlorodiphenyltrichloroethane
DEIR	Draft Environmental Impact Report
DESF	Dixieland East Solar Farm
DHS	Department of Health Services
DOC	Department of Conservation
DOE	Department of Energy
DOI	Department of Interior
DOGGR	Division of OII, Gas, and Geothermai
	Resources
	Dieser particulate matter
DIVLOI	Plan
DTSC	Department of Toxic Substance Control
DWSF	Dixieland West Solar Farm
-	
E	
EA	Environmental Assessment
EDP	Equitable Distribution Plan
EDR	Environmental Data Research
EHS	Environmental Health Services
	Environmental Impact Report
EIK/EA	Environmental Impact Report/
	Environmental Assessment

E (continue	d)
EMF	Electromagnetic field
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
EPCRA	Emergency Planning Community Right- to-Know Act
ESA	Environmental Site Assessment
ESA	Endangered Species Act
ESRL	Earth System Research Laboratory
F	
F	Fahrenheit
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FIRM	Flood Insurance Rate Maps
FIT	Feed-in Tariff
FMMP	Farmland Mapping and Monitoring Program
FSF	Ferrell Solar Farm
FSZ	Farmland Security Zone
FTA	Federal Transit Administration
G	
GCC	Global Climate Change
GHG	Greenhouse gas
GIS	Geographic information systems
GS Lyon	GS Lyon Consultants, Inc.
GWP	global warming potential
н	
HA	Hydrological Area
НСМ	Highway Capacity Manual
HCP	Habitat Conservation Plan
HFC	hydrofluorocarbon
HFE	Hydrofluorinated ethers
HSC	Health and Safety Code
HU	Hydrological Unit
HVAC	Heating, ventilation, and air-conditioning
Hz	Hertz
<u> </u>	Interateda
1	Interstate
	Audobon Important Bird Aroas
	Importal County Air Pollution Control
	District
ICEO	Imperial County Office of Education
	Imperial County Fire Department
ICFD/OES	Imperial County Fire Department and
	Office of Emergency Services
ICPDSD	Imperial County Planning and Development Services Department
IGR	Intergovernmental Review
IID	Imperial Irrigation District
in/sec	Inches per second
IOU	Investor-owned utility

I (continued	<i></i>
IPCC	Intergovernmental Panel on Climate
	Change
IRP	Integrated Resource Plan
	Initial Study
	Ins Solar Farm
150	Independent System Operator (Call.)
	Imperial Valley Association of
IVAG	Governments
IVC	Imperial Valley College
IVT	Imperial Valley Transit
IRWMP	Imperial Integrated Regional Water
	Management Plan
IWSP	Interim Water Supply Policy
K	
KOP	Key observation point
kV	Kilovolt
	l and capability classification
	Land capability classification
	Day-Night Average Sound Level
	Land evaluation
	Equivalent Sound Level
LESA	Land Evaluation and Site Assessment
LLG	Linscott, Law and Greenspan
L _{max}	Maximum noise level
LOS	Level of Service
LSF	Lyons Solar Farm
M	
MBTA	Migratory Bird Treaty Act
MBTA MCE	Migratory Bird Treaty Act Maximum creditable earthquake
MBTA MCE MCE _R	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered
M MBTA MCE MCE _R	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi Hazard Mitigation Blan
M MBTA MCE MCE _R MHMP	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan
M MBTA MCE MCE _R MHMP MLD MMT	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant
M MBTA MCE MCE _R MHMP MLD MMT	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Linderstanding
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW MW-h	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt megawatt hours
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW MW-h MWSC	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt megawatt hours Minor Street Stop Controlled
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW MW-h MWSC	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt megawatt hours Minor Street Stop Controlled
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW MW-h MWSC N	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt megawatt hours Minor Street Stop Controlled
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW MW-h MWSC N N ₂ N ₂	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt megawatt hours Minor Street Stop Controlled
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW MW-h MWSC N2 N2 N2 N2 N2 N2 N2 N2 N2 N2	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt megawatt hours Minor Street Stop Controlled
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW MW-h MWSC N N2 N2 N2 NA NA	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt megawatt hours Minor Street Stop Controlled Nitrogen Nitrous Oxide Not Applicable National Ambient Air Quality Standards
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW MW-h MWSC N N2 N2 N2 NA NAAQS NAHC	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt megawatt hours Minor Street Stop Controlled Nitrous Oxide Not Applicable National Ambient Air Quality Standards Native American Heritage Commission
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW MW-h MWSC N N2 N2 N2 NA NAAQS NAHC NCCP	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt megawatt hours Minor Street Stop Controlled Nitrogen Nitrous Oxide Not Applicable Native American Heritage Commission Natural Community Conservation Plan
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW MW-h MWSC N N2 N2 N2 N2 NA NAAQS NAHC NCCP NEHRP	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt megawatt hours Minor Street Stop Controlled Nitrogen Nitrous Oxide Not Applicable National Ambient Air Quality Standards Native American Heritage Commission Natural Community Conservation Plan National Earthquake Hazards Reduction
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW MW-h MWSC N N2 N2 N2 NA NAAQS NAHC NCCP NEHRP	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt megawatt hours Minor Street Stop Controlled Nitrogen Nitrous Oxide Not Applicable National Ambient Air Quality Standards Native American Heritage Commission Natural Community Conservation Plan National Earthquake Hazards Reduction Program
M MBTA MCE MCE _R MHMP MLD MMT MMTCO ₂ e MOU mph MS4 MSL MT MW MW-h MWSC N N2 N2 N2 NA NAAQS NAHC NCCP NEHRP NEHRPA	Migratory Bird Treaty Act Maximum creditable earthquake Risk-Targeted Maximum Considered Earthquake Multi-Hazard Mitigation Plan Most Likely Descendant Million metric tons Million metric tons of CO ₂ equivalent Memorandum of Understanding miles per hour Municipal Separate Storm Sewer System mean sea level Metric tons Megawatt megawatt hours Minor Street Stop Controlled Nitrogen Nitrous Oxide Not Applicable National Ambient Air Quality Standards Native American Heritage Commission Natural Community Conservation Plan National Earthquake Hazards Reduction Program National Earthquake Hazards Reduction

N (continue	d)
NF ₃	Nitrogen trifluoride
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NIMS	National Incident Management System
NMES	National Marine Fisheries Service
	Nitrie ovido
NO.	Nitrogon dioxido
	National Oceania and Atmospheric
NOAA	National Oceanic and Atmospheric
NO	Administration
NOI	Notice of Intent
NOP	Notice of Preparation
NO _x	Nitrogen Oxide
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation
NPDES	National Pollutant Discharge Elimination
NRHP	System National Register of Historic Places
-	National Register of Historic Flaces
0	
O ₂	Oxygen
O ₃	Ozone
O&M	Operations and Maintenance
OA	Operational Area
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OHW	Ordinary high water
OHWM	Ordinary high water mark
	Covernor's Office of Planning and
OFIC	Bosoarob
	Research Safety and Health
USHA	Administration
P	
Pb	Lead
PCBs	Polychlorinated biphenyls
PCE	Passenger Car Equivalent
PFC	perfluorocarbon
PGA	Peak ground
PGAM	Maximum Considered Earthquake
- 101	Geometric Mean peak ground
	acceleration
PI	Principal Investigator
DMa -	Particulate Matter Less Than 2.5
F IVI2.5	Micropa in Diamator
	Nicions III Diameter
PIVI ₁₀	in Diameter
POE	Point of entry
POU	Publicly owned utility
PPΔ	Power Purchase Agreement
nnh	Parte ner hillion
ppm PPD	Parts per million
ррп	rans per minion Deak partiale valasity
	Public Deserves On t
PRC	Public Resources Code
PIR	Preterred Transmission Route
PUC	Public Utilities Commission
D\/	Photovoltaic
I V	

Q	
Q=CiA	Rational Method
QSA	Quantification Settlement Agreement
R	
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery
	Act
RE	Renewable Energy
REC	Renewable-Energy Credits
RECUP	Renewable Energy Conditional Use Permit
ROW	Right-of-way
RPS	Renewable Portfolio Standard
RPW	Relatively permanent water
RSF	Rockwood Solar Farm
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/
	Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
S	
SA	Site assessment
SARA	Superfund Amendments and
	Reauthorization Act
SCAG	Southern California Association of
	Governments
SCAQMD	South Coast Air Quality Management
0011	District
SCH	State Clearinghouse
5010	South Coastal Momation Center
303 8001E	Sustainable Communities Strategy
SDGAE	Supply/domand imbalance
SDSU	Sap Diego State University
SE.	Sulfur beyafluoride
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SO ₂	Sulfur Dioxide
SPA	Specific Plan Area
SPCC	Spill Prevention, Control, and
	Countermeasures
sa-ft	square feet
SR	State Route
SSAB	Salton Sea Air Basin
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
-	
	Toxio gir contominant
	Toppos of carbon diavide assistation
TIS	Traffic Impact Study
	Total maximum daily load
	Traditional paviable water
	Tauliunal navigable Waler
100	rotal suspended sollas
U	
UBC	Uniform Building Code
USACE	United States Army Corps of Engineers

U (continued		V		
USC	United States Code	V/C	Volume to Capacity Ratio	
USDA	United States Department of Agriculture			
USEPA	United States Environmental Protection	W		
	Agency	WSA	Water Supply Assessment	
USFWS	United States Fish and Wildlife Service			
USGS	United States Geological Survey	0	dearees	
UST	Underground storage tank	ua/m ³	microgram per cubic meter	
U.S. EPA	United States Environmental Protection	μg/m 3-D	Three-dimensional	
	Agency	5-0	Thee-dimensional	

I.1 INTRODUCTION AND SUMMARY

This Final Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) as amended (Public Resources Code Section 21000 et seq.), CEQA Guidelines (California Administrative Code Section 15000 et seq.), and the County of Imperial CEQA procedures.

According to CEQA Guidelines §15132, the Final Environmental Impact Report (EIR) shall consist of the following:

- a) The Draft EIR or a revision of the Draft;
- b) Comments and recommendations received on the Draft EIR, either verbatim or in summary;
- c) A list of persons, organizations, and public agencies commenting on the Draft EIR;
- d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process; and
- e) Any other information added by the Lead Agency.

In accordance with these requirements, the Final SEPV Dixieland East and West Solar Farm Projects EIR is comprised of the following:

- Draft Environmental Impact Report, SEPV Dixieland East and West Solar Farm Projects (September 2015) (SCH No. 2015051043); and
- This Final EIR document, dated December 2015, that incorporates the information required by §15132.

Format of the Final EIR

This document is organized as follows:

Section I.1 Introduction

This section describes CEQA requirements and content of this Final EIR.

Section II.1 Corrections and Additions

This section provides a list of those revisions made to the Draft EIR text as a result of comments received and/or clarifications subsequent to release of the Draft EIR for public review. The Draft EIR, as revised is included as part of the Final EIR.

Section III Responses to Comment Letters Received on the Draft EIR

This section provides copies of the comment letters received and individual responses to written comments. In accordance with Public Resources Code 21092.5, copies of the written proposed responses to public agencies will be forwarded to the agencies at least 10 days prior to certifying the EIR. The responses conform to CEQA Guideline 15088, providing "... good faith, reasoned analysis in response."

Section IV Mitigation Monitoring and Reporting Program

This section includes the Mitigation Monitoring and Reporting Program (MMRP) which identifies the mitigation measures, timing and responsibility for implementation of the measures.



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II.1 CORRECTIONS AND ADDITIONS

The following Sections II.1.1 and II.1.2 contain revisions to information included in the Draft EIR (September 2015) based upon: (1) additional or revised information required to prepare a response to a specific comment; (2) updated information required due to the passage of time; and/or (3) typographical errors. Given the minor changes associated with the document, the information added to the EIR does not meet the requirements for recirculation pursuant to Section 150885.5 of the State CEQA Guidelines.

II.1.1 REVISED AND SUPPLEMENTAL TEXT

Changes to the Draft EIR were made in response to comments received on the Draft EIR. Overall, the new information clarifies information and analysis presented in the Draft EIR, or revises mitigation measures in response to comments on the Draft EIR.

The table below identifies the changed EIR sections as presented in this Final EIR.

Final EIR Section	Description of Revisions			
Table of Contents	Updated to reflect Final EIR format			
ES. Executive Summary	Changed format of headings to reflect Final EIR format			
	• Revised Mitigation Measure AQ-4 into two separate mitigation measures (Mitigation Measure AQ-4 and AQ-5) in response to ICAPCD comment			
	 Revised Mitigation Measure AG-1 to reflect the most current Pest Management Requirements (dated September 11, 2015) 			
	 Revised Table 0.1-2 to revise the level of significance from "mitigated to below a level less than significant" to "less than significant" for Greenhouse Gas Emissions and Noise 			
1.0 Introduction	 Updated subsection 1.4.5 to reflect Final EIR organization 			
	 Removed the Lot Line Merger approval from the list of required project approvals 			
3.0 Project Description	Minor typographical and formatting edits			
	 Revised subsection 3.1.1 to indicate that the Renewable Energy and Transmission Element was approved in October 2015 			
	 Added two paragraphs under subsection 3.4 to add more specificity to the construction schedule and construction workforce 			
	 Removed the Lot Line Merger approval from the list of required project approvals 			
4.1 Aesthetics and Visual Resources	 In response to the Caltrans comment, included additional text on page 4.1-19 in order to clarify that the visual aspects of the proposed projects would not result in significant glint and glare impacts to motorists driving on I-8 			
4.2 Agricultural Resources	 Revised Mitigation Measure AG-1 to reflect the most current Pest Management Requirements (dated September 11, 2015) 			
4.3 Air Quality	Updated date of revised Air Quality/Greenhouse Gas Report			
	 Updated page 4.3-6 to include additional text indicating that the proposed projects are within the nonattainment boundaries for PM_{2.5} 			
	• Revised Mitigation Measure AQ-4 into two separate mitigation measures (Mitigation Measure AQ-4 and AQ-5) in response to ICAPCD comment			
	 Edited the second paragraph on page 4.3-11 to revise the construction start schedule from mid-2016 to early-2016 			
4.4 Biological Resources	Minor typographical and formatting edits			
4.7 Greenhouse Gas Emissions	Updated date of revised Air Quality/Greenhouse Gas Report			



Final EIR Section	Description of Revisions
4.10 Land Use	Updated pages 4.10-3 and 4.10-12 to indicate that the Renewable Energy and Transmission Element was approved in October 2015
	Updated Table 4.10-1 to delete policies under the Geothermal/Alternative Energy and Transmission General Plan Element
4.13 Transportation/Traffic	Updated date of revised Traffic Assessment
	Revised Table 4.13-1 to identify the correct number of project trips
	 Updated page 4.13-3 to include Brown Road as part of the existing circulation network
5.0 Analysis of Long-Term Effects	 Added text to page 5-1 to add more specificity to the maximum number of construction employees
6.0 Cumulative Impacts	 Updated page 6-2 to indicate that the Renewable Energy and Transmission Element was approved in October 2015
	Updated page 6-6 to include additional text indicating that the proposed projects are within the nonattainment boundaries for PM _{2.5}
	Minor typographical and formatting edits
8.0 Alternatives	Revised page 8-3 to indicate that the proposed projects would not result in significant air quality impacts
	Revised page 8-5 to indicate that the proposed projects would not result in significant noise impacts to sensitive receptors
	Revised page 8-7 to indicate that the proposed projects would not result in significant noise impacts to sensitive receptors
	 Revised Table 8-1 to revise the level of significance from "mitigated to below a level less than significant" to "less than significant" for Greenhouse Gas Emissions and Noise
10.0 EIR Preparers and Persons and Organizations Contacted	Updated the list of persons and organizations contacted to include the Imperial County Agricultural Commissioner's Office and Imperial Irrigation District

II.1.2 REVISED MITIGATION MEASURES

The following Mitigation Measures have been revised as part of preparation of the Final EIR:

Mitigation Measure AG-1 has been revised as follows:

- AG-1 Prior to the issuance of a grading permit or building permit (whichever occurs first), a Weed and Pest Control Management Plan shall be developed by the project applicant and approved by the County of Imperial Agricultural Commissioner. The plan shall provide the following:
 - 1. Monitoring, preventative, and management strategies for weed and pest control <u>management</u> during construction activities at any portion of the project (e.g., transmission line);
 - 2. Control and management of weeds and pests in areas temporarily disturbed during construction where native seed will aid in site revegetation as follows;
 - Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner's office that a pest problem is present on the project site. <u>The assistance of a licensed pest control advisor is</u> recommended;



- All treatments must be performed by a qualified applicator or a licensed pest control operator business;
- "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation. Effective control methods may include physical/mechanical removal, bio control, cultural control, or chemical treatments;
- <u>Use of "permanent" soil sterilants to control weeds or other pests is</u> prohibited due to the fact that this would interfere with reclamation.
- Notify the Agricultural Commissioner's office immediately regarding any suspected exotic/invasive pest species such as A and Q rated pest species as defined by the California Department of Food and Agriculture (CDFA) and the United States Department of Agriculture (USDA). Request a sample be taken by the Agricultural Commissioner's office of a suspected invasive species. Eradication of exotic pests shall be done under the direction of the Agricultural Commissioner's Office and/or CDFA;
- Obey all pesticide use laws, regulations, and permit conditions;
- <u>Allow access</u> Access shall be allowed by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties;
- <u>Ensure that</u> all project employees that handle pest control issues shall be are appropriately trained and certified, that and all required records are shall be maintained and made available for inspection, and that all required permits and other required legal documents are current;
- <u>Maintain</u> records of pests found and <u>treatments or pest management</u> <u>methods used</u>. controlled shall be maintained and available for review, or submitted to the Agricultural Commissioner's office on a quarterly basis <u>Records shall include the date, location/block, project name (current and</u> <u>previous if changed), and methods used. For pesticides include the</u> <u>chemical(s) used, EPA Registration numbers, application rates, etc. A</u> <u>pesticide use report may be used for this;</u>
- Submit a report on pest finds and treatments or other pest management methods to the Agricultural Commissioner quarterly within 15 days after the end of the previous quarter, and upon request. The report may consist of a copy of all records for the previous quarter, or may be a summary letter/report as long as the original detailed records are available upon request.
- 3. A long-term strategy for weed and pest control and management during the operation of the proposed project. Such strategies may include, but are not limited to:
 - a. Use of specific types of herbicides and pesticides on a scheduled basis.
- 4. <u>Maintain a Pest Management Plan until reclamation is complete. Maintenance and management of project site conditions to reduce the potential for a significant increase in pest-related nuisance conditions on adjacent agricultural lands.</u>
- 5. <u>Develop and implement a Pest Management Plan that will reduce negative impacts</u> to surrounding (not necessarily adjacent) farmland.
- 6. <u>The project shall reimburse the Agricultural Commissioner's office for the actual cost</u> of investigations, inspections, or other required non-routine responses to the site that are not funded by other sources.



Mitigation Measure AQ-4 has been revised as follows:

AQ-4 Dust Suppression Management Plan. Prior to any earthmoving activity, the applicant shall submit and obtain approval from the ICAPCD and Imperial County Planning and Development Services Department (ICPDSD) a construction Dust Control Plan. Prior to the issuance of a Certificate of Occupancy, the applicant shall submit and obtain approval from the ICAPCD and ICAPDSD an Operations Dust Control Plan.

ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits are submitted for the proposed projects, the ICAPCD shall review the project to determine if Rule 310 fees are applicable to the proposed projects.

AQ-5 Operational Dust Control Plan. Prior to the issuance of a Certificate of Occupancy, the applicant shall submit and obtain approval from the ICAPCD and ICAPDSD an Operations Dust Control Plan.

ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits are submitted for the proposed projects, the ICAPCD shall review the project to determine if Rule 310 fees are applicable to the proposed projects.



III.1 RESPONSE TO COMMENTS

III.1.1 PROJECT OVERVIEW

This section contains responses to all comment letters received on the September 2015 Draft Environmental Impact Report (DEIR). Seven letters were received during the comment period, which closed November 11, 2015. A copy of each letter with bracketed comment numbers on the right margin is followed by the response for each comment as indexed in the letter. The comment letters are listed in Table III.1-1.

Letter No.	Commenter	Date
1	Imperial County Department of Public Works	10/8/15
2	Imperial County Department of Public Works	10/21/15
3	California Department of Transportation (Caltrans)	10/12/15
4	Imperial Irrigation District	11/4/15
5	State Clearinghouse	11/5/15
6	Imperial County Air Pollution Control District	11/10/15
7	Imperial County Agricultural Commissioner	11/15/15

TABLE III.1-1. DRAFT EIR COMMENT LETTERS SEPV DIXIELAND EAST AND WEST SOLAR FARM PROJECTS

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LETTER 1



THE FOLLOWING COMMENTS SHALL BE CONDITIONS OF APPROVAL UNDER THE CUP APPROVAL PROCESS:

- 5. Brown Road and Carriso Road are classified as Local Roads, requiring sixty (60) feet of right of way, being thirty (30) feet from existing centerline. It is requested that sufficient right-of-way be provided to meet this road classification. (As directed by Imperial County Board of Supervisors per Minute Order #6 dated 11/22/1994 per the Imperial County Circulation Element Plan of the General Plan).
- 6. The applicant shall furnish a Drainage and Grading Plan/Study to provide for property grading and drainage control, which shall also include prevention of sedimentation of damage to off-site properties. The Study/Plan shall be submitted to the Department of Public Works for review and approval. The applicant shall implement the approved plan. Employment of the appropriate Best Management Practices (BMP's) shall be included. (Per Imperial County Code of Ordinances, Chapter 12.10.020 B).
- 7. An encroachment permit shall be secured from the Department of Public Works for any and all new, altered or unauthorized existing driveway(s) to access the properties through surrounding County roads. As a minimum a Commercial type Driveway shall be constructed at project's main entrances. (Per Imperial County Code of Ordinances, Chapter 12.10.020 B).
- 8. The applicant for Encroachment Permits in County Roads and Right of Way is responsible for researching, protecting, and preserving survey monuments per the Professional Land Surveyor's Act (8771 (b)). This shall include a copy of the referenced survey map and tie cards(s) (if applicable) for all monuments that may be impacted.
- 9. The applicant for grading plans and/or improvement plans is responsible for researching, protecting and preserving survey monuments per the Professional Land Surveyor's Act (8771 (b)). This shall include a copy of the referenced survey map and tie card(s) (if applicable) for all monuments that may be impacted by the project whether it be on-site of off-site.
- 10. As-Built Plans shall be required prior to ICPWD signing the final Certificate of Occupancy letter.
- 11. Prior to construction a routing plan shall be provided which indicates the ingress and egress from the project site. The routing plan shall make a distinction between paved and unpaved roads which will be used to access the site. In the event public unpaved roads are utilized the applicant shall provide improvements to said unpaved roads to mitigate PM10 Impacts. Improvements shall be in accordance with the Air Pollution Control Districts rules governing unpaved roadways and ICPWD design standards.
- 12. Ingress and egress over Imperial Irrigation District (IID) canal and drainage facilities may require additional structural improvement depending upon the applicant's loading requirements. In the event the IID requires additional structural improvements over their facilities, the applicant shall provide securities to the County of Imperial to ensure compliance with IID's standards.
- 13. The Applicant shall enter into a Roadway Maintenance Agreement with the County of Imperial prior to issuance of a grading permit. The Applicant shall pay its proportionate

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share of the responsibility to maintain the proposed haul routes during construction and if necessary bring the roadways up to an appropriate minimum standard to handle the anticipated project traffic.

At a minimum the Applicant shall perform roadway preparation work and construct pavement improvements as specified prior to the use of a haul route that involves each of the roads identified below:

- Brown Road.
- Evan Hewes Hwy

In addition, the Applicant shall be responsible for roadway preparation work, pavement construction and repairs to County-maintained roads including County-maintained bridges and other roadway appurtenances for any other route that is subsequently used .This may include, but not be limited to, bridges, signs, striping, drainage improvements and roadway shoulders. Consideration shall also be given to improvements to other infrastructure, such as Imperial Irrigation District canal and drain crossings.

- 14. Applicant shall provide improvement securities for roadway improvements along Brown Road and Evan Hewes Hwy prior to issuance of Building Permits and/or Encroachment Permits.
- 15. Easements shall be required or provided for any non public utility crossing County Public Road; all easements shall be in place prior to Final Certificate of Occupancy
- 16. All permanent structures, including above ground piping abutting public roads shall be located outside the ultimate right of way. Additionally, locations of instruments and appurtenances cannot pose a traffic study hazard.
- 17. At time of development, if required, by Section 8762(b) of the Professional Land Surveyors Act, a record of survey shall be filed with the County Recorder of Imperial County.

INFORMATIVE:

The following items are for informational purposes only. The applicant is responsible to determine if the enclosed items affect the subject project.

- All solid and hazardous waste shall be disposed of in an approved solid waste disposal site in accordance with existing County, State and Federal regulations. (Per Imperial County Code of Ordinances, Chapter 8.72).
- All on-site traffic area shall be hard surfaced to provide all weather access for fire protection vehicles. Fire/OES Standards as well as those of the Air Pollution Control District (APCD). (Per Imperial County Code of Ordinances, Chapter 12.10.020 A).

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Cont.

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- The project will require a National Pollutant Discharge Elimination System (NPDES) permit and Notice of Intent (NOI) from the Regional Water Quality Control Board (RWQCB) prior to County approval of onsite grading plan. (40 CFR 122.28).
- Public Works requests that the project proponent be aware of all survey land control monument, property and right of way monuments, general land office (GLO) corners, vertical control monuments and horizontal control monuments in the area of construction. If the monuments are in or near the proposed area of construction and may be destroyed, damaged, covered or in any way disturbed; they shall provide a Record of survey and/or corner record card prior to and again after construction and reconstruct said monument with a durable monument in the exact location as prior to construction. Preservation and perpetuation of these monuments is per Professional Land Surveyor Act, Article 5, and Section 8771. Imperial County Public Works Survey office should be visited for research in locating data for the above mentioned monuments.
- The Imperial Irrigation District (IID) should be contacted for acceptance of storm runoff drainage. The IID does not automatically accept storm runoff once the land use is change.

Should you have any questions, please do not hesitate to contact this office. Thank you for the opportunity to review and comment on this project.

Respectfully,

William S. Brunet, PE Director of Public Works

Manuel Ortiz Assistant County Engineer

OB/ga

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Letter 1 Imperial County Department of Public Works October 8, 2015

Response to Letter 1-1

Table 1–Project Traffic Generation of the Traffic Assessment (dated October 19, 2015) and Table 4.13-1– Project have been updated to revise the correct NET Project Trips from 148 daily trips to 170 daily trips. The table has been revised as follows:

		AM Peak Hour		PM Peak Hour			
Land Use	Daily	Total	In	Out	Total	In	Out
Employee Trips*	68	34	34	0	34	0	34
Truck Trips (PCEs)	88	11	6	5	11	5	6
Ancillary Trips	14	2	1	1	2	1	1
NET Project Trips (PCEs)	<u>170</u> 148	47	41	6	47	6	41

While the total NET Project Trips depicted in these tables has been corrected, it should be noted that this correction does not change the AM and PM Peak Hour volumes, which are the basis of the impact analysis on affected roadways. Therefore, this correction does not change the conclusions of the EIR.

Response to Letter 1-2

The following paragraph has been added to Section 5 – Roadway Capacity Analysis of the Traffic Assessment (dated October 19, 2015) and page 4.13-3 of the EIR:

Brown Road is a two-lane north-south roadway that has a southern terminus at West Evan Hewes Highway to the south and Centinela State Prison to the north. Brown Road bisects the SEPV Dixieland East Project Site, which is proposing two (2) primary access driveways and two (2) secondary access driveways along Brown Road. The Brown Road/West Evan Hewes Highway intersection is controlled by stop signs on the intersection approaches. Brown Road is classified as a local roadway.

The traffic analysis indicates that the construction and operation of the proposed project would not result in a significant traffic impact, primarily due to the remote location of the project sites and the relative, very low traffic volumes. Similarly, Brown Road would not be significantly impacted as this road would only carry construction trips associated with the SEPV Dixieland East Project, the volume of which will be well below the capacity of this roadway.

Response to Letter 1-3

As a condition of approval of each of the project's Conditional Use Permits, the developer will prepare a Construction Traffic Route Plan to be maintained and enforced during the construction phase. The construction traffic route identified on the plan will reflect the traffic route assumed for the Traffic Assessment.

Response to Letter 1-4

The following sentence has been added to the Traffic Assessment (dated October 19, 2015):

Access to Evan Hewes Highway from the SEPV Dixieland East Project would be provided by Brown Road.

Please also refer to response to comment 1-2 above.



Response to Letter 1-5

Comment noted. The measures identified by ICDPW in this comment will be incorporated into the CUP conditions of approval.

Response to Letter 1-6

This comment is acknowledged. All solid and hazardous waste will be disposed of in an approved solid waste disposal site in accordance with existing County, State, and Federal regulations.

Response to Letter 1-7

This comment is acknowledged. All on-site fire access areas will be constructed of materials in accordance with County requirements.

Response to Letter 1-8

This comment is acknowledged. EIR Section 4.9 Hydrology/Water Quality identifies that an NPDES permit and NOI will be required prior to grading (see EIR page 4.9-15, Mitigation Measure HWQ-1).

Response to Letter 1-9

This comment is acknowledged. The comment does not address the adequacy of the EIR; therefore, no additional response is necessary.

Response to Letter 1-10

This comment is acknowledged. The applicant has been, and will continue to coordinate with the IID regarding all aspects of the project that potentially affect IID facilities and easements.

LETTER 2





Attachment A

PUBLIC SERVICE EASEMENT PETITION FOR ABANDONMENT OF COUNTY HIGHNAN

TO THE HONORABLE BOARD OF SUPERVISORS, COUNTY OF IMPERIAL, STATE OF CALIFORNIA:

The undersigned respectfully represents and petitions as follows:

That each and all of them are free-holders in the County of Imperial, State of California; that at least two of them, to-wit:

Address: 2630 LENKO Name: BANGU \$2243

Address: Nam 601 - 023

are residents of Road District No. 1, being the road district in which said County Highway is situated and are taxable therein for hot way purposes in which the property asked to be abandoned as hereinafter described is situated:

A strip of land 20 feet wide and 600 feet long bounded on the north by a single parcel (APN 051-035-001), bounded on the south by a single parcel (APN 051-035-002), bounded on the west by Broadway Avenue and bounded on the east by Brown Road.

The reason for the abandonment of said County Highwayyis as follows:

This particular 20 foot wide alleyway serves no current or anticipated future use and bisects two parcels of land proposed for lot merger and development. The continued existence of this alleyway for public use will render the proposed development infeasible.

That in accordance with and pursuant to Section 8320 et. seq. of the Streets and Highways Code, of the State of California, the undersigned, as petitioners, do hereby petition your Honorable body that the County Highway now located over the real property herein above described, be vacated, discontinued, abandoned, and abolished,

WHEREFORE, the undersigned petitioners pray that your Honorable body fix a day for the hearing of the foregoing petition and give notice to all free-holders in Road District No. 1 in the County of Imperial, said District being the road district in which the property asked to be abandoned is located, of a time and place fixed for the hearing, all as provided by law; that on the hearing of this petition, your Honorable body grant said petition and vacate said County Algorithm way as herein before requested.

**Public Service Easement



1. Road District: 5 Date Signed: 9/2/17 Signature: Name: TAKILYNN COBB Address: 2129 Bell Rd. Holtville CA 92250 APN: 045-061-004 acquetine Vaughan Ilallo 2. Road District: 1 Date Signed: 4/4/15 Signature: Name: Jacqueline Vanahan Address: 102 Dahlia Lase, Imperial, CA. 9225) APN: 064 - 032 - 002 3. Road District: / Date Signed: 1/4/45 Signature: // Name: MACILYN MOOR 97243 Address: 13-91 W. KOSS APN: 053-561-025-00 4. Road District: 1 Date Signed: 9. 10. 15 Signature: William Auntor Vale Name: William NewTon Robinson Address: 1860 61 commo CA 91243 SBEE APN: Willion Newton Koth 052 - 470 - 018 5. Road District: 3 Date Signed: 91015 Signature: Name: Janie Robbin S Address: 2459 O'have, Imperial, CA 064-312-039 APN: 6. Road District: 1 Date Signed. 9-1+15 Signature: Name: DOSTE SINK Address: 2470 W. BRighton Ave - ElCentro. APN: 052-785-003 10 1 1 1 mm

7. Road District: 1 Date Signed: 11/15 Signature: aug Salkot SARAH TALBOT FAMILY TRUST Name: SARAH TALBOT Address: 2751 SANDALWOOD DR. ELCENTRO APN: 052 - 742 -008 8. Road District: 1 Date Signed: 9/11/15 Signature: Chan Name: & Janer meps GARG in I CENTRO CA. Address: 2299 P. 0 BOX 3305 APN: 2900 Len RAY Cat EICENTRO CA 92243 052-731-064 9. Road District: 1 Date Signed Alil 5 Signature: Alenia Name: NORMA A, ORAZ Address: 551 SANda Wood Dr., EC CENTRO, CA. APN: 053-463-005 10.Road District: 4 Date Signed 9-11-18 Signature: odki Name: Ko beh Cer 92227 Address: 958 Jennet 048 - 373 - 011 APN: 11.Road District: ____ Date Signed: _____ Signature: _ Name: Address: APN: 12.Road District: ____ Date Signed: _____ Signature: ____ Name: Address: APN:

HRS 8-0-11

Hart Carlos and

AFFIDAVIT

I, $\underline{Concrete N} = \underline{B}_{exc} \underline{G}_{exc}$, solemnly swear (or affirm) that I have circulated the above petition to secure signatures to abandon the County Highway described therein; that all the signatures on this petition were made in my presence, and that, to the best of my knowledge and belief, each signature is the genuine signature of the person whose name it purports to be.

Becher Comenso Name:

Subscribed and sworn to before me,

this 15 day of September , 2015.





CALIFORNIA ALL-PURPOSE ACKNOWLEDG	MENT CIVIL CODE § 1189
A notary public or other officer completing this certificat document to which this certificate is attached, and not the	ate verifies only the identity of the individual who signed the ne truthfulness, accuracy, or validity of that document.
State of California)	
County of Imperial)	
on Sept 2, 2015 before me. B.C	Slesh notary Dublic
Date	Here Insert Name and Title of the Officer
personally appeared Michael Bailey	shasan
personally appeared T mentice rectified of	Name(s) of Signer(s)
subscribed to the within instrument and acknow his/her/their authorized capacity(iee), and that by hi or the entity upon behalf of which the person(s) ac	ledged to me that he/she/they executed the same in is/her/their signature(s) on the instrument the person(s), ted, executed the instrument.
	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
Contractor and a second s	WITNESS my hand and official seal.
8. OLESH Commission # 2024225 Notary Public - California Imperial County My Comm. Expires May 11, 2017	Signature D. Q. Q. Signature of Notary Public
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Individual Individual Attorney in Fact	Individual Attorney in Fact
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who proved to me on the basis of satisfactor subscribed to the within instrument and acknow his/her/their authorized capacity(ies), and that by or the entity upon behalf of which the person(s) a	y evidence to be the person(s) whose name(s) is/a wledged to me that he/she/they executed the same his/her/their signature(s) on the instrument the person(acted, executed the instrument.
	I certify under PENALTY OF PERJURY under the law of the State of California that the foregoing paragray is true and correct.
B. OLESH	WITNESS my hand and official seal.
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A notary public or other officer completing this c document to which this certificate is attached, and	ertificate verifies only the identity of the individual who signed the i not the truthfulness, accuracy, or validity of that document.
State of California County of Imperial On Sept. 15 2015 before me, Date personally appeared	Here Insert Name and Title of the Officer Name(s) of Signer(s)
who proved to me on the basis of satisfa subscribed to the within instrument and aci his/her/their authorized capacity(ies), and that or the entity upon behalf of which the persor	ctory evidence to be the person(s) whose name(s) is/are knowledged to me that he/she/they executed the same in t by his/her/their signature(s) on the instrument the person(s), n(s) acted, executed the instrument.
	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal.
EVANGELINA SILVA Commission # 2099870 Notary Public - California Imperial County	Signature Signature of Notary Public

Place Notary Seal Above

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Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

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Individual	Attorney in Fact	Individual	Attorney in Fact	
Trustee	Guardian or Conservator	□ Trustee	Guardian or Conservator	
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PETITION FOR ABANDONMENT OF COUNTY HIGHWAY

TO THE HONORABLE BOARD OF SUPERVISORS, COUNTY OF IMPERIAL, STATE OF CALIFORNIA:

The undersigned respectfully represents and petitions as follows:

That each and all of them are free-holders in the County of Imperial, State of California; that at least two of them, to-wit:

LEARST ANDAY, ET CANTRO, CA 92243 741-028-000 Name: Ban Address: 2630

LENALY AVENA El CENTRO CA 92243 Address: 24/1 Name 601-023-000

are residents of Road District No. 1, being the road district in which said County Highways are situated and are taxable therein for highway purposes in which the properties asked to be abandoned as hereinafter described are situated:

A strip of land 20 feet wide south of a single parcel (APN 051-035-002) bounded on the west by Broadway Avenue and bounded on the east by Brown Road,

A strip of land 20 feet wide south of two parcels (APN 051-047-001 and APN 051-047-002) bounded on the west by Brown Road and bounded on the east by Canal Street, and,

A strip of land 40 feet wide west of two parcels (APN 051-035-001 and APN 051-035-002) bounded on the north by Del Norte Avenue and bounded on the south by Cocupa Avenue.

The reason for the abandonment of said County Highways is as follows:

The existing unmaintained County roadways known as Broadway Avenue, Cocupa Avenue and Potrero Avenue are 100 feet wide, 80 feet wide, and 80 feet wide respectively and the minimum County road standard width for such roadways is 60 feet. The development proposed for the parcels adjacent to these roadways can benefit from the strips of land to be abandoned and the remaining 60 foot wide roadways (Cocupa Avenue, Potrero Avenue, and Broadway Avenue) are sufficient for all existing and anticipated land uses.

That in accordance with and pursuant to Section 8320 et. seq. of the Streets and Highways Code, of the State of California, the undersigned, as petitioners, do hereby petition your Honorable body that the County Highways now located over
the real properties herein above described, be vacated, discontinued, abandoned, and abolished, WHEREFORE, the undersigned petitioners pray that your Honorable body fix a day for the hearing of the foregoing petition and give notice to all free-holders in Road District No. 1 in the County of Imperial, said District being the road district in which the properties asked to be abandoned is located, of a time and place fixed for the hearing, all as provided by law; that on the hearing of this petition, your Honorable body grant said petition and vacate said County Highways as herein before requested. 1. Road District: 5 Date Signed: 9/2/15 Signature: Name: TANILYNN LOBB Address: 2/29 Bell Rd. HOLTVILLE 045-061 -00 APN: n Inhallo Date Signed: 9 4 15 Signature 2. Road District: Dacqueline Vaula Name: CA .9225 , Imperial Address: 102 064-002 032-APN: 3. Road District: / Date Signed: 9/4/, Signature: Name: MAKILYN Moi Centro (A G3243 Address: 1291 APN: 052-561-02. -000 4. Road District: 1 Date Signed: 9.10 IT Signature: 4 Name: WILLIAM NEWTON Robinso 92243 Address: 1860 CENTRO CA A SILSDEE Re El APN: William Allerton 052-470-018 Koha. 5. Road District: <u>3</u> Date Signed: 9.10.15 Signature: _ Name: Jamic Robbins Address: 2459 Share, Imperial, CA 064-312-039 APN:

1 Date Signed: 1115 Signature: 6. Road District: 5 SHe. AVIC Name: ICENTRO Address: 2470 11 ighton (1) 7850-003 052-APN: 7. Road District: / Date Signed: Signature Telhat kak FAMILY TRUST SARAH TALBOTI SARAH TALBOT Name: SANDALWOOD DR. EL CENTRO Address: 275 -008 052 - 742 APN: 8. Road District: 1 Date Signed: 9/11/15 Signature: A Jary Ma Aletur Name: R. GARYMEPheteige Address: 2900 Lenkay CAT, ELCENTROCA. APN: 052 - 731 - 064 9. Road District: 1 Date Signed: 11/105 Signature: Alla Name: NORMA A. ORAZ Address: 551 Sandal wood OR EL CENTRO, CA APN: 053 - 463 - 005 10.Road District: 4 Date Signed: 9-11-10 Si Signature: Name: X 227 Address: 958 37 048-01 3 -APN: 11.Road District: ____ Date Signed: _____ Signature: _ Name: Address: APN: 111 112

AFFIDAVIT

I, <u>Constant</u>, solemnly swear (or affirm) that I have circulated the above petition to secure signatures to abandon the County Highways described therein; that all the signatures on this petition were made in my presence, and that, to the best of my knowledge and belief, each signature is the genuine signature of the person whose name it purports to be.

BucHER Camionan Print name

Subscribed and sworn to before me,

this 15th day of September, 2015.







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CALIFORNIA ALL-PURPOSE ACKNOWLEDG	MENT CIVIL CODE § 1189
A notary public or other officer completing this certific document to which this certificate is attached, and not the	ate verifies only the identity of the individual who signed the he truthfulness, accuracy, or validity of that document.
State of California)	
County of Imperial)	
On Sept 2, 2015 before me, B.	Oksh notary public.
Date	Here Insert Name and Title of the Officer
personally appeared Michael Balley	Johnson
	Name(s) of Signer(s)
who proved to me on the basis of satisfactory subscribed to the within instrument and acknow his/her/their authorized capacity(ice), and that by h or the entity upon behalf of which the person(s) ac	evidence to be the person(s) whose name(s) is/are ledged to me that he/ shc/they executed the same in is/ her/thei r signature(s) on the instrument the person(s), cted, executed the instrument.
	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
B. DLESH Commission # 2024225	WITNESS my hand and official seal.
Imperial County	B Da
My Comm. Expires May 11, 2017	Signature O, Olan Signature of Notary Public
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Place Notary Seal Above	
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□ Trustee □ Guardian or Conservator	□ Trustee □ Guardian or Conservator
□ Other:	Other:
Signer Is Representing:	Signer Is Representing:

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	<u> </u>
CALIFORNIA ALL-PURPOSE ACKNOWLEDGM	WENT CIVIL CODE § 1189

A notary public or other officer completing this certificat document to which this certificate is attached, and not th	te verifies only the identity of the individual who signed the truthfulness, accuracy, or validity of that document.
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who proved to me on the basis of satisfactory subscribed to the within instrument and acknowl his/h er/ths ir authorized capacity (ies), and that by hi or the entity upon behalf of which the person(s) ac	evidence to be the person(s) whose name(s) is/are edged to me that he/ she/the y executed the same in is/her/their signature(s) on the instrument the person(s) ted, executed the instrument.
	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
Commission # 2024225	WITHERS my bood and official cool
Notary Public - California	WITNESS my hand and omicial seal.
Imperial County	0 00.
My Comm. Expires May 11, 2017	Signature D. Ofse
	Signature of Notary Public
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Capacity(ies) Claimed by Signer(s) Signer's Name:	Signer's Name: Corporate Officer — Title(s): Partner — Limited General Individual Attorney in Fact
Capacity(ies) Claimed by Signer(s) Signer's Name:	Signer's Name: Corporate Officer — Title(s): Partner — Limited General Individual Attorney in Fact Trustee Guardian or Conservator
Capacity(ies) Claimed by Signer(s) Signer's Name:	Signer's Name: Corporate Officer — Title(s): Partner — Limited General Individual Attorney in Fact Trustee Guardian or Conservator Other:

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who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.



is true and correct WITNESS my hand and official seal. Signature Signature of Notary Public

Place Notary Seal Above

- OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document		
Title or Type of Document:	Docu	ment Date:
Number of Pages: Signer(s) Other That	n Named Above: _	
Capacity(ies) Claimed by Signer(s)		
Signer's Name:	Signer's Name:	
Corporate Officer - Title(s):	Corporate Officer — Title(s):	
Partner - Limited General	Partner - Limited General	
Individual Attorney in Fact	Individual	□ Attorney in Fact
Trustee Guardian or Conservator	□ Trustee	Guardian or Conservator
Other:	Other:	
Signer Is Representing:	Signer Is Representing:	
ATTACK AND AND A		

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Letter 2 Imperial County Department of Public Works October 21, 2015

Response to Letter 2-1

Comment noted.

Response to Letter 2-2

Comment noted.

Response to Letter 2-3

Comment noted. As identified in EIR Section 3.7 Required Project Approvals (see EIR page 3-17), the project proposes the abandonment of 40' of Broadway Avenue road right of way, 20' of Cocupa Avenue road right of way and 20' of Potrero Avenue road right of way as well as the 20' alley way located within Block 24 of the Townsite of Dixieland. These approvals are part of the discretionary actions of the proposed project that will be considered by the Planning Commission as a component of the overall project approvals.



LETTER 3

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY

EDMUND G. BROWN, Jr., Governor

Serious drought

Help save water!

DEPARTMENT OF TRANSPORTATION DISTRICT 11, DIVISION OF PLANNING 4050 TAYLOR ST, M.S. 240 SAN DIEGO, CA. 92110

SAN DIEGO, CA 92110 PHONE (619) 688-6960 FAX (619) 688-4299 TTY 711 www.dot.ca.gov

October 12, 2015

11-IMP-8 PM 23.48 Dixieland Solar Project

SCH#2015051043

Mr. David Black County of Imperial 801 Main Street El Centro, CA 92243

Dear Mr. Black:

The California Department of Transportation (Caltrans) has received the Draft Environmental Impact Report (DEIR) dated, September 21, 2015, for the Dixieland East and West Solar Farm Projects located near Interstate 8 (I-8) at Dunaway Road. Caltrans has the following comments:

It is understood by our agency that no new utility crossings on state facilities will occur as a result of this project. However, if any work is performed within Caltrans right-of-way (R/W) an encroachment permit will be required.

Visual aspects of the project including glint and glare should be documented not to have any potential impacts to motorists driving on I-8.

If you have any questions on the comments Caltrans has provided, please contact Roy Abboud of the Development Review Branch at (619) 688-6968 or email roy.abboud@dot.ca.gov.

Sincere

JACOB M. ARMSTRONG, Chief Development Review Branch

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"



Letter 3 California Department of Transportation October 21, 2015

Response to Comment 3-1

Comment noted. No new utility crossings on state facilities are proposed as part of the project. No work would be performed within Caltrans right-of-way (R/W).

Response to Comment 3-2

The proposed project is not located in proximity to I-8, and would not be visible by motorists traveling east or west on I-8. The text on EIR page 4.1-19 has been modified as follows in order to clarify that the visual aspects of the proposed projects would not result in significant glint and glare impacts to motorists driving on I-8:

The projects would not result in a significant glint or glare impact to motorists driving on I-8. The project sites are located approximately 1.25 miles north of I-8 and the views to the project sites from I-8 are limited or otherwise unavailable due to the distance and intervening terrain in the area. Furthermore, the projects would involve the installation of PV solar systems, which convert sunlight directly into electricity, and by their shear nature, are non-reflective. By nature, PV panels are designed to absorb as much of the solar spectrum as possible in order to convert sunlight to electricity and are furnished with anti-reflective coating for that purpose. Reflectivity levels of solar panels are decisively lower than standard glass or galvanized steel, and should not pose a reflectance hazard to area viewers. Other glare sources in nature (free water surfaces) have a higher glare effect than PV modules. Reflected light from standard PV modules surface is between 10 to 20 percent of the incident radiation (as low as free water surfaces), while galvanized steel (used in industrial roofs) is between 40 to 90 percent (Aztec 2014). Therefore, impacts related to glare or glint to motorists driving on I-8 is considered **less than significant**.

LETTER 4



www.iid.com

November 4, 2015

Mr. David Black Planner IV Planning & Development Services Department County of Imperial 801 Main Street El Centro, CA 92243

SUBJECT: SEPV Dixieland East and West Solar Farm Projects DEIR

Dear Mr. Black:

On September 24, 2015 we received from the Imperial County Planning & Development Services Department, the Draft Environmental Impact Report for the SEPV Dixieland East and West Solar Farm Projects. The projects propose the construction and operation of two small solar photovoltaic electricity generating facilities with a total output of 5MW on 63 acres of land located north of Evan Hewes Highway and adjacent to Brown and Carriso Roads, in the vicinity of the Dixieland Substation. The SEPV Dixieland East Solar Project (CUP #15-0006) will encompass 27 acres of land and generate 2 MW of electrical energy and the SEPV Dixieland West Solar Project (CUP #15-0005) will encompass 36 acres of land and generate 3MW.

The Imperial Irrigation District has reviewed the DEIR and in addition to IID's September 10, 2015 comment letter¹ on the 1st Administrative DEIR (see attached letter), has the following comments:

- A 12 kV distribution line currently crosses the SEPV East project along its east property line (see attached map) and has a prescriptive right of way. If the line needs to be relocated, project proponent should contact IID Energy Customer Operations & Planning Section at (760) 482-3300 and speak with a project manager to have the line relocated to a new dedicated easement. Both the new dedicated easement and primary line relocation costs will be the responsibility of the project proponent
- 2. During the construction phase, project proponent must contract with an approved provider to deliver drinking water to the construction site in order to stay in compliance with the Safe Drinking Water Act. For additional information, project proponent should contact Carrie Cruz, Water Dept. operations analyst at (760) 339-9191.

IMPERIAL IRRIGATION DISTRICT OPERATIFIC HEADQUARTERS PL2 803: 917 INPERIAL, CA 92251



4-2

¹ In light of further discussions between developer and IID, IID Energy Planning staff determined that the existing 140-foot IID easement over the SEPV Dixieland West property will be sufficient for IID's present and future transmission plans, thus IID has no concerns that the project might cause any impacts to IID's infrastructure expansion plans and the related comment contained in this letter should be disregarded.

Mr. David Black November 4, 2015 Page 2

Should you have any questions, please do not hesitate to contact me at 760-482-3609 or at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully, Donald Vargas

Donald Vargas Environmental Regulatory Compliance Administrator

Kevin Kelley – General Manager Mike Pacheco – Manager, Water Dept. Tina Snieds – Co-Manager, Water Dept. Carl Stills – Manager, Energy Dept. Eduxvijes A: Lutz – Portolio Mgmt. Officer Jamie Asbury – Deputy Energy Manager, Critical Business & Regulatory Alfairs Vance Taylor – Asst. General Counsel Robert Laure – Asst. General Counsel Jesse Montaño – Transmission, Planning and Engineering Oversight Angela Evana - Manager Distribution Services & Maintenance Operations Oscar Kebriti – Supt. Gen. Project implementation, Energy Dept. Michael P. Kemp – Superintendent, Real Estate Randy Gray – ROW Agent, Real Estate Randy Gray – ROW Agent, Real Estate Jessica Lovecchio – Water Transfer Program Mitigation Oversight





Attachment A



www.lid.com

GS- RE&ERCS

September 10, 2015

Mr. David Black Planner IV Planning & Development Services Department County of Imperial 801 Main Street El Centro, CA 92243

SUBJECT: SEPV Dixieland East & West Solar Farm Projects ADEIR

Dear Mr. Black:

On September 2, 2015 we received from the Imperial County Planning & Development Services Department, the 1st Administrative Draft Environmental Impact Report (ADEIR) for the SEPV Dixieland East and West Solar Farm Projects. The projects propose the construction and operation of two solar photovoltaic electricity generating facilities with a total output of 5 megawatts (MW) on 63 acres of land located north of Evan Hewes Highway and adjacent to Brown and Carriso Roads, in the vicinity of the Dixieland Substation. The SEPV Dixieland East Solar Project, Conditional Use Permit (CUP) #15-0006 will encompass 27 acres and generate 2 MW of electrical energy and the SEPV Dixieland West Solar Project, CUP #15-0005, will encompass 36 acres and generate 3 MW.

The Imperial Irrigation District (IID) has reviewed the ADEIR and considers that the district's March 11, 2015 and March 24, 2015 comment letters on the CUP applications and the July 17, 2015 letter on the Notice of Preparation of a draft Environmental Impact Report (see attached letters) continue to apply.

However, we are submitting a new map that better depicts IID's proposed and alternate double circuit 230kV IV- Dixieland line routes near the project sites (blue dashed line) and reiterate our concern of the projects' potential to obstruct the planned 230 kV IV-Dixieland transmission line routes, block future lines going west from our Dixieland Substation and compromise the planned Dixieland Substation expansion. Consequently, IID will require that the developer provide sufficient right-of-way to offset our planned 230kV lines coming into the Dixieland Substation and its future expansion.



IMPERIAL IRRIGATION DISTRICT OPERATING HEADQUARTERS • P.O. BOX 937 • IMPERIAL, CA 92251 Mr. David Black September 10, 2015 Page 2

Should you have any questions, please do not hesitate to contact me by phone at 760-482-3609 or by e-mail at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully,

1 **Donald Vargas**

Environmental Regulatory Compliance Administrator

Kevin Kelley – General Manager Mike Pacheco – Manager, Water Dept. Tina Shields – Co-Manager, Water Dept. Carl Stills – Manager, Energy Dept. Eduwnies A. Lutz – Portfolio Mgmt. Officer Tom King – Deputy Energy Manager, Engineering & Operations Jamie Asbury – Deputy Energy Manager, Critical Business & Regulatory Affaira Vance Taylor – Assl. General Counsel Robert Laurie – Assl. General Counsel Paul G. Peschel – Manager Planning & Engineering, Energy Dept. Angels Evans - Manager Distribution Services & Maintenance Operations Oscar Kebril – Sut. Gen. Project Implementation, Energy Dept. Michael P. Kemp – Superintendent, Regulatory & Environmental Compliance Randy Gray – Real Estate Jessica L. Lovecchio – Environmental and Salton See Programs



Attachment 4A-1 Email Correspondence

From: Vargas, Donald A [mailto:DVargas@IID.com]
Sent: Tuesday, October 06, 2015 12:00 PM
To: Michael Stern
Cc: davidblack@co.imperial.ca.us; Freeman Hall; Neda Aghvami; Kebriti, Oscar
Subject: RE: SEPV Dixieland West easement area adequacy

Mr. Stern,

In light of Mr. Kebriti's response, I have no concerns that the project might cause any impacts to IID's present and future infrastructure expansion plans.

Regards,



Donald Vargas Environmental Regulatory Compliance Administrator Regulatory & Environmental Compliance Section Imperial Irrigation District P.O. Box 937 Imperial. CA 92251 Tel: (760) 482-3609 Cel. (760) 427-8099 Fax (760) 482-3603 E-mail: dvargas@iid.com

"If you don't know where you're going any road will take you there" -George Harrison

From: Michael Stern [mailto:mstern@solarelectricsolutions.com] Sent: Tuesday, October 06, 2015 11:50 AM To: Vargas, Donald A Cc: davidblack@co.imperial.ca.us; Freeman Hall; Neda Aghvami; Kebriti, Oscar Subject: SEPV Dixieland West easement area adequacy

Mr. Vargas,

In response to your comment letter dated September 10, 2015, Oscar Kebriti has told us in the email below that the existing 140 foot IID easement over the SEPV Dixieland West property will be sufficient for IID's present and future purposes.

Could you confirm that Mr. Kabriti's response eliminates the potential concerns of IID with respect to the project that you described in your comment letter?

Thank you,

Mike



Michael Stern SEPV Imperial, LLC Solar Electric Solutions, LLC 11726 San Vicente Blvd, Suite 414 Los Angeles, CA 90049 www.solarelectricsolutions.com Direct : 310-826-8511 Cell: 818-665-5122 From: Kebriti, Oscar [mailto:okebriti@IID.com] Sent: Wednesday, September 23, 2015 11:04 AM

To: Michael Stern <<u>mstern@solarelectricsolutions.com</u>> Cc: Peschel, Paul <<u>PGPeschel@IID.com</u>>; King, Thomas G <<u>tgking@IID.com</u>>; Martinez, Esteban <<u>ESMartinez@IID.com</u>>; Stills, Carl <<u>CDStills@IID.com</u>> Subject: FW: Voice mail: 91 sec.

Michael,

It was my pleasure talking to you on phone. We have submitted our comment to Imperial County Planning regarding the proposed solar farm development directly west of our existing Dixieland substation (see attached copy). The proposed 140 feet wide right of way will be sufficient for us to build the proposed double circuit 230KV transmission connecting Imperial Valley substation to Dixieland (option 1 in the following map). Please see the following ROW drawing was prepared by our consultant back in 2011.

OSCAR KEBR	ITI, P.E
General Supe	erintendant
Transmission	n Implementation
Office: (760)	482-3310
Mobile: (760) 427-6324
Fax: (760)	482-3320
E-mail: okebri	ti@iid.com
MAILING ADDRESS:	BUSINESS ADDRESS:
P.O. BOX 937	1561 W. Main St., Suite 11B
IMPERIAL, CA 92251	El Centro, CA 92243







Attachment B



www.iicl.com

GS- RE&ERCS

June 17, 2015

Mr. David Black Planner IV Planning & Development Services Department County of Imperial 801 Main Street El Centro, CA 92243

SUBJECT: SEPV Dixieland East & Dixieland West Solar Projects NOP of an EIR and IS

Dear Mr. Black:

On May 8, 2015 we received from the Imperial County Planning & Development Services Department, the Notice of Preparation (NOP) and Initial Study (IS) for the SEPV Dixieland East & Dixieland West Solar Projects. The projects propose the construction and operation of two small solar PV electricity generating facilities with a total output of 5MW on 63 acres of land located north of Evan Hewes Highway and adjacent to Brown and Carriso Roads, in the vicinity of the Dixieland Substation. The SEPV Dixieland East Solar Project (CUP #15-0006) will encompass 27 acres of land and generate 2 MW of electrical energy and the SEPV Dixieland West Solar Project (CUP #15-0005) will encompass 36 acres of land and generate 3MW.

The Imperial Irrigation District (IID) has reviewed the NOP and in addition to our March 11, 2015 and March 24, 2015 comment letters (see attachments) has the following comments:

 The attached map shows IID's proposed and alternate double circuit 230kV IV-Dixieland line routes around the project site (blue dashed line). The project site obstructs the planned 230 kV IV-Dixieland transmission line routes and blocks future lines going west from our Dixieland Substation. Furthermore, the planned Dixieland Substation expansion is also compromised as a result of solar development west of the substation. Consequently, IID will require that the developer provide sufficient right-of-way to offset our planned 230kV lines coming into the Dixieland Substation.

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Mr. David Black June 17, 2015 Page 2

Should you have any questions, please do not hesitate to contact me by phone at 760-482-3609 or by e-mail at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully,

Donald Vargas Environmental Regulatory Compliance Administrator

Kavin Kelley – General Manager Kristine Fontsine – Asst. General Menager Tina Shields – Interim Planning and Water Conservation Manager. Water Dept. Mike Pacheco – Interim Operations and Maintenance Manager, Water Dept Carl Stills – Manager, Energy Dept. Vance Taylor – Asst. General Doursel Tom King – Deputy Energy Manager. Engineering & Operations Paul G. Peschel – Manager Flanning & Engineering, Energy Dept. Angela Evans – Manager Distribution Services & Maintenance Operations Oscar Kebril – Supt Gen. Project Implementation, Energy Dept. Michael P. Kemp – Superintendent, Real Eatate & Environmental Compliance Randy Gray – Real Estate Bruce Wilcox – Manager Environmental and Sation Sea Programs





FS

Attachment C

www.ik.com



GS-RE&ERCS

March 11, 2015

Ms Patricia Valenzuela Planner IV Planning & Development Services Department County of Imperial 801 Main Street El Centro, CA 92243

SUBJECT: SEPV Imperial, LLC (SEPV Dixieland West) - CUP App. #15-0005

Dear Ms. Valenzuela

On February 25, 2015 we received from the Imperial County Planning & Development Services Department, Conditional Use Permit (CUP) application #15-0005. The applicant, SEPV Imperial LLC, is proposing to construct and operate a 3MW solar pv electricity generation facility to be called SEPV Dixieland West, on 36 acres at the northeast corner of West Evan Hewes Hwy, and Carriso Ave., 5 miles west of Seeley, CA.

The Imperial Irrigation District (IID) has reviewed the application and has the following comments:

- 1 IID provides raw (untreated) Colorado River water to agricultural, municipal, industrial and commercial customers within its service area. In the case of renewable energy generators, all new non-agricultural water project supply requests are processed in accordance with the IID's Interim Water Supply Policy for Non-Agricultural Projects (IWSP) (see <u>http://www.iid.com/index.aspx?page=152</u> for a link to the IWSP).
- 2 Also, on May 8, 2012 the IID Board of Directors adopted the Temporary Land Conversion Fallowing Policy (), a policy that requires participation from certain project developers and/or landowners as a condition of water service for new non-agricultural projects. In particular, this policy targets lower water demand projects, such as photovoltaic solar facilities, that require a temporary land use conversion and are permitted by conditional use permits on agriculturally-zoned lands (see IID websites <u>http://www.iid.com/Modules/ShowDocument.aspx?documentid=5646</u> or the IID MCI webpage at <u>http://www.iid.com/index.aspx?page=152</u>).
- For additional information regarding the IWSP and TLCFP, the IID Water Supply Planning section may be contacted at (760) 339-9755
- 4. Any construction or operation on IID property or within its existing and proposed right of way or easements including but not limited to: surface improvements such as proposed new streets, driveways, parking lots, landscape; and all water, sewer, storm water, or any other above ground or underground utilities, will require an encroachment permit, or encroachment agreement (depending on the circumstances). A copy of the

4C-1 4C-2 4C-3 4C-4

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> encroachment permit application and instructions for its completion can be found at the IID website: http://www.lid.com/Modules/ShowDocument.aspx?documentid=3306. The IID Real Estate Section should be contacted at (760) 339-9239 for additional information regarding encroachment permits or agreements.

- 5. In addition to IID's recorded easements, IID claims, at a minimum, a prescriptive right of way to the toe of slope of all existing canals and drains. Where space is limited and depending upon the specifics of adjacent modifications, the IID may claim additional secondary easements/prescriptive rights of ways to ensure operation and maintenance of IID's facilities can be maintained and are not impacted and if impacted mitigated. Thus, IID should be consulted prior to the installation of any facilities adjacent to IID's facilities. Certain conditions may be placed on adjacent facilities to mitigate or avoid impacts to IID's facilities.
- 6. Any new, relocated, modified or reconstructed IID facilities required for and by the project (which can include but is not limited to electrical utility substations, electrical transmission and distribution lines, canals, drains, etc.) need to be included as part of the project's CEQA and/or NEPA documentation, environmental impact analysis and mitigation. Failure to do so will result in postponement of any construction and/or modification of IID facilities until such time as the environmental documentation is amended and environmental impacts are fully mitigated. Any and all mitigation necessary as a result of the construction, relocation and/or upgrade of IID facilities is the responsibility of the project proponent.

Should you have any questions, please do not hesitate to contact me by phone at 760-482-3609 or by e-mail at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully, Donald Vargas

Environmental Regulatory Compliance Administrator

Kevin Kolloy – General Manager Kristine Fontens – Assi: General Manager & Interim Portfolio Management Officer Tina Shietos – Interim Planning and Water Canservation Manager. Water Dept Mike Pacheco – Interm Operations and Matintenance Manager. Water Dept Can Stills –Manager, Energy Dept. Vance Taytor – Asst: General Coungel Tom King – Deputy Energy Manager, Engineering, & Operations Paul G. Peschel – Manager Planning & Engineering, Energy Dept Angele Evana – Manager Distribution Services & Maintenance Operations Oscar Kebrill – Supt Gen Project Implementation, Energy Dept Michael P. Kemp – Superintendent, Reel Estate & Environmental Shayne Farber – Superintendent, Reel Estate & Environmental Shayne Farber – Superintendent, Reel Estate & Environmental Bruce Wilcox – Manager Environmental and Salton Sca Programs Vikki Dee Bradshaw – Environmental Compliance Officer



Attachment D



www.iid.com

GS-RE&ERCS

March 24, 2015

Mr. David Black Planner IV Planning & Development Services Department County of Imperial 801 Main Street El Centro, CA 92243

SUBJECT: SEPV Imperial, LLC (SEPV Dixieland East) - CUP App. #15-0006

Dear Mr. Black:

On February 26, 2015 we received from the Imperial County Planning & Development Services Department, Conditional Use Permit (CUP) application #15-0006. The applicant, SEPV Imperial LLC, is proposing to construct and operate a 2MW solar pv electricity generation facility to be called SEPV Dixieland East, on 20 acres at the northeast corner of Brown Road and Potrero Avenue, 5 miles west of Seeley, CA.

The Imperial Irrigation District (IID) has reviewed the application and has the following comments:

- IID provides raw (untreated) Colorado River water to agricultural, municipal, industrial and commercial customers within its service area. In the case of renewable energy generators, all new non-agricultural water project supply requests are processed in accordance with the IID's Interim Water Supply Policy for Non-Agricultural Projects (IWSP) (see http://www.iid.com/index.aspx?page=152 for a link to the IWSP).
- 2. Also, on May 8, 2012 the IID Board of Directors adopted the Temporary Land Conversion Fallowing Policy, a policy that requires participation from certain project developers and/or landowners as a condition of water service for new non-agricultural projects. In particular, this policy targets lower water demand projects, such as photovoltaic solar facilities, that require a temporary land use conversion and are permitted by conditional use permits on agriculturally-zoned lands (see IID websites http://www.iid.com/Modules/ShowDocument.aspx?documentid=5646 or the IID MCI webpage at http://www.iid.com/index.aspx?page=152).
- For additional information regarding the IWSP and TLCFP, the IID Water Supply Planning section may be contacted at (760) 339-9755
- 4 The applicant should be advised to contact IID Energy Customer Operations and Planning Section at (760) 482-3402 or (760) 482-3300 for information regarding electrical service for the project's construction, station service and O&M facility.

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Mr David Black March 24, 2015 Page 2

- 5. Any construction or operation on IID property or within its existing and proposed right of way or easements including but not limited to: surface improvements such as proposed new streets, driveways, parking lots, landscape, and all water, sewer, storm water, or any other above ground or underground utilities, will require an encroachment permit, or encroachment agreement (depending on the circumstances). A copy of the encroachment permit application and instructions for its completion can be found at the IID website: <u>http://www.iid.com/Modules/ShowDocument.aspx?documentid=3306</u>. The IID Real Estate Section should be contacted at (760) 339-9239 for additional information regarding encroachment permits or agreements.
- 6. In addition to IID's recorded easements, IID claims, at a minimum, a prescriptive right of way to the toe of slope of all existing canals and drains. Where space is limited and depending upon the specifics of adjacent modifications, the IID may claim additional secondary easements/prescriptive rights of ways to ensure operation and maintenance of IID's facilities can be maintained and are not impacted and if impacted mitigated. Thus, IID should be consulted prior to the installation of any facilities adjacent to IID's facilities. Certain conditions may be placed on adjacent facilities to mitigate or avoid impacts to IID's facilities.
- 7. Any new, relocated, modified or reconstructed IID facilities required for and by the project (which can include but is not limited to electrical utility substations, electrical transmission and distribution lines, canals, drains, etc.) need to be included as part of the project's CEQA and/or NEPA documentation, environmental impact analysis and mitigation. Failure to do so will result in postponement of any construction and/or modification of IID facilities until such time as the environmental documentation is amended and environmental impacts are fully mitigated Any and all mitigation necessary as a result of the construction, relocation and/or upgrade of IID facilities is the responsibility of the project proponent.

Should you have any questions, please do not hesitate to contact me by phone at 760-482-3609 or by e-mail at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully, Donald Vargas

Environmental Regulatory Compliance Administrator

Kevin Keiley – General Manager Kislina Fonta ne – Assi. General Manager Tras Shaids – Interm Dienning and Water Conservation Manager, Water Dept Mike Pacheca – Interm Operations and Mainteniance Manager, Water Dept Mike Pacheca – Interm Operations and Mainteniance Manager, Water Dept Vance Taylor – Assi. General Counsel Tom King – Deput Erengy Manager, Engineering & Operations Paul G. Paschal – Manager Bioning & Engineering, Energy Dept Angela Evans – Manager Distribution Services & Mainteniace Operations Oscar Kebriti – Supt Gen Project Implementation, Energy Dept Michael P. Keng – Super-Intendent, Real Estate & Environmental Shayne Feroer – Supervision, Real Estate Bruce Watex – Manager, Environmental and Sartan See Programs. Visko Dee Bridshaw – Environmental Compliance Officer 4D-6

4D-7

Attachment E



www.iid.com

GS-RE&ERCS

March 24, 2015

Mr. David Black Planner IV Planning & Development Services Department County of Imperial 801 Main Street El Centro, CA 92243

SUBJECT: SEPV Imperial, LLC (SEPV Dixieland East) - CUP App. #15-0006 – Additional Comments

Dear Mr. Black:

In addition to our comments on the above mentioned projects submitted to you earlier today, the Imperial Irrigation District (IID) has the following additional concerns:

The Imperial Irrigation District (IID) has reviewed the application and has the following comments:

- The Westside Main Canal may be impacted. The project site is located adjacent to and west of this IID facility.
- The project proponent may not use IID's canal or drain banks to access the project site. Any abandonment of easements or facilities shall be approved by IID based on systems (Irrigation, Drainage, Power... etc.) needs.
- Storm, drainage, and/or seepage reservoir waters are not allowed to discharge into the Westside Main Canal. We request that the project's Storm Water Pollution Prevention Plan be submitted to IID Water Engineering Services prior to final design.
- 4. Furthermore, to insure there are no impacts to IID facilities, the project's grading, drainage and fencing plans should be submitted to IID Water Engineering Services prior to final project design. IID Water Engineering Services can be contacted at (760) 339-9265 for further information.
- For construction water the applicant is required to contact IID South End Division at (760) 482-9800.

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Mr David Black March 24, 2015 Page 2

Should you have any questions, please do not hesitate to contact me by phone at 760-482-3609 or by e-mail at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully,

Donald Vargas Environmental Regulatory Compliance Administrator

Kevin Kelley – General Manager Kristine Fontame – Assl. General Manager Trins Shields – Interim Planning and Water Conservation Manager. Water Dept. Mike Pacheto – Interim Operations and Maintenance Manager. Water Dept. Carl Stills – Manager. Energy Dept. Vance Taylor – Assl. General Counsel Tom King – Deputy Energy Manager, Engineering & Operations Paul G. Peschel – Manager Planning & Engineering, Energy Dept. Angela Evans – Manager Planning & Engineering, Energy Dept. Angela Evans – Manager Distribution Sorvoca & Maintenance Operations. Oscar Kebiti – Supit Gen. Project Implementation, Energy Dept. Michael P. Kentp. – Supervisor Real Estate Bruce Wilcox – Manager Environmental and Saton See Programs Vikku Dee Bradshaw – Environmental Compliance Officer



Letter 4 Imperial Irrigation District November 4, 2015

Response to Comment 4-1

The proposed project will not require relocating the existing 12 kV distribution line that crosses the SEPV Dixieland East Solar Farm Project along the east property line. As depicted in EIR Figure 3-5, the SEPV Dixieland East Solar Farm Project fence line would be set back approximately 10 feet from the existing 12 kV distribution line.

The project proponent will coordinate with IID's Energy Customer Operations & Planning Section in the event the existing 12 kV distribution line needs to be relocated. It is acknowledged that the potential primary line relocation and new dedicated easement costs will be the responsibility of the project proponent.

Response to Comment 4-2

Comment noted. It is acknowledged that the project proponent will be required to contract with an approved provider to deliver drinking water to the construction site in order to stay in compliance with the Safe Drinking Water Act.

Response to Comment 4A-1

Comment noted. IID's comment letters dated July 17, 2015, March 11, 2015, and March 24, 2015 (two separate letters) are provided as Attachments B, C, D, and E, respectively. Please refer to responses to comments 4-1 through 4-2, 4-A1 through 4-A2, 4B-1, and 4-C1 through 4C-6.

Response to Comment 4A-2

The project proponent contacted Mr. Oscar Kebriti and Mr. Donald Vargas with IID to verify that the proposed projects would not obstruct IID's planned 230 kV IV-Dixieland transmission line routes, block future lines extending west from the Dixieland Substation or compromise the planned Dixieland Substation expansion. On September 23, 2015, Mr. Kebriti confirmed via e-mail correspondence that the SEPV project's proposed 140 feet wide right of way will be sufficient for IID to build IID's proposed double circuit 230 kV transmission connecting the Imperial Valley substation to Dixieland. On October 6, 2015, Mr. Vargas (EIR commenter) verified via e-mail correspondence that he had no concerns that the projects might cause impacts to IID's present and future infrastructure expansion plans. Please see Attachment 4A-1 - Email Correspondence to view the email correspondence between the project proponent and IID.

Response to Comment 4B-1

Please refer to Response 4A-2.

Response to Comment 4C-1

Comment noted. It is acknowledged all new non-agricultural water project supply requests are processed in accordance with the IID's Interim Water Supply Policy for Non-Agricultural Projects (IWSP).

Response to Comment 4C-2

The County acknowledges that IID adopted the Temporary Land Conversion Fallowing Policy (TLCFP) that may require participation by the project applicant as a condition of water service. The applicant will be required to adhere to project water supply agreements under IID's Interim Water Supply Policy and the landowner will be required to adhere to appropriate provisions.



Response to Comment 4C-3

Comment noted.

Response to Comment 4C-4

Comment noted. EIR page 3-18 identifies an Encroachment Permit from IID as a potential approval required for implementation of the projects. The applicant will coordinate with IID with respect to any potential encroachment into IID rights of way. Coordination with IID regarding these matters will be included as a Condition of Approvals for the projects.

Response to Comment 4C-5

Comment noted. The applicant will coordinate with IID with respect to any potentially encroachment into IID rights of way. Coordination with IID regarding these matters will be included as a Condition of Approval for the projects.

Response to Comment 4C-6

The project does not propose specific changes, modifications, or relocations to IID facilities and avoidance of IID facilities is proposed to the extent feasible. Potential impacts associated with any unforeseen improvements to IID facilities would occur within the footprint of the proposed project and, to that extent, impacts have been addressed. These physical impacts include potential biological and cultural resources impacts. These impacts have been evaluated to the extent that the entire project site is assumed to be within the development footprint and proposed area of disturbance, with the exception of IID drainages and canals. Mitigation associated with these impacts (e.g., burrowing owl, site restoration, drainage) is the responsibility of the project applicant.

Letter 4 – Attachment D (Comments 4-D1 through 4-D7)

Attachment D is the IID's comment letter on the CUP applications. These comments do not address the adequacy of the EIR. Where comments may pertain to the EIR, they have been addressed in the EIR and/or are otherwise responded to in the preceding responses to comments. Please refer to responses to comments 4-1 through 4-2, 4-A1 through 4-A2, 4B-1, and 4-C1 through 4C-6.

Letter 4 – Attachment E (Comments 4-E1 through 4-E5)

Attachment E is the IID's comment letter on the CUP applications. These comments do not address the adequacy of the EIR. Where comments may pertain to the EIR, they have been addressed in the EIR and/or are otherwise responded to in the preceding responses to comments. Please refer to responses to comments 4-1 through 4-2, 4-A1 through 4-A2, 4B-1, and 4-C1 through 4C-6.



LETTER 5



Edmund G. Brown Jr. Governor

November 5, 2015

David Black Imperial County 801 Main Street El Centro, CA 92243

Subject: SEPV Dixieland East and West Solar Project SCH#: 2015051043

Dear David Black:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on November 4, 2015, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

STATE OF CALIFORNIA Governor's Office of Planning and Research State Clearinghouse and Planning Unit

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan

Scott Morgan Director, State Clearinghouse

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MPERIAL COUNTY

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044 TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov



Document Details Report	
State Clearinghouse Data Base	

SCH# Project Title Lead Agency	2015051043 SEPV Dixieland East and West Solar Project Imperial County		
Туре	EIR Draft EIR		
Description	Construction of two Photovoltaic solar facilities, on two sites encompassing approximately 63 acres of land. Each Project would include a ground mounted photovoltaic solar power generating system, supporting structures, electronic/electrical equipment, access roads and fencing. Partial roadway abandonments are also proposed. Each Project would be interconnected to the Imperial District electrical distribution system at an existing IID 12kV distribution line. Each project is proposed under a separate Conditional Use Permit.		
Lead Agend	cy Contact		
Name	David Black		
Agency	Imperial County		
Phone	442 265 1746 Fax		
email			
Address	801 Main Street		
City	El Centro State CA Zip 92243		
Project Loc	ation		
County City	Imperial		
Region	200 40 0 M (445) 40 00 500 W		
Lar/Long	32 47 B N/115 46 35.50 W		
Parent Na	Evan Hewes Highway, Carriso Avenue, Broadway Avenue, Brown Road		
Parcel No.	16S Barrow 11E Section 12 Barrow COBALL		
Township	TIGS Range TIC Securit 12 Base SBBAM		
Proximity to	e -		
Highways	1-8		
Airports	No		
Railways	No		
Waterways	Westside Main Canal		
Schools	No		
Land Use	Undeveloped Land / A-2 Agriculture		
Project Issues	Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Fiscal Impacts; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Noise; Public Services; Schools/Universities; Septic System; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects; Aesthetic/Visual; Minerals; Population/Housing Balance; Recreation/Parks		
Reviewing Agencies	Resources Agency; Colorado River Board; Department of Fish and Wildlife, Region 6; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 11; Air Resources Board, Major Industrial Projects; Regional Water Quality Control Board, Region 7; California Energy Commission; Native American Heritage Commission; Public Utilities Commission		
ate Received	09/21/2015 Start of Review 09/21/2015 End of Review 11/04/2015		

Note: Blanks in data fields result from insufficient information provided by lead agency



Letter 5 State Clearinghouse November 5, 2015

Response to Comment 5-1

This comment acknowledges that the County of Imperial has complied with the State Clearinghouse review requirements for the SEPV Dixieland East and West Solar Farm Projects.
LETTER 6

6-1

6-2

6-3

6-4



SUBJECT: Draft EIR SEPV Dixieland East and West Solar Farm Projects for HDR Engineering Inc.

Dear Mr. Minnick,

The Imperial County Air Pollution Control District (Air District) has reviewed the Draft EIR for the SEPV Dixieland East and West Solar Projects. Through its review the Air District could verify that **no changes** were made from the Administrative Draft (8/26/2015), despite comments given by the Air District (9/8/2015).

In regards to the air analyses, the Air District was unable to verify the data because of a noted omission within Appendix D. Section 5.1.1: Construction Emissions and section 5.1.2: Operational Emissions of Appendix D state that a detailed summary of the assumptions and modeling data used to estimate both construction and operational emissions (shown in the Draft EIR in tables 4.3-6, 4.3-7, 4.3-8, and 4.3-9) were presented in Appendix A, which was not included in the provided documents. Because the air analyses in Appendix D used undisclosed assumptions and modeling data for construction and operational emissions estimates, the Air District is unable to substantiate the Air Analyses' conclusions.

The Air District did run a preliminary model of construction and operational emissions for the Dixieland East and West solar projects using the 2013 version of CalEEMod. Inputs used for the calculations were derived from information provided in the Draft EIR, OB-1 Air Analyses, and Traffic Assessment when provided; all other inputs were left as defaults. From this preliminary model the Air District was unable to replicate the emission estimates shown in both the Draft EIR and Appendix D further substantiating the inability to verify the finding of "less than significant".

The Air District would also like to address section 6.3.3 of the Draft EIR, which discusses cumulative impacts on air quality. CEQA Guidelines (\$15130) requires a discussion of cumulative impacts when a projects incremental effect is cumulatively considerable as defined in section 15065 (c)(a)(3) and when a project that is not "cumulatively considerable" a lead agency need not consider the effect significant but shall briefly describe the basis for concluding the incremental effect as not cumulatively considerable. Any cumulative determination must meet the foundational definition of CEQA Guideline section 15065 (c)(a)(3) which reads as follows:

"The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project

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are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects"

Based on what was presented in the Draft EIR the Air District found that section 6.3.3 was inadequate as it did not discuss past, present, or probable future projects that produce related cumulative impacts, as required by section 15130 of the CEQA Guidelines. Yet, the Air District recognizes that historical emissions data has shown that solar projects produce minimal emissions for most criteria air pollutants once operational. Therefore, in order to assure the protection of public health and to assure the project findings of "less than significant" are substantiated, the Air District is requiring that the project adhere to Regulation VIII and submit two Dust Control Plans (DCP): 1) a construction DCP and 2) an operational DCP, as to limit the projects' cumulative impact on the region's air quality. Additionally, it is important to note that the Dixieland area was inaccurately referred to being in attainment for PM_{2.5} under section 6.3.3, according to the Air District's records the Dixieland area is in fact currently within the established non-attainment area for PM_{2.5}.

To Summarize, in order to assure that the public health is protected the Imperial County Air Pollution Control District requires the following known feasible measures as part of the Conditional Use Permit:

- Provide the Air District with a complete Construction Equipment List at periodic intervals throughout the actual construction of the project by Make, Model, Horsepower, hours of operation and quantity. Prior to the issuance of the Final Certificate of Occupancy the ICAPCD shall assess the projects overall NOx emissions. Should the project exceed the thresholds found in the Imperial County CEQA Air Quality Handbook the project must either provide for an off-site project which will reduce those identified excess emissions or abide by Policy 5.
- Provide an Operational Dust Control Plan that is approved by the Imperial County Air Pollution Control District prior to the issuance of the Certificate of Occupancy.

ADMINISTRATIVE NOTES

Additionally, ICAPCD found a number of inconsistencies between the EIR and supporting documents concerning to the Projects' scale and timeframe. The following comments are for administration:

- Concerning the acreage of the respective projects, there are conflicting estimates between the Initial Study, which lists the combined acreage of Dixieland Solar Farms East and West at ~63 ac (East 27ac - West 36.28ac) , and the EIR and Appendix D, which estimate the projects' combined acreage at ~53ac (East 24ac - West 29ac).
- The second discrepancy concerns the estimated number of construction workers, and their associated vehicle trips to and from the project sites. The number presented in the projects' Traffic Assessment (Appendix K) is a maximum of 40 workers (28 driving alone and 12 carpooling), this number changes to 30 workers (20 driving alone and 10 carpooling) in the EIR.

6-4 Cont.

6-6

6-8

6-9

6-10

6-11

6-12

6-13

- There are conflicting accounts in the EIR of when construction of the projects is scheduled to begin: Sub-section 3.4: Construction Process for Solar Farm Sites states that construction for both projects is proposed to start in early 2016, While sub-section 4.3.2.3: Impact Analysis states that construction for both projects is proposed to start in mid-2016.
- Mitigation AQ-4 under the Air Quality section of the Executive Summary should be broken into two separate mitigations. The Air District recommends that, "Prior to the issuance of a Certificate of Occupancy, the applicant shall submit and obtain approval from the ICAPCD and ICAPDSD an Operational Dust Control Plan." Be labeled as AQ-5.

Lastly, the Air District would like to bring attention to a number of grammatical errors found in the Draft EIR, OB-1 Air Analyses (Appendix D), and Traffic Assessment (Appendix K).

- Page 3-13, section 3.3.5.1 of the Draft EIR there is an unnecessary "the" between "into" and "each"
- Page 4, section 2.1.2 of Appendix D "drop" should be changed to "drops"
- Pages 32 and 33, sections 5.1.1 and 5.1.2 of Appendix D "Project's" should be changed to "Projects"
- · Page 1, section 1 of Appendix K "project" should be changed to "projects"

The Air Districts' rule book including all new regulations can be accessed via the internet at http://www.co.imperial.ca.us under "Air Pollution Control." Should you have any questions please call our office at (442) 265-1800.

Sipce Ashton Howington

APC Environmental Coordinator

Letter 6 Imperial County Air Pollution Control District November 10, 2015

Response to Comment 6-1

Comment noted. The comments provided by the Imperial County Air Pollution Control District dated September 8, 2015 have been addressed in the Final EIR and/or are otherwise responded to in responses to comments 6-2 through 6-13 below.

Response to Comment 6-2

The air quality modeling spreadsheets for the SEPV Imperial East and West Projects were submitted to Monica Soucier, APC Division Manager at the Imperial County Air Pollution Control District, via e-mail on November 10, 2015 for review. The air quality modeling spreadsheets are now included as Appendix A of the Air Quality/Greenhouse Gas Report. The Air Quality/Greenhouse Gas Report is provided Appendix D of the Final EIR.

Response to Comment 6-3

The air quality modeling spreadsheets are included as Appendix A of the Air Quality/Greenhouse Gas Report, as provided in the Final EIR. The air quality modeling spreadsheets provide the details on construction and operational criteria air pollutant emissions and substantiate that the proposed projects would not exceed ICAPCD's significance thresholds.

Response to Comment 6-4

Comment noted. The project proponent acknowledges that compliance with Regulation VIII is mandatory on all construction sites, regardless of size. The project will adhere to Regulation VIII. EIR Mitigation Measure AQ-4 requires that the applicant submit a dust control plan prior to any earthmoving activity. EIR Mitigation Measure AQ-5 requires the project applicant to submit and obtain approval of an operational dust control plan prior to issuance of a certificate of occupancy. The measures will be incorporated into the CUP conditions of approval.

EIR page 6-6 has been revised as follows to indicate the proposed projects are within the nonattainment boundaries for $PM_{2.5}$:

As identified in Section 4.3, Air Quality, currently the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of 8-hour ozone, PM_{10} ; and $PM_{2.5}$. More specifically, Imperial County is classified as a "serious" non-attainment area for PM_{10} and a "moderate" non-attainment area for 8-hour ozone for the National Ambient Air Quality Standards (NAAQS). and non-attainment for $PM_{2.5}$ for the urban areas of Imperial County. On November 13, 2009, EPA published Air Quality Designations for the 2006 24-Hour Fine Particle ($PM_{2.5}$) National Ambient Air Quality Standards wherein Imperial County was listed as designated nonattainment for the 2006 24-hour $PM_{2.5}$ NAAQS. However, the nonattainment designation for Imperial County is only for the urban area within the County and it has been determined that the proposed projects are located within the nonattainment boundaries for $PM_{2.5}$. On April 10, 2014, the CARB Board gave final approval to the 2013 Amendments to Area Designations for CAAQSs. For the State $PM_{2.5}$ standard, effective July 1, 2014, the City of Calexico will be designated nonattainment, while the rest of the SSAB will be designated attainment.

Similarly, EIR page 4.3-6 and Page 20 of the Air Quality/Greenhouse Gas Report have been revised to indicate the proposed projects are within the nonattainment boundaries for PM_{2.5}.



Response to Comment 6-5

Comment noted. The measures proposed in this comment will be incorporated into the CUP conditions of approval.

Response to Comment 6-6

Comment noted. The acreages from the NOP and Initial Study identified the total area of the parcels. The acreages provided in the Draft EIR and Traffic Assessment represents the total project area or fenced area. SEPV Dixieland West only uses 29 acres of the total 36.28 acres and Dixieland East only uses 24 acres of the total 27 acres. Please see table below for a comparison of the project acreages.

	Project Area	
Project Site	(Fenced area)*	Total Area of the Parcels **
SEPV Dixieland West	29	36.28
SEPV Dixieland East	24	27
Total	53	63.28

* The acreages from the EIR represent the project area or the fenced area.

** The acreages from the NOP/Initial Study are in fact the total area of the parcel(s), but Dixieland West only uses 29 acres of the total 36.28 acres and Dixieland East only uses 24 acres of the total 27 acres. The areas outside the project area boundaries will remain undisturbed.

Response to Comment 6-7

As provided on Page 3-14 of the EIR, "The on-site construction workforce for each project is expected to peak (overlapping construction activities) at 30 individuals. It is anticipated that the construction workforce would commute to the site each day from local communities. The worker vehicle trips anticipated to be generated from the project assumes 20 employees that would commute alone, and 10 employees that would carpool." To clarify, 30 construction workers will be required for each project. However, 40 workers is the maximum number of employees that will be working on the two solar projects at one time.

The following paragraph has been included in the Traffic Assessment (dated October 19, 2015) and added to page 3-15 of the EIR to provide clarification on the maximum number of employees working on the two solar projects at one time:

The maximum number of employees working on the two solar projects at one time will be 40 employees. For purposes of the trip generation calculations, it is assumed that 28 employees will drive alone and 12 employees will arrive in two-person carpools.

Response to Comment 6-8

The construction schedule provided in subsection 3.4 of the Draft EIR Project Description is correct. The second paragraph on page 4.3-11 of the EIR has been revised as follows:

Construction activities are proposed to start in <u>earlymid</u>-2016.

Response to Comment 6-9

Mitigation Measure AQ-4 has been broken into two separate mitigation measures (Mitigation Measure AQ-4 and AQ-5) as follows:

AQ-4 Dust Suppression Management Plan. Prior to any earthmoving activity, the applicant shall submit and obtain approval from the ICAPCD and Imperial County Planning and Development Services Department (ICPDSD) a construction Dust Control Plan. Prior to the issuance of a Certificate of Occupancy, the applicant shall submit and obtain approval from the ICAPCD and ICAPDSD an Operations Dust Control Plan.



ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits are submitted for the proposed projects, the ICAPCD shall review the project to determine if Rule 310 fees are applicable to the proposed projects.

AQ-5 Operational Dust Control Plan. Prior to the issuance of a Certificate of Occupancy, the applicant shall submit and obtain approval from the ICAPCD and ICAPDSD an Operations Dust Control Plan.

ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits are submitted for the proposed projects, the ICAPCD shall review the project to determine if Rule 310 fees are applicable to the proposed projects.

Response to Comment 6-10

The sentence on page 3-13, Section 3.3.5.1 of the EIR has been revised as follows:

Additionally, controlled access gates would be maintained at entrances into the each of the project site locations.

Response to Comment 6-11

The word "drop" has been replaced with "drops" on page 4, section 2.1.2 of the Air Quality/Greenhouse Gas Report.

Response to Comment 6-12

The use of "Project's" on pages 32 and 33, sections 5.1.1 and 5.1.2 of the Air Quality/Greenhouse Gas Report shows possession of the combined SEPV Dixieland East and West Solar Farm Projects. Therefore, the word "Project's" has not been replaced with "Projects" on pages 32 and 33, sections 5.1.1 and 5.1.2 of the Air Quality/Greenhouse Gas Report.

Response to Comment 6-13

The word "project" has been replaced with "projects" on page 1, section 1 of the Traffic Assessment.

LETTER 7

852 Broadway

Connie L. Valenzuela Agricultural Commissioner Sealer of Weights and Measures

Linda S. Evans Assistant Agricultural Commissioner/ Asst. Sealer of Weights and Measures

AGRICULTURAL COMMISSIONER

SEALER OF WEIGHTS AND MEASURES

El Centro, CA 92243 (442) 265-1500

Fax: (760) 353-9420

E-mail: agcom@co.imperial.ca.us

November 11, 2015

David Black, Planner IV Planning & Development Services Department 801 Main Street El Centro, CA 92243

Dear Mr. Black,

On September 11, 2015, we submitted a comment letter on the First Administrative Draft. After reviewing the Draft Environmental Impact Report our requests were not taken into consideration. Please see the letter dated September 11.

Even though the parcels have not been farmed in many years, portions of the land have been designated as Farmland of Local Importance. This land has the capability of production and should be considered Important Farmland. We should not discount any land that could be conditioned to productivity. We have reviewed the Draft Environmental Impact Report and would like the following conditions:

A Pest Management Plan

Update the DEIR to current Pest Management Requirements (dated September 11, 2015)

A Reclamation Plan to include

- o A written description of the physical infrastructure of the land
- o A plan to return the land to farmland condition

Please contact me to discuss the above conditions or if you have any questions.

Thank you,

Phyllis Cason for

Connie Valenzuela Agricultural Commissioner



7-1

Letter 7 Imperial County Agricultural Commissioner November 11, 2015

Response to Comment 7-1

The pest management plan components identified in Mitigation Measure AG-1 were current at the time the NOP was issued for the EIR. However, ultimately the Pest Management Plan for the project is required to be approved by the Agricultural Commissioner, and it is the intent that the project comply with the applicable requirements at the time of grading or building permit issuance. Mitigation Measure AG-1 has been revised as follows:

Prior to the issuance of a grading permit or building permit (whichever occurs first), a Weed and Pest <u>Control_Management</u> Plan shall be developed by the project applicant and approved by the County of Imperial Agricultural Commissioner. The plan shall provide the following:

- 1. Monitoring, preventative, and management strategies for weed and pest control <u>management</u> during construction activities at any portion of the project (e.g., transmission line);
- 2. Control and management of weeds and pests in areas temporarily disturbed during construction where native seed will aid in site revegetation as follows;
 - Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner's office that a pest problem is present on the project site. <u>The assistance of a licensed pest control advisor is</u> <u>recommended</u>;
 - All treatments must be performed by a qualified applicator or a licensed pest control operator <u>business</u>;
 - "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation. Effective control methods may include physical/mechanical removal, bio control, cultural control, or chemical treatments;
 - <u>Use of "permanent" soil sterilants to control weeds or other pests is</u> prohibited due to the fact that this would interfere with reclamation.
 - Notify the Agricultural Commissioner's office immediately regarding any suspected exotic/invasive pest species such as A and Q rated pest species as defined by the California Department of Food and Agriculture (CDFA) and the United States Department of Agriculture (USDA). Request a sample be taken by the Agricultural Commissioner's office of a suspected invasive species. Eradication of exotic pests shall be done under the direction of the Agricultural Commissioner's Office and/or CDFA;
 - Obey all pesticide use laws, regulations, and permit conditions;
 - <u>Allow access Access shall be allowed</u> by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties;
 - <u>Ensure that</u> all project employees that handle pest control issues shall be are appropriately trained and certified, that and all required records are shall be

maintained and made available for inspection, and that all required permits and other required legal documents are current;

- <u>Maintain</u> records of pests found and <u>treatments or pest management</u> <u>methods used.</u> controlled shall be maintained and available for review, or submitted to the Agricultural Commissioner's office on a quarterly basis Records shall include the date, location/block, project name (current and previous if changed), and methods used. For pesticides include the chemical(s) used, EPA Registration numbers, application rates, etc. A pesticide use report may be used for this;
- Submit a report on pest finds and treatments or other pest management methods to the Agricultural Commissioner quarterly within 15 days after the end of the previous quarter, and upon request. The report may consist of a copy of all records for the previous quarter, or may be a summary letter/report as long as the original detailed records are available upon request.
- 3. A long-term strategy for weed and pest control and management during the operation of the proposed project. Such strategies may include, but are not limited to:
 - a. Use of specific types of herbicides and pesticides on a scheduled basis.
- 4. <u>Maintain a Pest Management Plan until reclamation is complete. Maintenance and management of project site conditions to reduce the potential for a significant increase in pest-related nuisance conditions on adjacent agricultural lands.</u>
- 5. <u>Develop and implement a Pest Management Plan that will reduce negative impacts</u> to surrounding (not necessarily adjacent) farmland.
- 6. <u>The project shall reimburse the Agricultural Commissioner's office for the actual cost</u> of investigations, inspections, or other required non-routine responses to the site that are not funded by other sources.

As identified in the EIR Project Description, as part of the approvals associated with the projects, the County will be required to approve the site reclamation plans for each of the projects. The site reclamation plan for each of the projects is provided in EIR Appendix L. As required by the County, when the projects are decommissioned at the end of their life spans, the project applicant or its successor in interest would be responsible for implementing the reclamation plan, which includes the removal, recycling, and/or disposal of all solar arrays, inverters, transformers and other structures on each of the sites, as well as restoration of the site to its pre-project condition. The County is responsible for approving the reclamation plan for each project and confirming that financial assurances for each of the projects are in conformance with Imperial County ordinances.

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IV.1 MITIGATION MONITORING AND REPORTING PROGRAM

SEPV Dixieland East and West Solar Farm Projects, County of Imperial

The County of Imperial will adopt this Mitigation Monitoring and Reporting Program (MMRP) in accordance with Public Resources Code (PRC) Section 21081.6 and Section 15097 of the California Environmental Quality Act (CEQA) Guidelines. The purpose of the MMRP is to ensure that the SEPV Dixieland East and West Solar Farm Projects, which is the subject of the Environmental Impact Report (EIR), comply with all applicable environmental mitigation requirements. The mitigation measures for the project will be adopted by the County of Imperial, in conjunction with the adoption of the EIR. The mitigation measures have been integrated into this MMRP. Within this document, the approved mitigation measures are organized and referenced by subject category and include: Agricultural Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hydrology and Water Quality, and Noise and Vibration. The mitigation measures are provided in Table 1. The specific mitigation measures are identified, as well as the monitoring method, responsible monitoring party, monitoring phase, verification/approval party, date mitigation measure verified or implemented, location of documents (monitoring record), and completion requirement for each mitigation measure.

The mitigation measures applicable to the project include avoiding certain impacts altogether, minimizing impacts by limiting the degree or magnitude of the action and its implementation, and/or reducing or eliminating impacts over time by maintenance operations during the life of the action.

Public Resources Code Section 21081.6 requires the Lead Agency, for each project that is subject to CEQA, to monitor performance of the mitigation measures included in any environmental document to ensure that implementation does, in fact, take place. The County of Imperial is the designated CEQA lead agency for the Mitigation Monitoring and Reporting Program. The County of Imperial is responsible for review of all monitoring reports, enforcement actions, and document disposition as it relates to impacts within the County's jurisdiction. The County of Imperial will rely on information provided by the monitor as accurate and up to date and will field check mitigation measure status as required.

A record of the MMRP will be maintained at County of Imperial, Department of Planning and Development Services, 801 Main Street, El Centro, CA 92243. All mitigation measures contained in the EIR shall be made conditions of the project as may be further described below.

TABLE IV-1. SEPV DIXIELAND EAST AND WEST SOLAR FARM PROJECTS MITIGATION, MONITORING, AND REPORTING PROGRAM CHECKLIST

				Responsible		Verification/	Date Mitigation	Location of	
Project	мм		Monitoring	Monitoring	Monitoring	Approval	Verified or	(Monitoring	Completion
Component	No.	Mitigation Measure	Method	Party	Phase	Party	Implemented	Record)	Requirement
Chapter 4.2	Agricult	ural Resources							
DESF and DWSF	AG-1	 Prior to the issuance of a grading permit or building permit (whichever occurs first), a Weed and Pest Management Plan shall be developed by the project applicant and approved by the County of Imperial Agricultural Commissioner. The plan shall provide the following: Monitoring, preventative, and management strategies for weed and pest management during construction activities at any portion of the project (e.g., transmission line); Control and management of weeds and pests in areas temporarily disturbed during construction where native seed will aid in site revegetation as follows; Monitor for all pests including insects, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural 	Prior to the issuance of a grading permit, Planning and Development Services shall review and approve the Weed and Pest Management Plan.	Department of Planning and Development Services and Agricultural Commissioner	Prior to the issuance of a grading permit	Department of Planning and Development Services and Agricultural Commissioner			

Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		Commissioner's office that a pest problem is present on the project site. The assistance of a licensed pest control advisor is recommended; • All treatments must be							
		performed by a qualified applicator or a licensed pest control business;							
		 "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation. Effective control methods may include physical/ mechanical removal, bio control, cultural control, or chemical treatments: 							
		 Use of "permanent" soil 							



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		sterilants to control weeds or other pests is prohibited due to the fact that this would interfere with reclamation.							
		 Notify the Agricultural Commissioner's office immediately regarding any suspected exotic/invasive pest species as defined by the California Department of Food and Agriculture (CDFA) and the United States Department of Agriculture (USDA). Request a sample be taken by the Agricultural Commissioner's office of a suspected invasive species. Eradication of exotic pests shall be done under the direction of the Agricultural Commissioner's Office and/or CDFA; 							



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		 Obey all pesticide use laws, regulations, and permit conditions; 							
		 Allow access by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties; 							
		• Ensure that all project employees that handle pest control issues are appropriately trained and certified, that all required records are maintained and available for inspection, and that all permits and other required legal documents are current;							
		 Maintain records of pests found and treatments or pest management methods used. Records shall include the date, location/block, 							



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		 project name (current and previous if changed), and methods used. For pesticides include the chemical(s) used, EPA Registration numbers, application rates, etc. A pesticide use report may be used for this; Submit a report on pest finds and treatments or other pest management methods to the Agricultural Commissioner quarterly within 15 days after the end of the previous quarter, and upon request. The report may consist of a copy of all records for the previous quarter, or may be a summary letter/report as long as the original detailed records are available upon request. 							



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		 A long-term strategy for weed and pest control and management during the operation of the proposed project. Such strategies may include, but are not limited to: 							
		 Use of specific types of herbicides and pesticides on a scheduled basis. 							
		 Maintain a Pest Management Plan until reclamation is complete. 							
		 Develop and implement a Pest Management Plan that will reduce negative impacts to surrounding (not necessarily adjacent) farmland. 							
		 The project shall reimburse the Agricultural Commissioner's office for the actual cost of investigations, inspections, or other required non-routine 							
		responses to the site that							
		sources.							
Chapter 4.3	Air Qual	ity						-	
DESF and DWSF	AQ-1	The following mitigation measures are required for DESF and DWSF. Records sufficient to document compliance with mitigation measures shall be maintained on site at all times and available for ICAPCD inspection.	Prior to the issuance of a grading permit, ICAPCD shall verify that construction equipment are equipped with an	Department of Planning and Development Services and ICAPCD	Prior to the issuance of a grading permit	Department of Planning and Development Services and ICAPCD			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		Construction Equipment. The operator shall insure the use of Tier 2 vehicles or the equivalent alternative fueled or catalyst equipped diesel construction equipment, where practicable, including all off-road and portable diesel powered equipment.	engine designation of EPA Tier 2 or better.						
DESF and DWSF	AQ-2	Fugitive Dust Control. Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII-Fugitive Dust Control Measures. Whereas these Regulation VIII measures are mandatory and are not considered project environmental mitigation measures, the ICAPCD CEQA Handbook's required additional standard and enhanced mitigation measures listed below shall be implemented prior to and during construction. The County Department of Public Works will verify implementation and compliance with these measures as part of the grading permit review/approval process. ICAPCD Standard Measures for Fugitive Dust (PM ₁₀) Control • The operator shall	Prior to and during construction, the ICAPCD will verify that the project is in compliance with Regulation VIII – Fugitive Dust Control Measures.	Department of Planning and Development Services and ICAPCD	Prior to and during construction	Department of Planning and Development Services and ICAPCD			
		insure that all disturbed areas, including bulk material storage, which							

Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		 is not being actively utilized, will be effectively stabilized and visible emissions will be limited to no greater than 20% opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material such as vegetative ground cover. The operator shall insure that all on-site 							
		unpaved roads will be effectively stabilized and visible emissions be limited to no greater than 20% opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.							
		• The operator shall insure that all transport (import or export) of borrow material used as cover material will be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of borrow material. In addition, the cargo							

Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material.							
		 The operator shall insure that all track-out or carryout will be cleaned at the end of each workday. 							
		ICAPCD "Discretionary" Measures for Fugitive Dust (PM10) Control							
		 Water exposed soil with adequate frequency for continued moist soil, including a minimum of three wettings per day during grading activities. 							
		 Replace ground cover in disturbed areas as quickly as possible. 							
		 Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site. 							
		 Implement the trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees. 							
		 Implement a shuttle service to and from retail services and food 							



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		establishments during lunch hours.							
		Standard Mitigation Measures for Construction Combustion Equipment							
		 Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment. 							
		 Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum. 							
		 Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use. 							
		 Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set). 							
		To help provide a greater degree of reduction of PM emissions from construction combustion equipment the ICAPCD recommends the following enhanced measures.							

Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		Enhanced Mitigation Measures for Construction Equipment Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak hour of vehicular traffic on							
		 adjacent roadways. Implement activity management (e.g., rescheduling activities to reduce short-term impacts). 							
DESF and DWSF	AQ-3	Dust Suppression. The project applicant shall employ a method of dust suppression (such as water or chemical stabilization) approved by ICAPCD. The project applicant shall apply chemical stabilization as directed by the product manufacturer to control dust between the panels as approved by ICAPCD, and other non-used areas (exceptions will be the paved entrance and parking area, and Fire Department access/ emergency entry/exit points as approved by Fire/OES Department).	During construction, the Department of Planning and Development Services shall verify that the project applicant is employing a method of dust suppression approved by ICAPCD.	Department of Planning and Development Services	During construction	Department of Planning and Development Services			
DESF and DWSF	AQ-4	AQ-4 Dust Suppression Management Plan. Prior to any earthmoving activity, the applicant shall submit and obtain approval from the ICAPCD and	Prior to any earthmoving activity, the Department of Planning and	Department of Planning and Development Services	Prior to construction, prior to issuance of a Certificate of Occupancy	Department of Planning and Development Services and ICAPCD			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		Imperial County Planning and Development Services Department (ICPDSD) a construction Dust Control Plan.	Development Services shall review and approve a construction Dust Control Plan.						
DESF and DWSF	AQ-5	AQ-5 Operational Dust Control Plan. Prior to the issuance of a Certificate of Occupancy, the applicant shall submit and obtain approval from the ICAPCD and ICAPDSD an Operations Dust Control Plan. ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits are submitted for the proposed projects, the ICAPCD shall review the project to determine if Rule 310 fees are applicable to the proposed projects.	Prior to the issuance of a Certificate of Occupancy, the applicant shall submit and obtain approval from the ICAPCD and Department of Planning and Development Services an Operations Dust Control Plan.	Department of Planning and Development Services	Prior to issuance of a Certificate of Occupancy	Department of Planning and Development Services and ICAPCD			
Chapter 4.4	Biologic	al Resources	-	•	•	•	•	•	
DESF and DWSF	BR-1	 Burrowing Owl Mitigation. The following measures will avoid, minimize, or mitigate potential impacts to burrowing owl during construction activities: 1. Within 30 days prior to initiation of construction, pre-construction clearance surveys for burrowing owl shall be conducted by qualified and agency-approved biologists to determine the presence or absence of this species 	Prior to construction, the Department of Planning and Development Services shall verify that pre- construction surveys were conducted. If active burrows are present, the measures as provided in Mitigation	Department of Planning and Development Services	Prior to and during construction	Department of Planning and Development Services and CDFW			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		 within the project footprint. This is necessary, as burrowing owls may not use the same burrow every year; therefore, numbers and locations of burrowing owl burrows at the time of construction may differ from the data collected during previous focused surveys. The proposed project footprint shall be clearly demarcated in the field by the project engineers and biologist prior to the commencement of the pre-construction clearance survey. The surveys shall follow the protocols provided in the <i>Burrowing Owl Survey</i> <i>Protocol and Mitigation</i> <i>Guidelines.</i> If active burrows are present within the project footprint, the following mitigation measures shall be implemented. Passive relocation methods are to be used by the biological monitors to move the owls out of the impact zone. Passive relocation shall only be done in the non- 	Measures BR-1 shall be implemented.						



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		breeding season in		,		,		,	
		accordance with the							
		guidelines found in the							
		Imperial Irrigation							
		Installation Manual This							
		includes covering or							
		excavating all burrows							
		and installing one-way							
		doors into occupied							
		burrows. This will allow							
		any animals inside to							
		leave the burrow, but							
		will exclude any animals							
		from re-entering the							
		burrow. A period of at							
		reast one week is							
		relocation effort to allow							
		the birds to leave the							
		impacted area before							
		construction of the area							
		can begin. The burrows							
		shall then be excavated							
		and filled in to prevent							
		their reuse. The							
		destruction of the active							
		burrows on-site requires							
		construction of new							
		burrows at a mitigation							
		meters from the							
		impacted area and must							
		be constructed as part							
		of the above-described							
		relocation efforts. The							
		construction of new							
		burrows will take place							
		within open areas in the							



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		solar fields such as detention basins.							
		3. As the project construction schedule and details are finalized, an agency-approved biologist shall prepare a Burrowing Owl Mitigation and Monitoring Plan that will detail the approved, site- specific methodology proposed to minimize and mitigate impacts to this species. Passive relocation, destruction of burrows, construction of artificial burrows, and a Forage Habitat Plan shall only be completed upon prior approval by and in cooperation with the CDFW. The Mitigation and Monitoring Plan shall include success criteria, remedial measures, and an annual report to CDFW and shall be funded by the project applicant to ensure long- term management and monitoring of the protected lands.							
DESF and DWSF	BR-2	Worker Awareness Program. Prior to project initiation, a Worker Environmental Awareness Program (WEAP) shall be developed and	Prior to construction, the Department of Planning and Development	Department of Planning and Development Services	Prior to and during construction	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		 implemented by a qualified biologist, and shall be available in both English and Spanish. Wallet-sized cards summarizing this information shall be provided to all construction, operation, and maintenance personnel. The education program shall include the following aspects: Biology and status of the burrowing owl; CDFW/USFWS regulations; Protection measures designed to reduce potential impacts to the species, function of flagging designated authorized work areas; Reporting procedures to be used if a burrowing owl (dead, alive, injured) is encountered in the field. 	Services shall verify that a WEAP has been developed by the project biologist. The qualified biologist implementing the WEAP shall provide an attendance log to the Department of Planning and Development Services verifying that all construction, operation, and maintenance personnel have attended the worker awareness class.						
DESF and DWSF	BR-3	 Speed Limit. The Designated Biologist or Biological Monitor(s) shall evaluate and implement best measures to reduce burrowing owl mortality along access roads. A speed limit of 15 miles per hour when driving access roads. All vehicles required for O&M must remain on designated access/maintenance roads. 	During construction	Designated Biologist or Biological Monitor	During construction	Designated Biologist or Biological Monitor and Department of Planning and Development Services			



Project I Component I	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
DESF and B DWSF	3R-4	Temporary Construction Suspension. During the clearing and grubbing of the project sites, a Designated Biological Monitor shall be present to relocate and remove any potential sensitive species that may have been unaccounted for during focused surveys and habitat assessment. Construction shall cease until sensitive species have been relocated from the project sites.	During construction Mitigation Measure BR-4 shall be implemented.	Department of Planning and Development Services	During construction and O&M	Department of Planning and Development Services			
DESF and B DWSF	3R-5	Construction and O&M Mitigation Measures. In order to reduce the potential indirect impact to migratory birds, bats and raptors, an Avian Bat Protection Plan ABPP shall be prepared following the USFWS's guidelines and implemented by the project applicant. This ABPP shall outline conservation measures for construction and O&M activities that might reduce potential impacts to bird populations and shall be developed by the project applicant in conjunction with and input from the USFWS. Construction conservation measures to be incorporated into the ABPP include: 1. Minimizing disturbance to vegetation to the extent practicable. 2. Clearing vegetation outside of the breeding season. If construction	During construction and O&M, the applicant shall implement Mitigation Measure BR-5 which would include adherence to the stipulations of the ABPP.	Department of Planning and Development Services	During construction and O&M	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		 occurs between February 1 and September 15, an approved biologist shal conduct a pre- construction clearance survey for nesting birds in suitable nesting habitat that occurs within the project footprint. Pre- construction nesting surveys will identify any active migratory birds (and other sensitive non-migratory birds) nests. If a nesting bird i detected, the area will be avoided and a 100- foot buffer will be installed until the nestir birds have fledged and have been observed to be foraging independently. In the event the red-tail hawk nest is active, a 300-foot buffer shall be installed around the hawk nest until the birds are observed to be foraging independently. Direct impact to any active migratory bird nest should be avoided. Minimize wildfire potential. Minimize activities that attract prey and predators. 	g ot						

Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		 Control of non-native plants. O&M conservation measures to be incorporated into the ABPP include: 							
		 Incorporate APLIC guidelines for overhead utilities as appropriate to minimize avian collisions with transmission facilities (APLIC 2006). 							
		 Minimize noise. Minimize use of outdoor lighting. Implement post 							
		construction avian monitoring that will incorporate of the Wildlife Mortality Reporting Program.							
DESF and DWSF	BR-6	 Raptor and Active Raptor Nest Avoidance. Raptors and active raptor nests are protected under CFGC 3503.5, 3503, 3513. In order to prevent direct and indirect noise impact to nesting raptors such as red-tailed hawk, the following measures shall be implemented: If construction occurs between February 1 and July 15, a qualified biologist shall conduct a pre-construction clearance survey for nesting raptors in suitable nesting habitat (e.g., tall trees or 	Prior to construction, the Department of Planning and Development Services shall verify that pre- construction surveys were conducted. If active raptor nests are present, the measures as listed in Mitigation Measure BR-6 shall be implemented.	Department of Planning and Development Services	Prior to construction	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		transmission towers) that occurs within 300 feet of the site. If any active raptor nest is located, the nest area will be flagged, and a 300-foot buffer zone delineated, flagged, or otherwise marked. No work activity may occur within this buffer area, until a qualified biologist determines that the fledglings are independent of the nest.							
Chapter 4.5	Cultural	Resources							
DESF and DWSF	CR-1	Pursuant to CEQA Guidelines §15064.5(f), in the event that previously unidentified unique archaeological resources are encountered during construction or operational repairs, archaeological monitors will be authorized to temporarily divert construction work within 100 feet of the area of discovery until significance and the appropriate mitigation measures are determined by a qualified archaeologist familiar with the resources of the region. Applicant shall notify the County within 24 hours. Applicant shall provide contingency funding sufficient to allow for implementation of avoidance measures or appropriate mitigation.	The applicant shall notify the County within 24 hours if unidentified archaeological resources are encountered. The County shall verify that the applicant has provided contingency funding sufficient to allow for implementation of avoidance measures or appropriate mitigation.	Department of Planning and Development Services	During and post construction	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
DESF and DWSF	CR-2	In the event of the discovery of previously unidentified archaeological materials, the contractor shall immediately cease all work activities within approximately 100 feet of the discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, and scrapers) or tool making debris; culturally darkened soil ("midden") containing heat- affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. After cessation of excavation, the contractor shall immediately contact the Imperial County Department of Planning and Development Services. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), the discovery of any cultural resource within the project area shall not be grounds for a "stop work" notice or otherwise interfere with the project's	The applicant shall notify the County immediately if unknown archaeological resources are encountered. The applicant shall retain the services of a qualified professional archaeologist in the event of an unanticipated discovery.	Department of Planning and Development Services	During construction	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		continuation except as set forth in this paragraph. In the event of an unanticipated discovery of archaeological materials during construction, the applicant shall retain the services of a qualified professional archaeologist, meeting the Secretary of the Interior's Standards for a Qualified Archaeologist, to evaluate the significance of the materials prior to resuming any construction-related activities in the vicinity of the find. If the qualified archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the applicant shall implement an archaeological data recovery program.							
DESF and DWSF	CR-3	A County-approved qualified paleontological monitor shall be present during excavation activities associated with project construction. The depth of excavation that requires paleontological monitoring shall be determined by the paleontological monitor and the construction contractor based on initial observations during construction earth moving. The paleontological monitor will be equipped to salvage fossils as they are unearthed (to help avoid construction delays). Monitors are empowered to	During construction, a County-approved qualified paleontological monitor shall be present during excavation activities associated with project construction.	Department of Planning and Development Services	During construction	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		temporarily halt or divert equipment to allow removal of abundant or large specimens. Recovered specimens shall be prepared to a point of identification and permanent preservation. Fossil specimens shall be curated by accessioning them into an established, accredited museum repository with permanent retrievable paleontological storage. A report of findings with an appended itemized inventory of specimens will be prepared. The report and inventory, when submitted to the Imperial County Department of Planning and Development Services, along with confirmation of the curation of recovered specimens into an established, accredited museum repository, will signify completion of the program to mitigate impacts to paleontological resources. In general, a paleontological monitor will not be required after possible fossil bearing sediments have been excavated. The monitor is not required during the construction phase when the steel posts for the arrays are installed.							
DESF and DWSF	CR-4	Human Remains. In the event that any human remains or related resources are discovered on the project site, such resources shall be treated in accordance with federal, state, and local regulations and	During construction and operational repair period, discovery of human remains shall result work	Department of Planning and Development Services	During construction and operations	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		guidelines for disclosure, recovery, relocation, and preservation, as appropriate. All construction affecting the discovery site shall cease until, as required by CEQA Guidelines, Section 156064.5(e), the human remains are evaluated by the County Coroner for the nature of the remains and cause of death. All parties involved would ensure that any such remains are treated in a respectful manner and that all applicable federal, state, and local laws are followed. If human remains are found to be of Native American origin, or if associated grave goods or objects of cultural patrimony are discovered, the provisions of NAGPRA would be followed, and the Native American Heritage Commission shall be asked to determine the most likely descendants who are to be notified or, if unidentifiable, to	stoppage in that area until the coroner and the Native American Heritage Commission are contacted.						
		burial.							
Chapter 4.6	Geology	/ and Soils							
DESF and DWSF	GEO-1	Incorporate Site-Specific Recommendations from Geotechnical Report(s) Into Project Design. Facility design for all project components shall comply with the site-specific design recommendations as provided in the Divieland Fast	Prior to the issuance of a grading permit, the Department of Planning and Development Services shall verify a	Department of Planning and Development Services	Prior to issuance of a grading permit	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		Solar Farm Geotechnical Investigation Report (June 2015) and Dixieland West Solar Farm Geotechnical Investigation Report (June 2015) prepared by Landmark Consultants, Inc The following site-specific recommendations shall be implemented by the project applicant: • Site preparation; • Foundations and settlements; • Drilled piers; • Driven steel posts; • Concrete mixes and corrosivity; • Excavations; • Seismic design; • Soil erosion factors for SWPPP Plans; and	Geotechnical Report has been completed by the applicant.						
Chapter 4.7	Greenho	ouse Gas Emissions							
DESF and DWSF	GHG-1	 Diesel Equipment (Compression Ignition) Offset Strategies a. Use electricity from power poles rather than temporary diesel power generators. b. Construction equipment operating on-site should be equipped with two to four degree engine 	Prior to the issuance of a grading permit, the applicant shall identify measures to reduce greenhouse gas emissions as listed in Mitigation Measure GHG-1.	Department of Planning and Development Services and ICAPCD	Prior to issuance of a grading permit	Department of Planning and Development Services			


Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		timing retard or precombustion chamber engines. c. Construction equipment used for the project should utilize EPA Tier 2 or better engine technology (requirement under Mitigation Measure AQ-1 as described in Chapter 4.3, Air Quality of this EIR).							
DESF and DWSF	GHG-2	 Vehicular Trip (Spark Ignition) Offset Strategies a. Encourage commute alternatives by informing construction employees and customers about transportation options for reaching your location (i.e., post transit schedules/routes). b. Help construction employees "ride share" by posting commuter ride sign-up sheets, employee home, zip code, map, etc. c. When possible, arrange for single construction vendor who makes deliveries for several items. d. Plan construction delivery routes to eliminate unnecessary trips. 	Prior to the issuance of a grading permit, the applicant shall identify measures to reduce greenhouse gas emissions as listed in Mitigation Measure GHG-2.	Department of Planning and Development Services and ICAPCD	Prior to issuance of a grading permit	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		e. Keep construction vehicles well maintained to prevent leaks and minimize emissions.							
Chapter 4.9	Hydrolo	gy and Water Quality	•	•	•		•	•	
DESF and DWSF	HWQ-1	Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The project applicant or its contractor shall prepare a SWPPP specific to the projects and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009- DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the project applicant prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the projects. The SWPPP(s) shall incorporate control measures in the following categories:	Prior to construction and site restoration, the applicant shall prepare a SWPPP with incorporated control measures outlined in Mitigation Measure HWQ-1 and implement BMPs. The Department of Planning and Development Services shall confirm.	Department of Planning and Development Services	Prior to issuance of a grading permit and site restoration	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		 Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching); 							
		 Dewatering and/or flow diversion practices, if required (see Mitigation Measure HWQ-2); 							
		 Sediment control practices (temporary sediment basins, fiber rolls); 							
		 Temporary and post construction on- and off- site runoff controls; 							
		 Special considerations and BMPs for water crossings, wetlands, and drainages; 							
		 Monitoring protocols for discharge(s) and receiving waters, with emphasis placed on the following water quality objectives: dissolved oxygen, floating material, oil and grease, pH, and turbidity; 							
		 Waste management, handling, and disposal control practices; 							
		 Corrective action and spill contingency measures; 							
		 Agency and responsible party contact information, and 							

Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		 Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP. 							
		The SWPPP shall be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above- normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.							
DESF and DWSF	HWQ-2	Properly Dispose of Construction Dewatering in Accordance with the Colorado River Basin Regional Water	Prior to issuance of a grading permit, the applicant shall	Department of Planning and Development Services	Prior to issuance of a grading permit	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		Quality Control Board. If required, all construction dewatering shall be discharged to an approved land disposal area or drainage facility in accordance with Colorado River Basin RWQCB requirements. The project applicant or its construction contractor shall provide the Colorado River Basin RWQCB with the location, type of discharge, and methods of treatment and monitoring for all groundwater dewatering discharges. Emphasis shall be placed on those discharges that would occur directly or in proximity to surface water bodies and drainage facilities.	provide the Colorado River Basin Regional Water Quality Control Board with the location, type of discharge, and methods treatment and monitoring for all groundwater dewatering discharges if the project requires construction dewatering.						
DESF and DWSF	HWQ-3	Incorporate Post Construction Runoff BMPs into Project Drainage Plan and Maximize Opportunities for Low Impact Development. The project Drainage Plan shall adhere to County and IID guidelines to treat, control, and manage the on- and off-site discharge of stormwater to existing drainage systems. Low Impact Development opportunities, including but not limited to infiltration trenches or bioswales, will be investigated and integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage	Post construction, the applicant shall implement a Drainage Plan in accordance with the County and Imperial Irrigation District guidelines as outlined in Mitigation Measure HWQ- 3. The Department of Planning and Development Services and Imperial Irrigation District to confirm.	Department of Planning and Development Services	Post construction	Department of Planning and Development Services			

Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		facilities and treatment of runoff generated from project impervious surfaces prior to off- site discharge.							
		The project applicant shall ensure the provision of sufficient outlet protection through the use of energy dissipaters, vegetated rip-rap, soil protection, and/or other appropriate BMPs to slow runoff velocities and prevent erosion at discharge locations, access roads, electrical distribution, and solar array locations. A long-term maintenance plan shall be developed and implemented to support the functionality of drainage control devices. The facility layout(s) shall also include sufficient container storage and on-site containment and pollution-control devices for drainage facilities to avoid the off-site release of water quality pollutants, including, but not limited to oil and grease, fertilizers, treatment chemicals, and sediment.							
Chapter 4.11	Noise a	and Vibration				•	•		
DESF and DWSF	NOI-1	Limit Construction Hours. Construction and decommissioning activities shall be limited to daylight hours between 7 AM and 7 PM Monday through Friday, and 9 AM and 5 PM on Saturday for those construction areas that are located within 2,500 feet of noise-sensitive receptors. No	During construction and decommissioning activities, the applicant shall adhere to construction hours identified in Mitigation Measure NOI-1.	Department of Planning and Development Services	During construction and decommissioning activities	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
		Sundays or holidays.							
DESF and DWSF	NOI-2	Minimize Noise from Construction Equipment and Staging. Construction equipment noise shall be minimized during project construction and decommissioning by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools, where used. The project applicant's construction specifications shall also require that the contractor select staging areas as far as feasibly possible from sensitive receptors. All contractor specifications shall include a requirement that equipment located within 2,500 feet of noise-sensitive receptors shall be equipped with noise reducing engine housings or other noise reducing technology such that noise levels are no more 85 dBA at 50 feet. If necessary the line of sight between the equipment and nearby sensitive receptors shall be blocked by portable acoustic barriers and/or shields to reduce noise levels.	Prior to construction and decommissioning activities, the applicant shall implement measures outlined in Mitigation Measure NOI-2 to prevent noise from construction equipment and staging. The Department of Planning and Development Services to provide inspection for final approval.	Department of Planning and Development Services	Prior to construction and decommissioning activities	Department of Planning and Development Services			



Project Component	MM No.	Mitigation Measure	Monitoring Method	Responsible Monitoring Party	Monitoring Phase	Verification/ Approval Party	Date Mitigation Measure Verified or Implemented	Location of Documents (Monitoring Record)	Completion Requirement
DESF and DWSF	NOI-3	Prohibit Non-Essential Noise Sources During Construction. No amplified sources (e.g., stereo "boom boxes") shall be used in the vicinity of residences during project construction or decommissioning.	During construction and decommissioning activities, the applicant shall verify no amplified noise sources are in use.	Department of Planning and Development Services	During construction	Department of Planning and Development Services			
			The Department of Planning and Development Services to provide inspection for final approval.						
DESF and DWSF	NOI-4	Provide a Mechanism for Filing Noise Complaints. The project applicant shall provide a mechanism for residents, businesses, and agencies to register complaints with the County if construction noise levels are overly intrusive or construction occurs outside the required hours.	During construction, the applicant shall provide a mechanism for residents, businesses, and agencies to register complaints with the County if construction levels are overly intrusive or outside required hours. The Department of Planning and Development Services to provide inspection for final approval.	Department of Planning and Development Services	During construction	Department of Planning and Development Services			

0.1 EXECUTIVE SUMMARY

0.1.1 PROJECT OVERVIEW

This Environmental Impact Report (EIR) has been prepared in compliance with the California Environmental Quality Act (CEQA) Public Resources Code Section 21000 et seq., the CEQA Guidelines (Section 15000 et seq.) as promulgated by the California Resources Agency and the Governor's Office of Planning and Research. The purpose of this environmental document is to assess the potential environmental effects associated with the SEPV Dixieland East Solar Farm (DESF) and Dixieland West Solar Farm (DWSF) Projects and to propose mitigation measures, where required, to reduce significant impacts.

The proposed projects (DESF and DWSF facility sites) would consist of construction and operation of a photovoltaic (PV) solar energy facility and supporting uses. The projects would employ the use of PV power systems to convert solar energy into electricity using non-reflective technology. The major components of the facility are PV modules, single-axis sun tracking support structures, and electronic/electrical equipment to convert the electricity from the PV modules from direct current ("DC") electricity to alternating current ("AC") electricity and transfer the electricity to IID's existing Dixieland Substation. Ancillary equipment includes switch/fuse panels, control and protection equipment, communications hardware, and meteorological data equipment. In addition, a major component of the projects would be the restoration of the project sites to pre-project conditions once the facilities are no longer in use.

Two separate Conditional Use Permit (CUP) applications have been filed by the project applicant for each of the projects.

The proposed projects are located on privately owned, undeveloped, but partially disturbed land encompassing approximately 53 acres. The project area is located in the Dixieland area in unincorporated Imperial County. The project sites are located adjacent to the existing Dixieland Substation, which is located between the two project sites.

Electricity generated by DESF would be interconnected to the IID electrical distribution system at an existing IID 12kV distribution line (Pole Number T-18700) that runs north-south along Broadway Avenue by way of a gen-tie line that would cross Brown Avenue and run east-west along the southern boundary of the DESF site. Electricity generated by DWSF would be interconnected to the IID electrical distribution system at an existing IID 12kV distribution line (Pole Number T-51071) that runs north-south along the eastern edge of the project site along Carriso Avenue and within the existing 140-foot wide IID transmission easement on the DWSF site. The electricity generated by the projects would be used to serve local load demand on the IID distribution circuits. The details of each of the solar projects is further described and depicted in Chapter 3.0, Project Description.

0.1.2 PURPOSE OF AN EIR

The purpose of an EIR is to analyze the potential environmental impacts associated with a project. CEQA (Section 15002) states that the purpose of CEQA is to: (1) inform the public and governmental decision makers of the potential, significant environmental impacts of a project; (2) identify the ways that environmental damage can be avoided or significantly reduced; (3) prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and (4) disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

0.1.3 ELIMINATED FROM FURTHER REVIEW IN NOTICE OF PREPARATION

Based on the Initial Study and Notice of Preparation (IS/NOP) prepared for the proposed projects (Appendix A), Imperial County has determined that the proposed projects would not have the potential to



cause significant adverse effects associated with the topics identified below. Therefore, these topics are not addressed in this EIR; however, the rationale for eliminating these topics is briefly discussed below.

Forestry Resources

The project sites are located on privately owned, undeveloped, but partially disturbed land. No portion of the project sites (or the immediate vicinity) is zoned or designated as forest lands, timberlands, or Timberland Production. As such, the projects would not result in a conflict with existing zoning or cause rezoning. Therefore, implementation of the proposed projects would not impact forestry resources.

Mineral Resources

The project sites are not used for mineral resource production and the applicant is not proposing any form of mineral extraction. According to the Conservation and Open Space Element of the County of Imperial General Plan, no known mineral resources occur within the project sites nor do any of the project sites contain mapped mineral resources. As such, the proposed projects would not adversely affect the availability of any known mineral resources.

Recreation

The proposed projects would not generate new employment on a long-term basis. As such, the project would not significantly increase the use or accelerate the deterioration of regional parks or other recreational facilities. The temporary increase of population during construction that might be caused by an influx of workers would be minimal and not cause a detectable increase in the use of parks. Additionally, the projects do not include or require the expansion of recreational facilities. No impact will occur.

Population/Housing

The project sites are currently vacant. Development of housing is not proposed as part of the projects. The facilities would be remotely operated, controlled and monitored and with no requirement for daily onsite employees. The proposed projects would not result in a substantial population growth, as the number of employees required to operate and maintain the facilities is minimal. Therefore, no impact is identified for population and housing.

Public Services (Schools, Parks and Other Facilities)

The proposed projects do not include the development of residential land uses that would result in an increase in population or student generation. Construction of the proposed projects would not result in an increase in student population within the Imperial County's School District since it is anticipated that construction workers would commute in during construction operations.

Additionally, operation of the proposed projects would require minimal part-time staff for maintenance. Therefore, substantial permanent increases in population that would adversely affect local parks, libraries, and other public facilities (such as post offices) are not expected.

Utilities (Wastewater, Stormwater, and Solid Waste)

The projects would generate a minimal volume of wastewater during construction. During construction activities, wastewater would be contained within portable toilet facilities and disposed of at an approved site. No habitable structures are proposed on the project sites (such as O&M buildings); therefore, there would be no wastewater generation from the proposed projects. The proposed projects would not exceed wastewater treatment requirements of the Regional Water Quality Control Board. The proposed projects are not anticipated to generate a significant increase in the amount of runoff water from water use



involving solar panel washing. Water will continue to percolate through the ground, as a majority of the surfaces on the project site will remain pervious. The proposed projects would not substantially alter the existing drainage pattern of the site, substantially increase the rate of runoff, or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. No IID drains or canals will be removed or relocated within the project. A less than significant impact is identified for these issue areas.

During construction and operation of the projects, waste generation will be minor. Solid waste will be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. There are over 40 solid waste facilities listed in Imperial County in the CalRecycle database. Trash would likely be hauled to the Imperial Solid Waste Site located approximately nine miles northeast from the project area. The facility has approximately 183,804 cubic yards of capacity remaining (reporting date May 2012). The Imperial Solid Waste Site has a maximum permitted throughput of 18 tons/day and is estimated to remain in operation until March 1, 2019 (http://www.calrecycle.ca.gov/SWFacilities/Directory/13-AA-0001/Detail/). Therefore, there is ample landfill capacity to receive the minor amount of solid waste generated by project construction and operation. Additionally, because the proposed projects would generate solid waste during construction and recycling; including the 1989 California Integrated Waste Management Act and the 1991 California Solid Waste Reuse and Recycling Access Act of 1991. Also, conditions of the CUP for each project site will contain provisions for recycling and diversion of construction waste per policies of the County.

0.1.4 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES THAT REDUCE OR AVOID THE SIGNIFICANT IMPACTS

Based on the analysis presented in the IS/NOP and the information provided in the comments to the IS/NOP, the following environmental topics are analyzed in this EIR.

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions

- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use and Planning
- Noise and Vibration
- Public Services
- Transportation/Traffic
- Utilities/Service Systems

Table 0.1-1 summarizes existing environmental impacts that were determined to be potentially significant, mitigation measures, and level of significance after mitigation associated with the project.

0.1.5 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Areas of Concern

Section 15123(b)(2) of the CEQA Guidelines requires that an EIR identify areas of controversy as well as issues to be resolved known to the Lead Agency, including issues raised by other agencies and the public. Through the course of the environmental review process for these projects, areas of concern and issues to be resolved include potential impacts related to aesthetics, biological resources, water supply, and obstruction of planned IID transmission line routes.

Detailed analyses of these topics are included within each corresponding section contained within this document.



Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Agriculture	•		
Adversely Affect Agricultural Productivity	Potentially Significant	The following mitigation measure is required for the DESF and DWSF. AG-1. Prior to the issuance of a grading permit or building permit (whichever occurs first), a Weed and Pest- <u>Control Management</u> Plan shall be developed by the project applicant and approved by the County of Imperial Agricultural Commissioner. The plan shall provide the following:	Less than Significant
		 Monitoring, preventative, and management strategies for weed and pest controlmanagement during construction activities at any portion of the project (e.g., transmission line); 	
		 Control and management of weeds and pests in areas temporarily disturbed during construction where native seed will aid in site revegetation as follows; 	
		 Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner's office that a pest problem is present on the project site. The assistance of a licensed pest control advisor is recommended; 	
		 All treatments must be performed by a qualified applicator or a licensed pest control operatorbusiness; 	
		 "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation. Effective control methods may include physical/mechanical removal, bio control, cultural control, or chemical treatments; 	
		<u>Use of "permanent" soil sterilants to control weeds or other</u> <u>pests is prohibited due to the fact that this would interfere</u> <u>with reclamation.</u>	
		 Notify the Agricultural Commissioner's office immediately regarding any suspected exotic/invasive pest species such- as A- and Q-rated pest species as defined by the California Department of Food and Agriculture (CDFA) and the United States Department of Agriculture (USDA). Request a sample be taken by the Agricultural Commissioner's office of a suspected invasive species. Eradication of exotic pests shall 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
·		be done under the direction of the Agricultural Commissioner's Office and/or CDFA;	
		 Obey all pesticide use laws, regulations, and permit conditions; 	
		 <u>Allow access</u> <u>Access shall be allowed</u> by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties; 	
		 Ensure that Aall project employees that handle pest control issues shall beare appropriately trained and certified, and that all required records shall beare maintained and made- available for inspection, and that all - All required permits and other required legal documents are shall be maintained current; 	
		<u>Maintain Rrecords of pests found and treatments or pest</u> <u>management methods used.and controlled shall be</u> <u>maintained and available for review, or submitted to the</u> <u>Agricultural Commissioner's office on a quarterly basis</u> <u>Records shall include the date, location/block, project name</u> (current and previous if changed), and methods used. For <u>pesticides include the chemical(s) used, EPA Registration</u> <u>numbers, application rates, etc. A pesticide use report may</u> <u>be used for this;</u>	
		 Submit a report on pest finds and treatments or other pest management methods to the Agricultural Commissioner quarterly within 15 days after the end of the previous quarter, and upon request. The report may consist of a copy of all records for the previous quarter, or may be a summary letter/report as long as the original detailed records are available upon request. 	
		 A long-term strategy for weed and pest control and management during the operation of the proposed project. Such strategies may include, but are not limited to: 	
		 Use of specific types of herbicides and pesticides on a scheduled basis. 	
		 Maintain a Pest Management Plan until reclamation is complete. Maintenance and management of project site conditions to reduce the- potential for a significant increase in pest-related nuisance conditions- on adjacent agricultural lands. 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		5. Develop and implement a Pest Management Plan that will reduce	
		negative impacts to surrounding (not necessarily adjacent) farmland.	
		4.6. The project shall reimburse the Agricultural Commissioner's office for	
		the actual cost of investigations, inspections, or other required non-	
		routine responses to the site that are not funded by other sources.	
Air Quality			
Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation	Less than Significant	The following mitigation measures are required for DESF and DWSF. Records sufficient to document compliance with mitigation measures shall be maintained on site at all times and available for ICAPCD inspection. AQ-1 Construction Equipment. The operator shall insure the use of Tier 2 vehicles or the equivalent alternative fueled or catalyst equipped diesel construction equipment, where practicable, including all off-road and portable diesel powered equipment. AQ-2 Fugitive Dust Control. Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII-Fugitive Dust Control Measures. Whereas these Regulation VIII measures are mandatory and are not considered project environmental mitigation measures, the ICAPCD CEQA Handbook's required additional standard and enhanced mitigation measures listed below shall be implemented prior to and during construction. The County Department of	Less than Significant
		Public Works will verify implementation and compliance with these measures as part of the grading permit review/approval process.	
		ICAPCD Standard Measures for Fugitive Dust (PM ₁₀) Control	
		• The operator shall insure that all disturbed areas, including bulk material storage, which is not being actively utilized, will be effectively stabilized and visible emissions will be limited to no greater than 20% opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material such as vegetative ground cover.	
		• The operator shall insure that all on-site unpaved roads will be effectively stabilized and visible emissions be limited to no greater than 20% opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.	
		• The operator shall insure that all transport (import or export) of borrow material used as cover material will be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of borrow material. In addition, the cargo	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material.	
		 The operator shall insure that all track-out or carryout will be cleaned at the end of each workday. 	
		ICAPCD "Discretionary" Measures for Fugitive Dust (PM10) Control	
		 Water exposed soil with adequate frequency for continued moist soil, including a minimum of three wettings per day during grading activities. 	
		Replace ground cover in disturbed areas as quickly as possible.	
		 Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site. 	
		 Implement the trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees. 	
		 Implement a shuttle service to and from retail services and food establishments during lunch hours. 	
		Standard Mitigation Measures for Construction Combustion Equipment	
		 Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment. 	
		 Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum. 	
		 Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use. 	
		 Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set). 	
		To help provide a greater degree of reduction of PM emissions from construction combustion equipment the ICAPCD recommends the following enhanced measures.	
		Enhanced Mitigation Measures for Construction Equipment	
		 Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak hour of vehicular traffic on adjacent roadways. 	
		Implement activity management (e.g., rescheduling activities to reduce short-term impacts).	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		AQ-3 Dust Suppression. The project applicant shall employ a method of dust suppression (such as water or chemical stabilization) approved by ICAPCD. The project applicant shall apply chemical stabilization as directed by the product manufacturer to control dust between the panels as approved by ICAPCD, and other non-used areas (exceptions will be the paved entrance and parking area, and Fire Department access/emergency entry/exit points as approved by Fire/OES Department).	
		AQ-4 Dust Suppression Management Plan. Prior to any earthmoving activity, the applicant shall submit and obtain approval from the ICAPCD and Imperial County Planning and Development Services Department (ICPDSD) a construction Dust Control Plan.	
		AQ-5 Operational Dust Control Plan. Prior to the issuance of a Certificate of Occupancy, the applicant shall submit and obtain approval from the ICAPCD and ICAPDSD an Operations Dust Control Plan.	
		ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits are submitted for the proposed projects, the ICAPCD shall review the project to determine if Rule 310 fees are applicable to the proposed projects.	
Biological Resources	·		
Possible Habitat Modification – Burrowing Owl	Potentially Significant	 The following mitigation measures are required for DESF and DWSF. BR-1 Burrowing Owl Mitigation. The following measures will avoid, minimize, or mitigate potential impacts to burrowing owl during construction activities: 1. Within 30 days prior to initiation of construction, pre-construction clearance surveys for burrowing owl shall be conducted by qualified and agency-approved biologists to determine the presence or absence of this species within the project footprint. This is necessary, as burrowing owls may not use the same burrow every year; therefore, numbers and locations of burrowing owl burrows at the time of construction may differ from the data collected during previous focused surveys. The proposed project footprint shall be clearly demarcated in the field by the project engineers and biologist prior to the commencement of the pre-construction clearance survey. The surveys shall follow the protocols provided in the <i>Burrowing Owl Survey Protocol and Mitigation Guidelines</i>. 	Less than Significant
		 If active burrows are present within the project footprint, the following mitigation measures shall be implemented. Passive relocation 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		methods are to be used by the biological monitors to move the owls out of the impact zone. Passive relocation shall only be done in the non-breeding season in accordance with the guidelines found in the <i>Imperial Irrigation District Artificial Burrow Installation Manual</i> . This includes covering or excavating all burrows and installing one-way doors into occupied burrows. This will allow any animals inside to leave the burrow, but will exclude any animals from re-entering the burrow. A period of at least one week is required after the relocation effort to allow the birds to leave the impacted area before construction of the area can begin. The burrows shall then be excavated and filled in to prevent their reuse. The destruction of the active burrows on-site requires construction of new burrows at a mitigation ratio of 1:1 at least 50 meters from the impacted area and must be constructed as part of the above-described relocation efforts. The construction of new burrows will take place within open areas in the solar fields such as detention basins.	
		3. As the project construction schedule and details are finalized, an agency-approved biologist shall prepare a Burrowing Owl Mitigation and Monitoring Plan that will detail the approved, site-specific methodology proposed to minimize and mitigate impacts to this species. Passive relocation, destruction of burrows, construction of artificial burrows, and a Forage Habitat Plan shall only be completed upon prior approval by and in cooperation with the CDFW. The Mitigation and Monitoring Plan shall include success criteria, remedial measures, and an annual report to CDFW and shall be funded by the project applicant to ensure long-term management and monitoring of the protected lands.	
		BR-2 Worker Awareness Program. Prior to project initiation, a Worker Environmental Awareness Program (WEAP) shall be developed and implemented by a qualified biologist, and shall be available in both English and Spanish. Wallet-sized cards summarizing this information shall be provided to all construction, operation, and maintenance personnel. The education program shall include the following aspects:	
		 Biology and status of the burrowing owl; CDFW/USFWS regulations; Protection measures designed to reduce potential impacts to the species, function of flagging designated authorized work areas; 	
		 Reporting procedures to be used if a burrowing owl (dead, alive, injured) is encountered in the field. 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		 BR-3 Speed Limit. The Designated Biologist or Biological Monitor(s) shall evaluate and implement best measures to reduce burrowing owl mortality along access roads. A speed limit of 15 miles per hour when driving access roads. All vehicles required for O&M must remain on designated 	
		access/maintenance roads.	
Possible Habitat Modification – Colorado Valley Woodrat	Potentially Significant	The following mitigation measure is required for DESF and DWSF. BR-4 Temporary Construction Suspension. During the clearing and grubbing of the project sites, a Designated Biological Monitor shall be present to relocate and remove any potential sensitive species that may have been unaccounted for during focused surveys and habitat assessment. Construction shall cease until sensitive species have been relocated from the	Less than Significant
		project sites.	
Possible Habitat Modification - Migratory and Other Sensitive Non-Migratory Bird Species:	Potentially Significant	The following mitigation measures are required for DESF and DWSF. BR-5 Construction and O&M Mitigation Measures. In order to reduce the potential indirect impact to migratory birds, bats and raptors, an Avian Bat Protection Plan ABPP shall be prepared following the USFWS's guidelines and implemented by the project applicant. This ABPP shall outline conservation measures for construction and O&M activities that might reduce potential impacts to bird populations and shall be developed by the project applicant in conjunction with and input from the USFWS.	Less than Significant
		Construction conservation measures to be incorporated into the ABPP include:	
		 Minimizing disturbance to vegetation to the extent practicable. Clearing vegetation outside of the breeding season. If construction occurs between February 1 and September 15, an approved biologist shall conduct a pre-construction clearance survey for nesting birds in suitable nesting habitat that occurs within the project footprint. Pre-construction nesting surveys will identify any active migratory birds (and other sensitive non-migratory birds) nests. If a nesting bird is detected, the area will be avoided and a 100-foot buffer will be installed until the nesting birds have fledged and have been observed to be foraging independently. In the event the red-tail hawk nest is active, a 300-foot buffer shall be installed around the hawk nest until the birds are observed to be foraging independently. Direct impact to any active migratory bird nest should be avoided. Minimize wildfire potential. 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		5. Control of non-native plants.	
		O&M conservation measures to be incorporated into the ABPP include:	
		 Incorporate APLIC guidelines for overhead utilities as appropriate to minimize avian collisions with transmission facilities (APLIC 2006). 	
		2. Minimize noise.	
		3. Minimize use of outdoor lighting.	
		 Implement post-construction avian monitoring that will incorporate of the Wildlife Mortality Reporting Program. 	
		BR-6 Raptor and Active Raptor Nest Avoidance. Raptors and active raptor nests are protected under CFGC 3503.5, 3503, 3513. In order to prevent direct and indirect noise impact to nesting raptors such as red-tailed hawk, the following measures shall be implemented:	
		If construction occurs between February 1 and July 15, a qualified biologist shall conduct a pre-construction clearance survey for nesting raptors in suitable nesting habitat (e.g., tall trees or transmission towers) that occurs within 300 feet of the site. If any active raptor nest is located, the nest area will be flagged, and a 300-foot buffer zone delineated, flagged, or otherwise marked. No work activity may occur within this buffer area, until a qualified biologist determines that the fledglings are independent of the nest.	
Cultural Resources			
Impact to Archaeological Resources	Potentially Significant	CR-1 . Pursuant to CEQA Guidelines §15064.5(f), in the event that previously unidentified unique archaeological resources are encountered during construction or operational repairs, archaeological monitors will be authorized to temporarily divert construction work within 100 feet of the area of discovery until significance and the appropriate mitigation measures are determined by a gualified archaeologist familiar with the resources of the region.	Less than Significant
		Applicant shall notify the County within 24 hours. Applicant shall provide contingency funding sufficient to allow for implementation of avoidance measures or appropriate mitigation.	
		CR-2. In the event of the discovery of previously unidentified archaeological materials, the contractor shall immediately cease all work activities within approximately 100 feet of the discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, and scrapers) or tool making debris; culturally darkened soil ("midden")	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. After cessation of excavation, the contractor shall immediately contact the Imperial County Department of Planning and Development Services. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), the discovery of any cultural resource within the project area shall not be grounds for a "stop work" notice or otherwise interfere with the project's continuation except as set forth in this paragraph.	
		In the event of an unanticipated discovery of archaeological materials during construction, the applicant shall retain the services of a qualified professional archaeologist, meeting the Secretary of the Interior's Standards for a Qualified Archaeologist, to evaluate the significance of the materials prior to resuming any construction-related activities in the vicinity of the find. If the qualified archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the applicant shall implement an archaeological data recovery program.	
Impact to Paleontological Resources	Potentially Significant	The following mitigation measure is required for DESF and DWSF. CR-3. A County-approved qualified paleontological monitor shall be present during excavation activities associated with project construction. The depth of excavation that requires paleontological monitoring shall be determined by the paleontological monitor and the construction contractor based on initial observations during construction earth moving. The paleontological monitor will be equipped to salvage fossils as they are unearthed (to help avoid construction delays). Monitors are empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Recovered specimens shall be prepared to a point of identification and permanent preservation. Fossil specimens shall be curated by accessioning them into an established, accredited museum repository with permanent retrievable paleontological storage. A report of findings with an appended itemized inventory of specimens will be prepared. The report and inventory, when submitted to the Imperial County Department of Planning and Development Services, along with confirmation of the curation of recovered specimens into an established, accredited museum repository, will signify completion of the program to mitigate impacts to paleontological resources. In general, a paleontological monitor will not be required after possible fossil bearing sediments have been excavated. The monitor is not required during the accretive during the accretive during the accretive for the acres are an installed.	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Impact to Human Remains	Potentially Significant	The following mitigation measure is required for DESF and DWSF. CR-4 Human Remains. In the event that any human remains or related resources are discovered on the project site, such resources shall be treated in accordance with federal, state, and local regulations and guidelines for disclosure, recovery, relocation, and preservation, as appropriate. All construction affecting the discovery site shall cease until, as required by CEQA Guidelines, Section 156064.5(e), the human remains are evaluated by the County Coroner for the nature of the remains and cause of death. All parties involved would ensure that any such remains are treated in a respectful manner and that all applicable federal, state, and local laws are followed. If human remains are found to be of Native American origin, or if associated grave goods or objects of cultural patrimony are discovered, the provisions of NAGPRA would be followed, and the Native American Heritage Commission shall be asked to determine the most likely descendants who are to be notified or, if unidentifiable, to establish the procedures for burial.	Less than Significant
Geology and Soils			
Possible Risks to People and Structures Caused by Strong Seismic Ground Shaking	Potentially Significant	The following mitigation measure is required for DESF and DWSF. GEO-1 Incorporate Site-Specific Recommendations from Geotechnical Report(s) Into Project Design. Facility design for all project components shall comply with the site-specific design recommendations as provided in the Dixieland East Solar Farm Geotechnical Investigation Report (June 2015) and Dixieland West Solar Farm Geotechnical Investigation Report (June 2015) prepared by Landmark Consultants, Inc The following site-specific recommendations shall be implemented by the project applicant: Site preparation; Foundations and settlements; Drilled piers; Driven steel posts; Concrete mixes and corrosivity; Excavations; Seismic design; Soil erosion factors for SWPPP Plans; and Pavements. 	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Greenhouse Gas Emissions			
Generate Greenhouse Gas Emissions, Either Directly or	Less than Significant	The following mitigation measures are required for DESF and DWSF.	Less than Significant
Indirectly, that may have a		GHG-1 Diesel Equipment (Compression Ignition) Offset Strategies	
Environment.		 Use electricity from power poles rather than temporary diesel power generators. 	
		 Construction equipment operating on-site should be equipped with two to four degree engine timing retard or precombustion chamber engines. 	
		 Construction equipment used for the project should utilize EPA Tier 2 or better engine technology (requirement under Mitigation Measure AQ-1 as described in Chapter 4.3, Air Quality of this EIR). 	
		GHG-2 Vehicular Trip (Spark Ignition) Offset Strategies	
		 Encourage commute alternatives by informing construction employees and customers about transportation options for reaching your location (i.e., post transit schedules/routes). 	
		 Help construction employees "ride share" by posting commuter ride sign-up sheets, employee home, zip code, map, etc. 	
		 When possible, arrange for single construction vendor who makes deliveries for several items. 	
		d. Plan construction delivery routes to eliminate unnecessary trips.	
		e. Keep construction vehicles well maintained to prevent leaks and minimize emissions.	
Hydrology/Water Quality	-		
Violation of Water Quality Standards During Construction	Potentially Significant	The following mitigation measures are required for DESF and DWSF.	Less than Significant
		HWQ-1 Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration . The project applicant or its contractor shall prepare a SWPPP specific to the projects and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the project applicant prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the projects. The SWPPP(s) shall incorporate control measures in the following categories:	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		 Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching); 	
		 Dewatering and/or flow diversion practices, if required (see Mitigation Measure HWQ-2); 	
		Sediment control practices (temporary sediment basins, fiber rolls);	
		 Temporary and post-construction on- and off-site runoff controls; 	
		 Special considerations and BMPs for water crossings, wetlands, and drainages; 	
		 Monitoring protocols for discharge(s) and receiving waters, with emphasis placed on the following water quality objectives: dissolved oxygen, floating material, oil and grease, pH, and turbidity; 	
		 Waste management, handling, and disposal control practices; 	
		Corrective action and spill contingency measures;	
		Agency and responsible party contact information, and	
		 Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP. 	
		The SWPPP shall be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.	
		HWQ-2 Properly Dispose of Construction Dewatering in Accordance with the Colorado River Basin Regional Water Quality Control Board. If required, all construction dewatering shall be discharged to an approved land disposal area or drainage facility in accordance with Colorado River Basin RWQCB requirements. The project applicant or its construction contractor shall provide the Colorado River Basin RWQCB with the location, type of discharge, and methods of treatment and monitoring for all groundwater dewatering discharges. Emphasis shall be placed on those discharges that would occur directly or in proximity to surface water bodies and drainage facilities.	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Violation of Water Quality Standards During Operation	Potentially Significant	The following mitigation measure is required for DESF and DWSF.	Less than Significant
		HWQ-3 Incorporate Post-Construction Runoff BMPs into Project Drainage Plan and Maximize Opportunities for Low Impact Development. The project Drainage Plan shall adhere to County and IID guidelines to treat, control, and manage the on- and off-site discharge of stormwater to existing drainage systems. Low Impact Development opportunities, including but not limited to infiltration trenches or bioswales, will be investigated and integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and treatment of runoff generated from project impervious surfaces prior to off-site discharge.	
		The project applicant shall ensure the provision of sufficient outlet protection through the use of energy dissipaters, vegetated rip-rap, soil protection, and/or other appropriate BMPs to slow runoff velocities and prevent erosion at discharge locations, access roads, electrical distribution, and solar array locations. A long-term maintenance plan shall be developed and implemented to support the functionality of drainage control devices. The facility layout(s) shall also include sufficient container storage and on-site containment and pollution-control devices for drainage facilities to avoid the off-site release of water quality pollutants, including, but not limited to oil and grease, fertilizers, treatment chemicals, and sediment.	
Noise and Vibration	1	T	1
Temporary, Short-Term Exposure of Sensitive Receptors to Increased Equipment Noise from Project Construction.	Less Than Significant	The following mitigation measures are required for DESF and DWSF. NOI-1 Limit Construction Hours. Construction and decommissioning activities shall be limited to daylight hours between 7 AM and 7 PM Monday through Friday, and 9 AM and 5 PM on Saturday for those construction areas that are located within 2,500 feet of noise-sensitive receptors. No construction shall be allowed on Sundays or holidays.	Less Than Significant
		NOI-2 Minimize Noise from Construction Equipment and Staging. Construction equipment noise shall be minimized during project construction and decommissioning by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools, where used. The project applicant's construction specifications shall also require that the contractor select staging areas as far as feasibly possible from sensitive receptors. All contractor specifications shall include a requirement that equipment located within 2,500 feet of noise-sensitive receptors shall be equipped with noise reducing engine housings or other noise reducing technology such that noise levels are no more 85 dBA at 50 feet. If necessary the line of sight between the equipment	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		and nearby sensitive receptors shall be blocked by portable acoustic barriers and/or shields to reduce noise levels.	
		NOI-3 Prohibit Non-Essential Noise Sources During Construction. No amplified sources (e.g., stereo "boom boxes") shall be used in the vicinity of residences during project construction or decommissioning.	
		NOI-4 Provide a Mechanism for Filing Noise Complaints. The project applicant shall provide a mechanism for residents, businesses, and agencies to register complaints with the County if construction noise levels are overly intrusive or construction occurs outside the required hours.	

Statement of Overriding Considerations

CEQA Guidelines Section 15093 requires the Lead Agency to balance, as applicable, the economic, legal, social, and technological, or other benefits of the project against its unavoidable environmental risks when determining whether to approve the project. No significant and unmitigated impacts have been identified for the proposed projects; therefore, the County would not be required to adopt a Statement of Overriding Considerations pursuant to Section 15093 for this project.

0.1.6 **PROJECT ALTERNATIVES**

The environmental analysis for the proposed projects evaluated the potential environmental impacts resulting from implementation of the proposed projects, as well as alternatives to the projects. The alternatives include: Alternative 1: No Project/No Development; Alternative 2: Development of DESF Site Only. A detailed discussion of the alternatives considered is included in Section 8.0. Table 0.1--2 summarizes the impacts resulting from the proposed projects and the identified alternatives.

Alternative 1: No Project/No Development Alternative

The CEQA Guidelines require analysis of the No Project Alternative (Public Resources Code Section 15126). According to Section 15126.6(e), "the specific alternative of 'no project' shall also be evaluated along with its impacts. The 'no project' analysis shall discuss the existing conditions at the time the Notice of Preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services."

The No Project/No Development Alternative assumes that the DESF and DWSF projects, as proposed, would not be implemented and the project sites would not be developed.

The No Project/No Development Alternative would not meet any of the objectives of the projects. Additionally, the No Project/No Development Alternative would not help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of Assembly Bill (AB) 832 (California Global Warming Solutions Act of 2006).

Alternative 2: Development of DESF Site Only

Under this alternative, only the 24-acre DESF project would be constructed and operated. The purpose of this alternative is to avoid potential CDFW and RWQCB jurisdictional resources located within the DWSF site. Five ephemeral, intermittent washes totaling 0.739 acres (1,520 linear feet) were identified within the DWSF site.

Implementation of Alternative 2: Development of DESF Site Only would result in reduced impacts for the following environmental issues areas as compared to the proposed projects: agriculture, biological resources, cultural resources, greenhouse gas emissions (construction phase only), and hydrology/water quality. This alternative would not result in any greater environmental impacts when compared to the proposed projects.

Environmentally Superior Alternative

The No Project/No Development Alternative would be considered the environmentally superior alternative, since it would eliminate all of the significant impacts identified for the projects. However, CEQA Guidelines Section 15126.6(e)(2) states that "if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." The environmentally superior alternative would be Alternative 2: Development of DESF Site Only because it would reduce impacts for the following environmental issues areas as compared to the proposed projects agriculture, biological resources, cultural resources, greenhouse gas emissions (construction phase only), and hydrology/water quality.



Environmental Issue Area	Proposed Project	Alternative 1 - No Project/ No Development	Alternative 2 - Development of DESF Site Only
Aesthetics	Less than Significant	CEQA Significance: No impact	CEQA Significance: Less than significant
		Comparison to Projects: Less impact	Comparison to Projects: Similar impact
Agriculture	Mitigated to below a level less than significant	CEQA Significance: No impact	CEQA Significance: Mitigated to below a level less than significant
		Comparison to Projects: Less impact (avoid)	Comparison to Projects: Less impact
Air Quality	Less than significant	CEQA Significance: No impact	CEQA Significance: Less than significant
		Comparison to Projects: Less impact	Comparison to Projects: Similar impact
Biological Resources	Mitigated to below a level less than significant	CEQA Significance: No impact	CEQA Significance: Mitigated to below a level less than significant
		Comparison to Projects: Less impact (avoid)	Comparison to Projects: Less impact (avoid)
Cultural Resources	Mitigated to below a level less than significant	CEQA Significance: No impact	CEQA Significance: Mitigated to below a level of significance
		Comparison to Projects: Less impact (avoid)	Comparison to Projects: Less impact
Geology and Soils	Mitigated to below a level less than significant	CEQA Significance: No impact	CEQA Significance: Mitigated to below a level less than significant
		Comparison to Projects: Less impact (avoid)	Comparison to Projects: Similar impact

TABLE 0.1-2. COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES



Environmental Issue Area	Proposed Project	Alternative 1 - No Project/ No Development	Alternative 2 - Development of DESF Site Only
Greenhouse Gas Emissions	Mitigated to below a level less than significantLess than significant	CEQA Significance: No impact Comparison to Projects: Less impact	CEQA Significance: Mitigated to below a level less than- significantLess than significant Comparison to Projects: Less impact during construction. Would not achieve GHG emission reductions to the extent of the proposed project as less renewable energy would be produced
Hazards and Hazardous Materials	Less than Significant	CEQA Significance: No impact Comparison to Projects: Less impact	CEQA Significance: Less than significant Comparison to Projects: Similar impact
Hydrology/ Water Quality	Mitigated to below a level less than significant	CEQA Significance: No impact Comparison to Projects Less impact	CEQA Significance: Mitigated to below a level less than significant Comparison to Projects: Less impact
Land Use/Planning	Less than significant	CEQA Significance: No impact Comparison to Projects: Less impact	CEQA Significance: Less than significant Comparison to Projects: Similar impact
Noise	Mitigated to below a level less than significantLess than significant_	CEQA Significance: No impact Comparison to Projects: Less impact	CEQA Significance: <u>Mitigated to below a level less than-</u> <u>significantLess than significant</u> Comparison to Projects: Similar impact
Public Services	Less than Significant	CEQA Significance: No impact Comparison to Projects: Less impact	CEQA Significance: Less than significant Comparison to Projects: Similar Impact
Transportation/ Traffic	Less than significant	CEQA Significance: No impact Comparison to Projects: Less impact	CEQA Significance: Less than significant Comparison to Projects: Similar Impact



Environmental Issue Area	Proposed Project	Alternative 1 - No Project/ No Development	Alternative 2 - Development of DESF Site Only
Utilities	Less than Significant	CEQA Significance: No impact	CEQA Significance: Less than significant
		Comparison to Projects: Less impact	Comparison to Projects Similar Impact



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1.0 INTRODUCTION

This Environmental Impact Report (EIR) has been prepared to meet the requirements of the California Environmental Quality Act (CEQA) for purposes of evaluating the potential environmental impacts, mitigation measures, and alternatives associated with the proposed SEPV Dixieland East Solar Farm (DESF) and Dixieland West Solar Farm (DWSF) Projects. This EIR describes the existing environment that would be affected by, and the environmental consequences which could result from the construction and operation of the proposed projects as described in detail in Chapter 3.0 of this EIR.

1.1 OVERVIEW OF THE PROPOSED PROJECTS

The proposed projects (DESF and DWSF facility sites) would consist of construction and operation of an expansive photovoltaic (PV) solar energy facility and supporting uses. The projects would employ the use of PV power systems to convert solar energy into electricity using non-reflective technology. The major components of each facility are PV modules, single-axis sun tracking support structures, and electronic/electrical equipment to convert the electricity from the PV modules from direct current ("DC") electricity to alternating current ("AC") electricity and transfer the electricity to IID's existing Dixieland Substation. Ancillary equipment includes switch/fuse panels, control and protection equipment, communications hardware, and meteorological data equipment. In addition, a major component of the projects would be the restoration of the project sites to pre-project conditions once the project is no longer in use.

Two separate Conditional Use Permit (CUP) applications have been filed by the project applicant for each of the projects.

The proposed projects are located on privately owned, undeveloped, but partially disturbed land encompassing approximately 53 acres. The project area is located in the Dixieland area in unincorporated Imperial County. The project sites are located adjacent to the existing Dixieland Substation, which is located between the two project sites.

Electricity generated by DESF would be interconnected to the IID electrical distribution system at an existing IID 12kV distribution line (Pole Number T-18700) that runs north-south along Broadway Avenue by way of a gen-tie line that would cross Brown Avenue and run east-west along the southern boundary of the DESF site. Electricity generated by DWSF would be interconnected to the IID electrical distribution system at an existing IID 12kV distribution line (Pole Number T-51071) that runs north-south along the eastern edge of the project site along Carriso Avenue and within the existing 140-foot wide IID transmission easement on the DWSF site. The electricity generated by the projects would be used to serve local load demand on the IID distribution circuits. The details of each of the solar projects is further described and depicted in Chapter 3.0, Project Description.

1.1.1 Agency Roles and Responsibilities

1.1.1.1 County of Imperial

The County of Imperial will be required to approve two CUPs to allow for the construction and operation of the proposed DESF and DWSF projects. Pursuant to Imperial County Land Use Ordinance Title 9, Division 5, Chapter 9, "Solar Energy Plants" is a use that is permitted in the A-2 Zone, subject to issuance of a CUP by the County. No land use changes would be required in order to implement the proposed action.

The following approvals will be required for implementation of the projects:



- Approval of CUPs. Implementation of the solar farm projects would require the approval of two CUPs by the County to allow for the construction and operation of the proposed DESF and DWSF projects. The projects are located on a total of four privately-owned legal parcels zoned A-2 (General Agriculture). Pursuant to Title 9, Division 5, Chapter 9, "Solar Energy Plants" is a use that is permitted in the A-2 Zone, subject to approval of a CUP.
- 2. Site Plans. Site Plan and Architectural Review is required.
- 3. *Roadway Abandonments.* The applicant is requesting the abandonment of the following roadway easements:
 - Abandonment of the public service easement alley intermediate between the two existing parcels (APNs 051-035-001 and 051-035-002) on the west side of Brown Road.
 - Abandonment of the northern 20 feet of Potrero Avenue from the east line of Brown Road to the west line of Canal Street.
 - Abandonment of the northern 20 feet of Cocupa Avenue from the east line of Broadway Avenue to the west line of Brown Road.
 - Abandonment of the eastern 40 feet of Broadway Avenue from the south line of Del Norte Avenue to the north line of Cocupa Avenue.
- 4. Lot Line Merger. Approval of a Lot Merger application for APN 051-047-001 to create a single lot/parcel by merging the boundaries of the small internal lots and those portions of Cocupa Avenue, Cyuma Street, Del Norte Avenue and the unnamed alleys vacated by resolution recorded August 19, 1954, as Instrument No. 11, in Book 891, Page 575 of Official Records and those portions of Canal Street vacated by resolution recorded May 10, 1962, as Instrument No. 82, in Book 1110, Page 435 of Official Records. The Lot Merger will also include the land area created through approval of the road abandonment process.-
- 5.4. Certification of the EIR. After the required public review for the Draft EIR, the County will respond to written comments, edit the document, and produce a Final EIR to be certified by the Planning Commission and/or Board of Supervisors prior to making a decision on the projects.
- 6-5. **Reclamation Plans.** The project applicant has prepared a site reclamation plan for each of the projects (EIR Appendix L). As required by the County, when the projects are decommissioned at the end of their life spans, the project applicant or its successor in interest would be responsible for implementing the reclamation plan, which includes the removal, recycling, and/or disposal of all solar arrays, inverters, transformers and other structures on each of the sites, as well as restoration of the site to its pre-project condition. The County is responsible for approving the reclamation plan for each project and confirming that financial assurances for each of the projects are in conformance with Imperial County ordinances.

Subsequent ministerial approvals may include, but are not limited to:

- Grading and clearing permits;
- Building permits; and
- Encroachment permits.



1.1.1.2 Other Agency Reviews and/or Consultations

1.1.1.2.1 Federal

U.S. Fish and Wildlife Service

• Consultation regarding potential impacts to special-status species or their habitat as required under the Federal Endangered Species Act (FESA). If applicable, Section 10 take permits would be required for the loss of such species and their habitat.

1.1.1.2.2 State

California Department of Fish and Wildlife (Trustee Agency)

• Consultation regarding potential impacts to California special-status species or their habitats as required under the California Endangered Species Act (CESA). If applicable, incidental take permits for the loss of such species or their habitat would be required. Consultation regarding potential impacts to waters/wetlands of the state. If applicable, a Section 1602 Streambed Alteration Agreement would be required.

California Department of Transportation

• Utility encroachment permits and/or consultation on potential impacts/improvements regarding Caltrans roads/rights-of-way.

California Regional Water Quality Control Board

National Pollution Discharge Elimination System (NPDES) Construction General Permit Order No. 2009-009-DWQ. Requires the applicant to file a public Notice of Intent to discharge stormwater and to prepare and implement a stormwater pollution prevention plan (SWPPP).

NPDES General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems Order No. 2013-0001-DWQ. Requires that discharges of pollutants from areas of new development be reduced to the maximum extent practicable in order to protect receiving waters and uphold water quality standards.

Consultation Regarding Potential Impacts to Jurisdictional Waters. If applicable, CWA Section 401 Water Quality Certification, or permitting under California Porter-Cologne Act.

1.1.1.2.3 Local

Imperial County Fire Department

• Review as part of the EIR process including the final design of the proposed fire system.

Imperial Irrigation District

• Review as part of the EIR process including approval of encroachment permits and water supply agreements.



Imperial County Air Pollution Control District

• Review as part of the EIR process regarding consistency with the Imperial County Air Pollution Control District (ICAPCD) CEQA Air Quality Handbook, the final "Modified" 2009 8-hour Ozone Air Quality Management Plan, and the State Implementation Plan for particulate matter less than 10 microns in diameter (PM₁₀) in the Imperial Valley, and including verification of Rule 801 compliance.

1.2 RELATIONSHIP TO STATUTES, REGULATIONS, AND OTHER PLANS

County of Imperial General Plan and Land Use Ordinance

The General Plan provides guidance on future growth in the County of Imperial. Any development in the County of Imperial must be consistent with the General Plan and the Land Use Ordinance (Title 9, Division 10).

Renewables Portfolio Standard Program

Established in 2002 under Senate Bill (SB) 1078, California's Renewables Portfolio Standard (RPS) was accelerated in 2006 under SB 107 by requiring that 20 percent of electricity retail sales be served by renewable energy resources by 2010. Subsequent recommendations in California energy policy reports advocated a goal of 33 percent by 2020. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08 requiring that "...[a]II retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020." The following year, Executive Order S-21-09 directed the California Air Resources Board, under its Assembly Bill 32 authority, to enact regulations to achieve the goal of 33 percent renewables by 2020.

In the ongoing effort to codify the ambitious 33 percent by 2020 goal, Senate Bill X1-2 was signed by Governor Brown, in April 2011. This new RPS preempts the California Air Resources Boards' 33 percent Renewable Electricity Standard and applies to all electricity retailers in the state including publicly owned utilities (POUs), investor-owned utilities (IOUs), electricity service providers, and community choice aggregators. All of these entities must have adopted the new RPS goals of 20 percent of retails sales from renewables by the end of 2013, 25 percent by the end of 2016, and the 33 percent requirement being met by the end of 2020. Renewable energy sources include wind, geothermal, and solar.

California Global Warming Solutions Act of 2006, Assembly Bill 32 (Statutes 2006; Chapter 488; Health and Safety Code Sections 38500 et seq.)

This Act requires the Air Resources Board (ARB) to enact standards that will reduce greenhouse gas (GHG) emissions to 1990 levels by 2020. Electricity production facilities are regulated by the ARB.

Title 17 CCR, Subchapter 10, Article 2, Sections 95100 et seq.

These ARB regulations implement mandatory GHG emissions reporting as part of the California Global Warming Solutions Act of 2006.

Federal Clean Air Act

The legal authority for federal programs regarding air pollution control is based on the 1990 Clean Air Act Amendments (CAAA). These are the latest in a series of amendments made to the Clean Air Act (CAA). This legislation modified and extended federal legal authority provided by the earlier Clean Air Acts of 1963 and 1970.



The Air Pollution Control Act of 1955 was the first Federal legislation involving air pollution. This Act provided funds for federal research in air pollution. The CAA of 1963 was the first Federal legislation regarding air pollution control. It established a federal program within the U.S. Public Health Service and authorized research into techniques for monitoring and controlling air pollution. In 1967, the Air Quality Act was enacted in order to expand Federal government activities. In accordance with this law, enforcement proceedings were initiated in areas subject to interstate air pollution transport. As part of these proceedings, the Federal government for the first time conducted extensive ambient monitoring studies and stationary source inspections.

The Air Quality Act of 1967 also authorized expanded studies of air pollutant emission inventories, ambient monitoring techniques, and control techniques.

Imperial County Air Pollution Control District

The Imperial County Air Pollution Control District enforces rules and regulations regarding air emissions associated with various activities, including construction and farming, and operational activities associated with various land uses, in order to protect the public health.

Federal Clean Water Act (33 United States Code §§1251-1387)

The Federal Water Pollution Control Act (33 United States Code [USC] §§1251-1387), otherwise known as the CWA, is a comprehensive statute aimed at restoring and maintaining the chemical, physical and biological integrity of the nation's waters. Enacted originally in 1948, the Act was amended numerous times until it was reorganized and expanded in 1972. It continues to be amended almost every year. Primary authority for the implementation and enforcement of the CWA rests with the U.S. Environmental Protection Agency (EPA). In addition to the measures authorized before 1972, the Act authorizes water quality programs, requires federal effluent limitations and state water quality standards, requires permits for the discharge of pollutants into navigable waters, provides enforcement mechanisms, and authorizes funding for wastewater treatment works construction grants and state revolving loan programs, as well as funding to states and tribes for their water quality programs. Provisions have also been added to address water quality problems in specific regions and specific waterways.

Important for wildlife protection purposes are the provisions requiring permits to dispose of dredged and fill materials into navigable waters. Permits are issued by the U.S. Army Corps of Engineers (USACE) under guidelines developed by EPA pursuant to Section 404 of the CWA.

Federal Clean Water Act and California Porter-Cologne Water Quality Control Act

The project is located within the Colorado River Basin (CRB) Regional Water Quality Control Board (RWQCB), Region 7. The Federal CWA and the California Porter-Cologne Water Quality Control Act require that Water Quality Control Plans (more commonly referred to as Basin Plans) be prepared for the nine state-designated hydrologic basins in California. The Basin Plan serves to guide and coordinate the management of water quality within the region.

Federal Endangered Species Act

FESA (16 U.S.C. 1531-1544) provides protection for plants and animals whose populations are dwindling to levels that are no longer sustainable in the wild. The Act sets out a process for listing species, which allows for petition from any party to list a plant or animal. Depending on the species, either the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) will determine whether listing the species is warranted. If it is warranted, the species will be listed as either threatened or endangered. The difference between the two categories is one of degree, with endangered species receiving more protections under the statute.



Section 9 of the ESA prohibits the "take" of listed fish and wildlife species, but not plant species. This provision applies to every person. The definition of "take" includes, by regulation, "significant habitat modification or degradation that actually kills or injures wildlife." 50 Code of Federal Regulations (CFR) §17.3.

National Historic Preservation Act

Federal regulations (36 CFR Part 800.2) define historic properties as "any prehistoric or historic district, site, building, structure, or object included, or eligible for inclusion in, in the National Register of Historic Places (NRHP)." The term "cultural resource" is used to denote a historic or prehistoric district, site, building, structure, or object, regardless of whether it is eligible for the NRHP.

California Endangered Species Act (Government Code Section 2050)

CESA is enacted through Government Code Section 2050. Section 2080 of the California Fish and Game Code prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

CESA allows for take incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project caused losses of listed species populations and their essential habitats.

California Lake and Streambed Program (Fish and Game Code Section 1602)

The California Department of Fish and Wildlife (CDFW) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code (Section 1602) requires an entity to notify CDFW of any proposed activity that may substantially modify a river, stream, or lake.

1.3 PURPOSE OF AN EIR

The purpose of an EIR is to analyze the potential environmental impacts associated with a project. CEQA (Section 15002) states that the purpose of CEQA is to: (1) inform the public and governmental decision makers of the potential, significant environmental impacts of a project; (2) identify the ways that environmental damage can be avoided or significantly reduced; (3) prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and (4) disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

1.4 EIR PROCESS

1.4.1 Availability of Reports

This <u>Draft_Final_EIR</u> and documents incorporated by reference are available for public review at the County of Imperial Planning and Development Services Department, 801 Main Street, El Centro, California 92243. Copies are also available for review at the City of El Centro Public Library, 539 State Street, El Centro, CA. Documents at these locations may be reviewed during regular business hours.

David Black, Planner IV County of Imperial, Planning and Development Services Department 801 Main Street El Centro, CA 92243


Comments received during the public review period of the Draft EIR will behave been reviewed and responded to in this the Final EIR. The Final EIR will then be reviewed by the Imperial County Planning Commission and Board of Supervisors as a part of the procedure to adopt the EIR. Additional information on this process may be obtained by contacting the County of Imperial Planning and Development Services Department at (760) 482-4236.

1.4.2 Public Participation Opportunities/Comments and Coordination

1.4.2.1 Notice of Preparation

The County of Imperial issued a Notice of Preparation (NOP) for the preparation of an EIR for the SEPV Dixieland East and West Projects on May 15, 2015. The NOP was distributed to City, County, State, and Federal agencies, other public agencies, and various interested private organizations and individuals in order to define the scope of the EIR. The NOP was also published in the Imperial Valley Press on May 16, 2015. The purpose of the NOP was to identify public agency and public concerns regarding the potential impacts of the projects, and the scope and content of environmental issues to be addressed in the EIR. Correspondence in response to the NOP was received from the following entities and persons:

- State Clearinghouse (May 18, 2015)
- Imperial Irrigation District (June 17, 2015)
- Imperial County Air Pollution Control District (June 18, 2015)

The comments submitted on the NOP during the public review and comment period are included as Appendix A to this EIR.

1.4.2.2 Scoping Meeting and Environmental Evaluation Committee

During the NOP public review period, the SEPV Dixieland East and West Projects were discussed as an informational item at the County's Environmental Evaluation Committee meeting on May 28, 2015. Additionally, a scoping meeting for the general public as well public agencies was held on May 28, 2015 at 6:00 p.m. The meeting was held by the Imperial County Planning & Development Services Department in the Board of Supervisors Chambers located at the County Administration Center at 940 Main Street, El Centro, CA.

1.4.3 Environmental Topics Addressed

Based on the analysis presented in the NOP and the information provided in the comments to the NOP, the following environmental topics are analyzed in this EIR.

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions

- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use and Planning
- Noise and Vibration
- Public Services
- Transportation/Traffic
- Utilities/Service Systems

1.4.3.1 Eliminated from Further Review in Notice of Preparation

The Initial Study and NOP completed by the County (Appendix A) determined that environmental effects to Forestry Resources, Mineral Resources, Recreation, Population/Housing, Public Services (Schools, Parks and Other Facilities), and Utilities (Wastewater, Stormwater, and Solid Waste) would not be



potentially significant. Therefore, these impacts are not addressed in this EIR; however, the rationale for eliminating these issues is briefly discussed below:

Forestry Resources

The project sites are located on privately owned, undeveloped, but partially disturbed land. No portion of the project sites (or the immediate vicinity) is zoned or designated as forest lands, timberlands, or Timberland Production. As such, the projects would not result in a conflict with existing zoning or cause rezoning. Therefore, implementation of the proposed projects would not impact forestry resources.

Mineral Resources

The project sites are not used for mineral resource production and the applicant is not proposing any form of mineral extraction. According to the Conservation and Open Space Element of the County of Imperial General Plan, no known mineral resources occur within the project sites nor do any of the project sites contain mapped mineral resources. As such, the proposed projects would not adversely affect the availability of any known mineral resources.

Recreation

The proposed projects would not generate new employment on a long-term basis. As such, the projects would not significantly increase the use or accelerate the deterioration of regional parks or other recreational facilities. The temporary increase of population during construction that might be caused by an influx of workers would be minimal and not cause a detectable increase in the use of parks. Additionally, the projects do not include or require the expansion of recreational facilities. No impact will occur.

Population/Housing

The project sites are currently vacant. Development of housing is not proposed as part of the projects. The facilities would be remotely operated, controlled and monitored and with no requirement for daily onsite employees. The proposed projects would not result in a substantial population growth, as the number of employees required to operate and maintain the facilities is minimal. Therefore, no impact is identified for population and housing.

Public Services (Schools, Parks and Other Facilities)

The proposed projects do not include the development of residential land uses that would result in an increase in population or student generation. Construction of the proposed projects would not result in an increase in student population within the Imperial County's School District since it is anticipated that construction workers would commute in during construction operations.

Additionally, operation of the proposed projects would require minimal part-time staff for maintenance. Therefore, substantial permanent increases in population that would adversely affect local parks, libraries, and other public facilities (such as post offices) are not expected.

Utilities (Wastewater, Stormwater, and Solid Waste)

The projects would generate a minimal volume of wastewater during construction. During construction activities, wastewater would be contained within portable toilet facilities and disposed of at an approved site. No habitable structures are proposed on the project sites (such as O&M buildings); therefore, there would be no wastewater generation from the proposed projects. The proposed projects would not exceed wastewater treatment requirements of the RWQCB. The proposed projects are not anticipated to generate a significant increase in the amount of runoff water from water use involving solar panel



washing. Water will continue to percolate through the ground, as a majority of the surfaces on the project site will remain pervious. The proposed projects would not substantially alter the existing drainage pattern of the site, substantially increase the rate of runoff, or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. No IID drains or canals will be removed or relocated within the project sites. A less than significant impact is identified for these issue areas.

During construction and operation of the projects, waste generation will be minor. Solid waste will be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. There are over 40_solid waste facilities listed in Imperial County in the CalRecycle database. Trash would likely be hauled to the Imperial Solid Waste Site located approximately nine miles northeast from the project area. The facility has approximately 183, 804 cubic yards of capacity remaining (reporting date May 2012). The Imperial Solid Waste Site has a maximum permitted throughput of 18 tons/day and is estimated to remain in operation until March 1, 2019 (http://www.calrecycle.ca.gov/SWFacilities/Directory/13-AA-0001/Detail/). Therefore, there is ample landfill capacity to receive the minor amount of solid waste generated by project construction and operation. Additionally, because the proposed projects would generate solid waste during construction and recycling; including the 1989 California Integrated Waste Management Act and the 1991 California Solid Waste Reuse and Recycling Access Act of 1991. Also, conditions of the CUP for each project site will contain provisions for recycling and diversion of construction waste per policies of the County.

1.4.4 Areas of Controversy and Issues to be Resolved

Section 15123(b)(2) of the *CEQA Guidelines* requires that an EIR identify areas of controversy known to the Lead Agency, including issues raised by other agencies and the public as well as issues to be resolved. Through the course of the environmental review process for these projects, areas of concern and issues to be resolved include potential impacts related to aesthetics, biological resources, water supply, and obstruction of planned IID transmission line routes.

1.4.5 Document Organization

The structure of the Draft-Final EIR is identified below. The Draft EIR was organized into eleven chapters, including the Executive Summary. Within Chapter 4.0, the environmental impacts associated with implementation of the proposed projects are addressed.

- Section I.1 Introduction describes CEQA requirements and content of this Final EIR.
- Section II.1 Corrections and Additions provides a list of those revisions made to the Draft EIR
 text as a result of comments received and/or clarifications subsequent to release of the Draft EIR
 for public review. Revisions to the Draft EIR have been incorporated into this Final EIR
 document.
- Section III.1 Responses to Comment Letters Received on the Draft EIR provides copies of the comment letters received and individual responses to written comments. In accordance with Public Resources Code 21092.5, copies of the written proposed responses to public agencies will be forwarded to the agencies at least 10 days prior to certifying an EIR. The responses will conform to the legal standards established for response to comments on Draft EIRs.
- Section IV.1 Mitigation Monitoring and Reporting Program includes the Mitigation Monitoring and Reporting Program (MMRP) which identifies the mitigation measures, timing and responsibility for implementation of the measures.
- The **Executive Summary** provides a summary of the proposed projects, including a summary of project impacts, mitigation measures, and project alternatives.



- **Chapter 1.0 Introduction** provides a brief introduction of the proposed projects; relationship to statutes, regulations and other plans; the purpose of an EIR; public participation opportunities; availability of reports; and, comments received on the NOP.
- **Chapter 2.0 Environmental Setting** provides a description of the physical characteristics of the proposed projects.
- **Chapter 3.0 Project Description** provides a description of the SEPV Dixieland East and West Solar Farm Projects. This chapter also defines the goals and objectives of the proposed projects, provides details regarding the individual components that together comprise the projects, and identifies the discretionary approvals required for implementation of each of the projects.
- Chapter 4.0 Environmental Analysis provides an analysis of the environmental impacts of the projects for the following environmental issues: aesthetics; agricultural resources; air quality; biological resources; cultural resources; geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology/water quality; land use and planning; noise and vibration; public services; transportation/traffic; and utilities/service systems. This chapter also identifies mitigation measures to address potential impacts to the environmental issues identified above.
- Chapter 5.0 Analysis of Long-Term Effects provides an analysis of growth inducing impacts, significant irreversible environmental changes, and unavoidable adverse impacts.
- **Chapter 6.0 Cumulative Impacts** discusses the impact of the proposed projects in conjunction with other planned and future development in the surrounding areas.
- Chapter 7.0 Effects Found Not to be Significant lists all the issues determined to not be significant as a result of the preparation of this EIR.
- Chapter 8.0 Alternatives analyzes the alternatives to the proposed projects.
- Chapter 9.0 References lists the data references utilized in preparation of the EIR.
- Chapter 10.0 EIR Preparers and Organizations Contacted lists all the individuals and companies involved in the preparation of the EIR, as well as the individuals and agencies consulted and cited in the EIR.



2.0 ENVIRONMENTAL SETTING

The proposed projects encompass a total of 53 acres of land located in unincorporated Imperial County. Imperial County encompasses over 4,597 square miles or 2,942,080 acres of land, bordered by Mexico to the south. Riverside County to the north. San Diego County on the west, and the State of Arizona on the east. The terrain varies from 235 feet below sea level at the Salton Sea to 4,548 feet at Blue Angel peak.

The project area is characterized by a typical desert climate with dry, warm winters, and hot, dry summers. Most of the rainfall occurs in conjunction with monsoonal conditions between May and September, with an average annual rainfall of less than 3 inches for the project area. The 10-year, 24-hour estimated precipitation amount for the project sites is 1.8 inches; while the 100-year, 24-hour estimated precipitation is 3 inches (Western Regional Climate Center 2004).

The Imperial Valley is an irrigated agricultural area. Approximately one-fifth of the nearly three million acres in Imperial County is irrigated for agricultural purposes, of which the majority are located within the Imperial Valley. The Imperial Valley area encompasses a total of 989,450 acres, of which 512,163 acres are irrigated.

Approximately 20 percent of the land in Imperial County is irrigated for agricultural purposes, most notably the central area known as Imperial Valley (512,163 acres). The rich soils of Imperial County, particularly of the Imperial Valley, were created by periodic flooding of the Colorado River over thousands of years which left deep, rich deposits of silt. Favorable climate, productive soils, and the availability of irrigated water have permitted Imperial County to become a leading producer of agricultural products. Irrigation agriculture in the County is extremely diverse and includes numerous types of vegetable crops including lettuce, carrots, onions, tomatoes, cauliflower, and broccoli; alfalfa, Sudan grass, and other animal feed; sugar beets; wheat and other grains; melons; cotton; various citrus fruits, and nuts. Two resources that are vital to past and future agricultural production are productive soils and adequate water availability (Imperial County General Plan, as amended through 2008).

Imperial County is, and will continue to be a predominately agricultural area; however, a significant increase in urbanization since 2003 has occurred, including recently developed, and developing solar facilities, and other alternative energy projects such as geothermal. Most of Imperial County, approximately 50 percent, is still largely undeveloped or under federal ownership. According to the Southern California Association of Governments (SCAG), between 2000 and 2014, the total population of the County increased by 38,311 to 180,672 (based on 2014 census data). The growth rate during the 14 years (26.9 percent) was higher than the SCAG region rate (12.3 percent) (SCAG 2015). The developed area where the County's incorporate cities, unincorporated communities, and supporting facilities are situated comprise less than one percent of the land (Imperial County General Plan, as amended through 2008). There are several residences located within close proximity to the project sites. The nearest residences to the DESF site are east of the Westside Main Canal along Foxglove Street, and in a trailer located at the northwest corner of West Evan Hewes Highway and Canal Street. Another single family residence adjacent to DESF is approximately 120 feet west of the western edge of the site, adjacent to the IID substation. Approximately 1,500 feet west of DWSF is the Imperial Lakes Water Ski Community which includes 20 residences surrounding two man-made lakes.

2.1 LOCATION OF PROJECTS

The proposed projects are located on privately owned, undeveloped, but partially disturbed land encompassing approximately 53 acres. The project area is located in the Dixieland area in unincorporated Imperial County. The southern-most boundary of the projects borders West Evan Hewes Highway. The eastern-most boundary of the project sites (Dixieland East) borders the Westside Main Canal, and is approximately 11.5 miles west of El Centro, California. The Dixieland East project site is located in Township 16 South, Range 12 East, Section 7, and the Dixieland West project site is located in Township 16 South, Range 11 East, Section 12 (San Bernardino Baseline and Meridian). The geographic center of the project area roughly corresponds with existing Dixieland Substation at 32°47'41.70"N latitude, 115°46'36.50"W longitude.



Two separate Conditional Use Permit (CUP) applications have been filed with the County, which together define the project sites. The two CUP applications or individual site locations consist of the following:

- Dixieland East Solar Farm (DESF); and •
- Dixieland West Solar Farm (DWSF). •

The project sites are located adjacent to the existing Dixieland Substation, which is located between the two project sites. The project sites (i.e., Dixieland East) border the Westside Main Canal on the east and are located approximately 1.500 feet from the Imperial Lakes Water Ski Community to the west. Table 3-1 in Section 3.0, Project Description identifies the individual assessor parcel numbers (APNs) associated with the DESF and DWSF with their respective combined acreage, and zoning.

2.1.1 **Transmission and Collector Facilities**

Electricity generated by DESF would be interconnected to the IID electrical distribution system at an existing IID 12kV distribution line (Pole Number T-18700) that runs north-south along Broadway Avenue by way of a gen-tie line that would cross Brown Avenue and run east-west along the southern boundary of the DESF site. Electricity generated by DWSF would be interconnected to the IID electrical distribution system at an existing IID 12kV distribution line (Pole Number T-51071) that runs north-south along the eastern edge of the project site along Carriso Avenue and within the existing 140-foot wide IID transmission easement on the DWSF site. The electricity generated by the projects would be used to serve local load demand on the IID distribution circuits.

2.2 PHYSICAL CHARACTERISTICS

2.2.1 Aesthetics and Visual Resources

The project area is located in the Dixieland area in unincorporated Imperial County, California. The Yuha Desert is generally located to the west and is comprised of upland desert landscape that transitions into the Peninsular Mountain Range that extends south into Mexico. Carrizo Mountain rises 2,400 feet above mean sea level in the southern Yuha Desert, and is the prominent visual landscape feature west of the project sites. The eastern-most boundary of the project sites (Dixieland East) borders the Westside Main Canal, and is approximately 11.5 miles west of El Centro, California. Areas to the east of the project area (that is, east of the Westside Main Canal), are generally level and characterized as an agriculturally dominated landscape. Views to the north, south, and west are characterized as a desert environment. Prominent visual features near the project sites include an agricultural canal (Westside Main Canal) that supply water to the agricultural areas, the IID Dixieland substation, scattered agricultural structures or residences, and the Centinela State Prison.

2.2.2 **Agricultural Resources**

In 2013, Imperial County (County) was ranked tenth among the 58 counties in the State of California with respect to production of agricultural goods, earning \$1,945,759,000 (gross) for the State's economy (California Department of Food and Agriculture 2015). Vegetable and melon crops were the top commodities in Imperial County producing \$865,401,000 in the year 2013. Livestock and field crops were the next two largest commodities generating \$617,371,000 and \$471,461,000, respectively, for Imperial County (Imperial County Agricultural Commissioner 2013).

2.2.3 **Air Quality**

The project area is located in the Salton Sea Air Basin (SSAB) under the jurisdiction of the ICAPCD. The SSAB, which contains part of Riverside County and all of Imperial County, is governed largely by the large-scale sinking and warming of air within the semi-permanent subtropical high-pressure center over the Pacific Ocean. The high-pressure ridge blocks out most mid-latitude storms, except in winter when the



high is weakest and farthest south. When the fringes of mid-latitude storms pass through the Imperial Valley in winter, the coastal mountains create a strong "rainshadow" effect that makes Imperial Valley the second driest location in the United States. The flat terrain near the Salton Sea, intense heat from the sun during the day, and strong radiational cooling at night create deep convective thermals during the daytime and equally strong surface-based temperature inversions at night. The temperature inversions and light nighttime winds trap any local air pollution emissions near the ground. The area is subject to frequent hazy conditions at sunrise, followed by rapid daytime dissipation as winds pick up and the temperature warms.

Currently, the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of 8-hour ozone (O_3), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter (PM_{2.5}). Imperial County is classified as a "serious" non-attainment area for PM₁₀ and a "moderate" non-attainment area for 8-hour ozone for the NAAQS and non-attainment for PM25 for the urban areas of Imperial County. Air pollutants transported into the SSAB from the adjacent South Coast Air Basin (Los Angeles, San Bernardino County, Orange County, and Riverside County) and from Mexicali. Mexico substantially contribute to the non-attainment conditions in the SSAB. The closest air quality monitoring station to the project study areas is the City of El Centro (150 Ninth Street, El Centro, CA 92243). This monitoring station measures PM₁₀, PM_{2.5}, carbon monoxide (CO), and nitrogen dioxide (NO₂).

2.2.4 **Biological Resources**

The project sites are surrounded by relatively undeveloped, moderately disturbed desert scrubland. Open access BLM lands are adjacent to the west and north sides of DWSF, and the Westside Main Canal is located to the east of DESF. A large area of cultivated agricultural croplands is situated on the east side of the Westside Main Canal, approximately 0.3 miles from the eastern boundary of DESF. As shown in Figure 4.4-1, the dominant habitat types within DWSF consist of approximately 35.5 acres of creosote scrub and 2.5 acres of mesquite. The habitat types within DESF consist of 4.1 acres of creosote scrub, 19.7 acres of ruderal habitat and 1.1 acres of Tamarix thicket. No riparian habitat or sensitive natural communities were observed any of the sites. Based on habitat requirements and geographic restrictions, no species listed as state or federally endangered and/or threatened included in the literature search results is likely to occur on the project sites. Although the sites contain potential habitat for burrowing owl and the flat-tailed horned lizard, no burrowing owl or flat-tailed horned lizard were observed on the project sites during biological surveys conducted for the project. Colorado Valley woodrat was not observed on the project sites during field investigations. However, den building materials are present on the project sites among the mesquite and tamarisk trees. The vegetation habitat within and adjacent to the project sites is suitable for providing nesting opportunities for avian species as evidenced in the red-tailed hawk nest observed immediately northeast of DWSF. Five ephemeral, intermittent washes totaling 0.739 acres (1,520 linear feet) were identified within the DWSF site.

2.2.5 **Cultural Resources**

Thousands of prehistoric archaeological resources and hundreds of historical era resources are found throughout Imperial County. Prehistoric evidence of land and natural resource use in the form of trails, rock art, geoglyphs, fish traps, and resource procurement and manufacturing locations are found in the regions surrounding the fertile valley portion of the county. From a historical standpoint, the intensive use of Imperial Valley for irrigation agriculture since the beginning of the 1900's has impacted any resources that may have existed on land that is now farmland or under the Salton Sea. Historic resource sites date back to 1540, when the Hernando de Alcaron Expedition discovered Alta California from near the intersection of Interstate 8 (I-8) and Highway 186. The next major historical event occurred in 1775 when Juan Bautista de Anza first passed through the area. The Anza Trail itself constitutes a significant cultural resource in the Yuha Desert, as does the later Sonoran/Southern Emigrant Trail which served as a major route to and from coastal California from 1825 to 1865. Although very few structures or artifacts may remain from the use of these trails, the routes themselves are of historical significance. Various other structures, such as missions (Spanish period 1769-1821) and a fort (Mexican period 1821-1848) are still evident in regions throughout the county (Imperial County Planning and Development 1993).



Data from the Southern Coast Information Center (SCIC) revealed 20 previous cultural resources studies have been conducted within or adjacent to the project sites, and 47 cultural resources have been recorded within one-mile of the project sites. No cultural resources were found to be in DESF. Six prehistoric isolates (P-13-9539, 9540, 9589, 13122, 13123, and 13124) and one secondary deposit of mixed prehistoric artifacts (P-13-13125) and modern materials were previously recorded in DWSF. Additionally, one previously unrecorded cultural resource (a prehistoric artifact scatter temporarily designated SEP 1501-P-1) was identified. Based on results of initial research and additional evaluation for SEP1501-P-1, these resources were not identified as being "historical resources" under CEQA.

The paleontological collection records at the Natural History Museum of Los Angeles County were reviewed for the Project locations and the presence of known fossil localities. No vertebrate fossil localities have been previously discovered within the project area boundaries; however there are fossil localities nearby that have been found in similar geological deposits that occur in the project area. Based on the results of this initial research, the paleontological sensitivity of the deposits within the project area is considered to be high.

2.2.6 Geology and Soils

The project sites are located in the Imperial Valley portion of the Salton Trough physiographic province. The Salton Trough is a topographic and geologic structural depression resulting from large scale regional faulting. The trough is bounded on the northeast by the San Andreas Fault and Chocolate Mountains and the southwest by the Peninsular Range and faults of the San Jacinto Fault Zone. The Salton Trough represents the northward extension of the Gulf of California, containing both marine and non-marine sediments deposited since the Miocene Epoch.

Tectonic activity that formed the trough continues at a high rate as evidenced by deformed young sedimentary deposits and high levels of seismicity.

The geologic conditions present within the County contribute to a wide variety of hazards that can result in loss of life, bodily injury, and property damage. Fault displacement is the principal geologic hazard affecting public safety in Imperial County. The primary seismic hazard at the project sites is the potential for strong groundshaking due to potential fault movements along the Brawley, Superstition Hills, and Imperial Faults. Secondary geologic hazards that have a potential to occur include differential ground settlement, soil liquefaction, rock and mudslides, ground lurching, or ground displacement along the fault.

2.2.7 Greenhouse Gases

GHGs are gases that trap heat in the atmosphere. These emissions occur from natural processes as well as human activities. Human-caused sources of CO_2 include combustion of fossil fuels (coal, oil, natural gas, gasoline and wood). Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. Concentrations of CO_2 have increased in the atmosphere since the industrial revolution. CH_4 is the main component of natural gas and also arises naturally from anaerobic decay of organic matter. Human-caused sources of N_2O include combustion of fossil fuels (coal, oil, natural fuels and industrial processes such as nylon production and production of nitric acid. Other GHGs are present in trace amounts in the atmosphere and are generated from various industrial or other uses. GHGs present in the project sites primarily include CO_2 and N_2O from farm equipment and local traffic.

2.2.8 Hazards and Hazardous Materials

The project area is located in an agriculturally zoned area of Imperial County. However, the project sites and surrounding area (west of the canal) have not been actively cultivated as agricultural land within recent years. The potential for an accident is increased in regions near major arterial roadways or railways that transport hazardous materials and in regions with agricultural or industrial facilities that use, store, handle, or dispose of hazardous materials.



2.2.9 Hydrology/Water Quality

The project area lies within the Colorado River Basin Region. The Colorado River Basin Region covers approximately 13 million acres (20,000 square miles) in the southeastern portion of California. It includes all of Imperial County and portions of San Bernardino, Riverside, and San Diego Counties. The Colorado River Basin Region is divided into seven major planning areas on the basis of difference economic and hydrologic characteristics.

The projects are located within the Imperial Valley Planning Area of the Colorado River Basin. The Imperial Valley Planning Area consists of the following hydrological units (HU): Imperial (723.00) comprised of 2,500 square miles in the southern portion of the Colorado River Basin Region, with the majority located in Imperial County: Davies (724.00). located to the east of the project sites, and Amos-Ogilby (726.00), located to the east of the project area. The project sites are located within the Imperial HU.

The Imperial Valley Planning Area's central feature is the flat, fertile Imperial Valley (California Regional Water Quality Control Board 2014). All watersheds within the Imperial Valley are located within a depression (the Salton Trough), resulting in a closed basin. The highest point is located at the Colorado River Delta in Mexico and the lowest point is located below sea level near the Riverside County line, draining into the Salton Sea. Two hydrologic areas are located within the Imperial HU, the Coyote Wells Hydrological Area (HA) located to the west of the project sites and the Brawley HA, where the project sites are located.

2.2.10 Noise

The predominant source of noise in the project area includes vehicular traffic on local roads and highways, and off-site agricultural operations. The use of heavy-duty equipment such as front-end loaders, tractors, forklifts, and diesel-powered trucks are common noise sources typically associated with agricultural uses. Agricultural operational equipment can reach maximum levels of approximately 84 dBA at 50 feet (Caltrans 2013). With the soft surfaces characterizing the agricultural landscape, these noise levels attenuate to approximately 60 dBA at distances over 800 feet. Based on field observations of the project sites, the existing noise environment is generally influenced by the noise produced from the following sources:

- Vehicle traffic along West Evan Hewes Highway, and
- Agricultural operations occurring east of the project sites.

2.2.11 **Public Services**

The project area is located in unincorporated Imperial County, east of the City of El Centro and just north of I-8. The project sites are located within the Imperial County Fire Department and Office of Emergency Services (ICFD/OES) and the Imperial County Sheriff Department's areas of service.

2.2.12 Transportation/Traffic

The project area is located within the County of Imperial on privately owned, undeveloped agricultural land collectively encompassing 53 acres approximately 10 miles west of El Centro, California. The surrounding roadways include the Evan Hewes Highway, Dunaway Road, I-8, and Brown Road. The existing circulation system is discussed further in Section 4.13 Transportation/Traffic.

2.2.13 **Utilities/Service Systems**

The source of nearly all surface waters in Imperial County is the Colorado River. The water is diverted from the Colorado River at the Palo Verde Weir north of Blythe by the Palo Verde Irrigation District for use in the Palo Verde Valley of northeast Imperial County and southeast Riverside County; and at the



Imperial Dam into the All-American Canal by the Imperial Irrigation District (IID) and the Bard Irrigation District for use in the Imperial, Yuma, Bard, and Coachella Valleys. The 82-mile All-American Canal, has several main canals that branch off: the East Highline, Central Main and Westside Main canals (IID n.d. (a)). These three canals supply water service to Imperial Valley and are operated and maintained by IID (IID n.d.(a)). The IID serves irrigation water and electric power to farmers and residents in the lower southeastern portion of California's desert.

The proposed projects are located on privately owned, undeveloped, but partially disturbed land. Besides the brief period between 1979 and 1984 in which the DESF site was used for agricultural production, both project sites have not been historically used for agricultural purposes. Therefore the annual water usage and estimated water consumption of either site has not been recorded by IID.

2.3 EXISTING LAND USE

The proposed projects are located on privately owned, undeveloped, but partially disturbed land. The project area is located in the Dixieland area in unincorporated Imperial County. The southern-most boundary of the projects borders West Evan Hewes Highway. The eastern-most boundary of the project sites (DESF) borders the Westside Main Canal, and is approximately 10 miles west of El Centro, California. The project sites are designated as Agriculture under the County's General Plan (as amended through 2008). The project sites are located within the General Agriculture (A-2) zoning designation. Surrounding uses consists of vacant desert land with rural lots and a few remaining residences. The Centinela State Prison is located approximately two miles northwest.

On and off-site uses are comprised of irrigated agriculture with isolated residential structures scattered sparsely throughout the project area.

The nearest residence (a mobile home) is adjacent to the DESF site to the east, 175 feet from the project boundary where construction equipment would be used. Eight more residences (four houses and four mobile homes) are located east of the project across the Westside Main Canal with the closest construction noise approximately 350 feet from the nearest residence. South of the project are two rural residences, with the nearest located approximately 350 feet from the project. The Imperial Lakes Water Ski Community is located west of DWSF. This development includes 20 residences (mobile homes). The eastern boundary of the Imperial Lakes Water Ski Community is approximately 1,500 feet from the DWSF western boundary. No residences are located immediately to the north. The land to the west of the canal, including the project sites are zoned for agricultural uses; however a majority of the land is underutilized vacant land. The nearest area of actively cultivated agricultural croplands is situated on the east side of Westside Main Canal, approximately 0.3 miles from the eastern boundary of DESF.

3.0 **PROJECT DESCRIPTION**

Chapter 3.0 provides a description of the SEPV Dixieland East and West Projects. This chapter also defines the goals and objectives of the proposed projects, provides details regarding the individual components that together comprise the projects, and identifies the discretionary approvals required for project implementation of each of the projects.

3.1 LOCATION OF PROJECTS

The proposed projects are located on privately owned, undeveloped, but partially disturbed land encompassing approximately 53 acres. The project area is located in the Dixieland area in unincorporated Imperial County (County) (see Figure 3-1). The southern-most boundary of the projects borders West Evan Hewes Highway. The eastern-most boundary of the project sites (Dixieland East) borders the Westside Main Canal, and is approximately 11.5 miles west of El Centro, California. The Dixieland East project site is located in Township 16 South, Range 12 East, Section 7, and the Dixieland West project site is located in Township 16 South, Range 11 East, Section 12 (San Bernardino Baseline and Meridian). The geographic center of the project area roughly corresponds with existing Dixieland Substation at 32°47'41.70"N latitude, 115°46'36.50"W longitude. Figure 3-1 illustrates the project area.

Two separate Conditional Use Permit (CUP) applications have been filed with the County, which together define the project sites. The two CUP applications or individual site locations consist of the following:

- Dixieland East Solar Farm (DESF); and
- Dixieland West Solar Farm (DWSF).

The project sites are located adjacent to the existing Dixieland Substation, which is located between the two project sites. The project sites (i.e., Dixieland East) border the Westside Main Canal on the east and are located approximately 1,500 feet from the Imperial Lakes Water Ski Community to the west. Table 3-1 identifies the individual assessor parcel numbers (APNs) associated with the DESF and DWSF with their respective combined acreage, and zoning. The location of the project sites is shown in Figure 3-2.

	APN	Acreage	Zoning
Dixieland East Solar Farm	051-047-001		A-2
	051-035-001	24	A-2
	051-035-002		A-2
Dixieland West Solar Farm	034-390-026	29	A-2
Total		53	

3.1.1 Renewable Energy Overlay Zone

The County has recently prepared an update to the existing Geothermal/Alternative Energy and Transmission Element of its General Plan, called the Renewable Energy and Transmission Element. <u>The County approved the Renewable Energy and Transmission Element in October 2015.Still in draft form, and adoption pending, this This</u> General Plan element was created as part of the California Energy Commission Renewable Energy Grant Program to amend and update the County's General Plan to facilitate future development of renewable energy projects. This General Plan element uses the Desert Renewable Energy Conservation Plan (DRECP) as an initial planning and policy framework, then applies further constraints analysis to the proposed renewable energy zones based on the County's goals and priorities, including protection of agricultural land.





Figure 3-1. Regional Location

G:/GIS_Production/Projects/CntyImperial_8126/SEPV_Dixieland_EIR_259563/Map_Docs/mxd/Project Location_Landscape.mxd-yli-7/21/2015

1-25

Figure 3-2. Project Sites





As part of this effort, the County developed a draft-Renewable Energy (RE) Overlay Zone Map, which identifies locations within the County authorized for development and operation of renewable energy projects with an approved Renewable Energy Conditional Use Permit (RECUP). The proposed RE Overlay Zone is concentrated in areas that were determined to be the most suitable for the development of renewable energy facilities while minimizing the impact to other established uses. The RE Overlay Zone covers approximately 61,627.10 acres of land and surface water within the Salton Sea. The Overlay Zone Map contains three categories: (1) Geothermal, (2) Renewable Energy, and (3) Renewable Energy/Geothermal.

As shown in Figure 3-3, the project sites are located within a proposed Renewable Energy/Geothermal overlay zone. The Renewable Energy/Geothermal overlay zone category was established to identify areas that could be developed with any form of renewable energy technology, including geothermal production. This Renewable Energy overlay zone category provides the greatest range of opportunities for future development of renewable energy, while preserving and protecting agricultural, natural, and cultural resources.

3.1.2 Dixieland East Solar Farm

The DESF project site consists of three parcels totaling 24 acres within the eastern portion of the project area. As shown in Figure 3-2, the DESF project site is generally located between the Westside Main Canal to the east and the Dixieland Substation to the west with W. Evan Hewes Highway to the south. Primary and secondary access to DESF is via W. Evan Hewes Highway to Brown Road. The DESF site includes the following County APNs: 051-047-001, 051-035-001, and 051-035-002.

3.1.3 Dixieland West Solar Farm

The DWSF project site consists of one parcel totaling 29 acres within the western portion of the project area. As shown in Figure 3-2, the DWSF is generally bounded by W. Evan Hewes Highway to the south, vacant land to the west and north, and the Dixieland Substation on the east. The Imperial Lakes Water Ski Community is located approximately 1,500 feet west of the DWSF project site. Primary and secondary access to the DWSF is via W. Evan Hewes Highway to Carriso Avenue. Carriso Avenue extends north of W. Evan Hewes Highway along the eastern perimeter of the site. The Imperial Irrigation District's (IID) existing electrical distribution line runs north-south along the eastern edge of the project site along Carriso Avenue and within the existing 140-foot wide IID transmission easement. The DWSF project site includes one County APN: 034-390-026.

3.2 PROJECT OBJECTIVES

The primary objective of the projects is to utilize Imperial County's abundance of available solar energy (sunlight) to generate renewable energy, consistent with the County General Plan renewable energy objectives. The project applicant and the County identified the following objectives for the projects:

- Construct and operate a solar energy facility capable of producing up to 5 megawatts (MW) of electricity to help meet the State-mandated Renewable Portfolio Standard (RPS) of providing 33 percent renewable energy by 2020.
- Construct and operate a solar power facility in the County's renewable energy overlay zone, ensuring that the projects are within areas determined to be the most suitable for the development of renewable energy facilities and with minimal impacts to the environment.
- Operate a facility at a location that ranks amongst the highest in solar resource potential in the nation.
- Interconnect with existing electrical transmission infrastructure to maximize opportunities for the sharing or use of existing utility transmission corridor(s) and to minimize potential environmental impacts associated with the construction of new infrastructure.





Figure 3-3. Imperial County Draft-Renewable Energy Overlay Zone Map

Source: Chambers Group 2015.

- Comply with the terms and requirements of the long-term power purchase agreement with the Imperial Irrigation District through its Feed-in Tariff program.
- Operate a renewable energy facility that does not produce significant noise nor emit any greenhouse gases.
- Help reduce reliance on foreign sources of fuel.
- Supply on-peak power to the electrical grid in California.
- Help California meet its statutory and regulatory goal of increasing renewable power generation, including greenhouse gas reduction goals of Assembly Bill (AB) 832 (California Global Warming Solutions Act of 2006).
- Contribute to Imperial County's economic growth and reputation as the renewable energy capital of the nation.

3.3 **PROJECT CHARACTERISTICS**

The proposed projects (DESF and DWSF facility sites) would consist of construction and operation of an expansive photovoltaic (PV) solar energy facility and supporting uses. The projects would employ the use of PV power systems to convert solar energy into electricity using non-reflective technology. The major components of the facility are PV modules, single-axis sun tracking support structures, and electronic/electrical equipment to convert the electricity from the PV modules from direct current ("DC") electricity to alternating current ("AC") electricity and transfer the electricity to IID's existing Dixieland Substation. Ancillary equipment includes switch/fuse panels, control and protection equipment, communications hardware, and meteorological data equipment. Additional auxiliary facilities would include lighting and security systems.

At build-out, the proposed projects would facilitate the generation of up to 5 MW of alternating current (AC) on a daily basis (Table 3-2). The facilities would be designed to generate electricity during the daylight hours when local electricity demand from IID customers is typically at its peak. A description of each solar farm is provided in Sections 3.3.3 through 3.3.4.

Project	Proposed Megawatt (MW)
DESF	2 MW AC
DWSF	3 MW AC
TOTAL	5 MW

ABLE 3-2. SEPV DESF AND DWSF SOLAR PROJECT PROPOSED MEGAWATT OUTPUT

3.3.1 Photovoltaic Panels/Solar Arrays

PV solar cells convert sunlight directly into direct current electricity. The process of converting light (photons) to electricity (voltage) in a solid state process is called the photovoltaic effect. A number of individual PV cells are electrically arranged and connected into solar PV modules, sometimes referred to as solar panels.

The PV cells will be made from crystalline silicon materials, which will be dark in color, non-reflective, and highly absorptive of the sunlight that strikes their glass surfaces. Each PV module is about six feet long, three feet wide and three inches thick with a weight of about 60 pounds. A number of PV modules will be wired together in a series and parallel configuration and connected to DC to AC inverters and transformers located throughout the project sites.

The PV modules will comply with all industry quality standards and will be stringently tested and robustly constructed to guarantee a useful life of at least 25 to 30 years in all weather conditions.



PV Panel/Mounting Configuration – The PV modules would be mounted to steel support structures designed and installed to properly position the PV modules to maximize the amount of sunlight that can land upon their surfaces. The single-axis sun tracking arrays (a row of PV modules) would be oriented along a north-south axis to allow the PV modules to rotate from east to west in order to track or follow the sun's path throughout the day. The parallel array rows would be separated and spaced apart to minimize inter-row shading of the sun.

These support structures are typically mounted on foundations of steel beams or tubes directly embedded into the ground to a depth of five to eight feet depending upon loading and soil conditions. These structural elements are typically driven into the earth with vibratory or hydraulic press-in methods. This type of driven pier foundation offers multiple benefits, including quick installation and minimal site disturbance, and is a "concrete-free" foundation solution that would allow for easy site reclamation at the end of the project life cycle. The PV modules, at their highest point of the solar tracking during the day, would be less than nine feet above the ground surface.

The DC electrical output from the PV modules would be transferred to inverters which convert the DC energy to high quality utility grade AC electricity. Electrical transformers would be used to boost the AC voltage output of the inverters to the 12kV level required to interconnect to IID's existing overhead distribution circuit that runs along the east side of DWSF and adjacent to the west side of DESF. Ancillary equipment includes switch/fuse panels, control and protection equipment, communications hardware, and meteorological data equipment.

3.3.2 Transmission Facilities

Electricity generated by DESF would be interconnected to the IID electrical distribution system at an existing IID 12kV distribution line (Pole Number T-18700) that runs north-south along Broadway Avenue by way of a short-span gen-tie line that would interconnect at the southwestern boundary of the DESF site. Electricity generated by DWSF would be interconnected to the IID electrical distribution system at an existing IID 12kV distribution line (Pole Number T-51071) that runs north-south along the eastern edge of the project site along Carriso Avenue and within the existing 140-foot-wide IID transmission easement on the DWSF site. The electricity generated by the projects would be used to serve local load demand on the IID distribution circuits. The point of interconnection(s) is depicted on Figure 3-4.

3.3.3 Dixieland East Solar Farm

The DESF encompasses a total of 24 acres and includes three parcels of land as described in Section 3.1. These parcels would be leased to the project applicant for the 20-year term of the Power Purchase Agreement with IID. In total, the DESF would be capable of generating up to 2 MW AC.

As shown in Table 3-3, of the 24 total acres, approximately eight acres (less than 30 percent of the total area of the parcels) would be developed with solar arrays, equipment and components as well as access roads. The proposed area of development (footprint) is significantly less than the full acreage because of setbacks, access roads and because of the spacing between array rows (more than twice as much space between rows than is covered by the width of the arrays) to minimize inter-row shading of the PV modules. The project fence line would be set back approximately 400 feet from W. Evan Hewes Highway. The site layout for the DESF is illustrated in Figure 3-5.





Figure 3-4. Point of Interconnection



Figure 3-5. Dixieland East Solar Farm – Site Layout

	APN	Total Acreage	Net Acres Covered (PV Modules, Electrical Equipment and Access Roads)
Dixieland East Solar Farm	051-047-001		
	051-035-001	24	8
	051-035-002		
Dixieland West Solar Farm	034-390-026	29	10
Total		53	18

TABLE 3-3. TOTAL ACREAGE VS. PROJECT FOOTPRINT

The development of this site would also require relinquishments of the following easements:

- Abandonment of the public service easement alley intermediate between the two existing parcels (APNs 051-035-001 and 051-035-002) on the west side of Brown Road.
- Abandonment of the northern 20 feet of Potrero Avenue from the east line of Brown Road to the west line of Canal Street.
- Abandonment of the northern 20 feet of Cocupa Avenue from the east line of Broadway Avenue to the west line of Brown Road.
- Abandonment of the eastern 40 feet of Broadway Avenue from the south line of Del Norte Avenue to the north line of Cocupa Avenue.

Figure 3-6 depicts the proposed road abandonments. A Lot Merger would also be required and include merging the boundaries of the small internal lots and the land area created through approval of the road abandonment process.

An existing concrete lined irrigation ditch runs along an elevated embankment from the Westside Main Canal to the west side of the DESF site. A set of water pumps and electrical transformer is located at the east end of the concrete lined ditch. The pumps no longer supply water to the ditch but feed an existing 12-inch diameter polyvinyl chloride pressurized water line that transects the DESF site (portion east of Brown Road). This line supplies water to the Imperial Lakes Water Ski Community approximately 0.5 miles west of DESF. This water line will remain in its current location and will not be impacted by the proposed projects.

3.3.4 Dixieland West Solar Farm

The DWSF encompasses a total of 29 acres and includes one parcel of land as described in Section 3.1. Similar to the DESF, these parcels would be leased to the project applicant for the 20-year term of the Power Purchase Agreement with IID. In total, the DWSF would be capable of generating up to 3 MW AC.

As shown in Table 3-3, of the 29 total acres, approximately 10 acres (less than 30 percent of the gross area of the parcel) would be developed with solar arrays, equipment and components as well as access roads. The proposed footprint is significantly less than the full acreage because of setbacks and IID's easement, and because of the spacing between array rows (more than twice as much space between rows than is covered by the width of the arrays) that would be set aside for native vegetation during the project's operation. The project fence line and the project components would be set back at least 240 feet from W. Evan Hewes Highway. The site layout for the DWSF is illustrated in Figure 3-7.





Figure 3-6. Roadway Abandonments



Figure 3-7. Dixieland West Solar Farm – Site Layout

3.3.5 **Auxiliary Facilities**

This section describes the auxiliary facilities that would be constructed and operated in conjunction with the project solar array facilities.

3.3.5.1 Site Security and Fencing

The perimeter of the project facilities would be secured with six-foot tall chain-link security fencing with barbed wire. A remotely monitored security system will be installed to discourage and record any incidents of vandalism or trespassing. Access to each of the site locations would be provided using a 20-foot minimum swinging or sliding gate. Additionally, controlled access gates would be maintained at entrances into the each of the project site locations. Emergency response personnel would be provided with manual override capability in order to access the site facilities.

3.3.5.2 Lighting System

Minimal lighting would be required for operations and would be limited to safety and security functions. Motion sensitive, directional security lights would be installed to provide adequate illumination at points of ingress/egress pursuant to County of Imperial Building Code Requirements (see Title 9, Division 3, Chapter 1: Special Development Standards, of the County's Zoning Ordinance). All lighting will be directed downward and shielded to focus illumination on the desired areas only and to minimize light trespass in accordance with applicable County requirements. If additional lighting should be required for nighttime maintenance, portable lighting equipment would be used.

3.3.5.3 Access Roads

To accommodate emergency access, PV panels would be spaced to maintain proper clearance. A 20-foot-wide access road would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles (see Figures 3-5 and 3-7). The internal access road would be graded and compacted (native soils) as required for construction, operations, maintenance, and emergency vehicle access.

3.3.5.4 **Fire Protection**

The projects are located within the jurisdiction of the Imperial County Fire Department. On-site fire protection would be provided via water tanks holding 10,000 gallons on each project site. The water tanks would be located near the primary entrance of each project site. Portable fire extinguishers would be provided at various locations throughout the solar farms. Both the access and service roads (along the perimeter of the project facilities) would have turnaround areas at any dead-ends to allow clearance for fire trucks per fire department standards (70 feet by 70 feet, and 20-foot-wide access road).

3.3.6 **Dust Suppression and Erosion Control**

To minimize wind driven dust from the project sites, all clearing, grading, and significant ground disturbing activities would be stopped during periods where the wind speed exceeds 25 miles per hour (averaged over one hour). Water would be the primary means of dust control and suppression but dust palliatives may also be utilized as needed.

3.3.7 Water Supply, Treatment, and Storage

Once the projects are operational, water would be required for solar panel washing and fire protection. The project sites are within the IID's boundary and therefore would receive water service from the IID. It is estimated that over the entire construction period for the DESF and DWSF projects, approximately 10 acre-feet of water will be required for all purposes, including dust control and suppression. The actual amount of water required to be brought on site will vary depending upon site conditions such as wind speed, direction, and the amount and timing of rainfall. The project will obtain metered Temporary Water Service from the Westside Main Canal to fill water trucks on an as needed basis. This service would



likely shift to metered General Industrial Water Service once the facility is operational to allow for periodic washing of the PV modules. DESF would require approximately 7,000 gallons of water for each routine panel washing operation. Approximately 10,000 gallons of water would be required for DWSF for each routine panel washing operation.

3.3.8 Operations and Maintenance

The facilities would be remotely operated, controlled and monitored and with no requirement for daily onsite employees. Local and remote operations and maintenance staff would be on-call to respond to any alerts generated by the monitoring systems, and would be present on the site periodically to perform maintenance.

A part-time operations and maintenance staff of two to three people per project would be responsible for performing all routine and emergency operational and maintenance activities. Such activities include inspections, equipment servicing, site and landscape clearing, and periodic washing of the PV modules if needed (up to four times per year) to increase the performance of the panels. DESF would require approximately 7,000 gallons of water for each routine panel washing operation. Approximately 10,000 gallons of water would be required for DWSF for each routine panel washing operation. Replacement parts and components would be warehoused off site and deployed as needed. Most scheduled maintenance would occur during daytime hours but work may be performed at night for safety reasons.

3.4 CONSTRUCTION PROCESS FOR SOLAR FARM SITES

Construction of DESF is proposed to start in early 2016 and last up to 22 weeks. Construction of DWSF would start in early 2016 and last up to 26 weeks. The construction activities for the projects generally fall into three main phases: (1) Site Preparation; (2) System Installation; and (3) Facility Commissioning. Construction would primarily occur during daylight hours, Monday through Saturday.

To characterize and analyze potential construction impacts, maximum crew size, truck trips, and worker trips have been estimated, based on the expected construction activities. To support these activities, the main pieces of equipment that may be used at any one time during construction may include:

- Vibratory post driver
- Crawler tractors/dozer
- Dump, concrete, and tender truck
- Forklift/aerial lift/boom
- Generator/compressor
- Grader/scraper
- Roller/compactor
- Tractor/loader/backhoe
- Vibratory plate (handheld)
- Flatbed truck
- Water truck

The on-site construction workforce for each project is expected to peak (overlapping construction activities) at 30 individuals. It is anticipated that the construction workforce would commute to the site each day from local communities. The worker vehicle trips anticipated to be generated from the project assumes 20 employees that would commute alone, and 10 employees that would carpool. Additionally, construction activity trips would include several trucks arriving and departing the site each day to deliver materials, including water for dust suppression, supplies, and equipment.



The projects will be constructed on a serial basis, meaning the time from construction start to finish will be 36 weeks. DESF will take 22 weeks to construct and DWSF will take 26 weeks to complete. Peak construction times for each individual project is not expected to occur at the same time.

The maximum number of employees working on the two solar projects at one time will be 40 employees. For purposes of the trip generation calculations, it is assumed that 28 employees will drive alone and 12 employees will arrive in two-person carpools.

Temporary construction trailers and associated work facilities would be placed on-site and utilized through the site preparation, system installation, and facility commissioning phases of the project. It is expected that the majority of these temporary facilities would be located at a single staging area within the site boundaries. Temporary power for construction is expected to be provided through service with IID or through the use of portable generators as needed.

The coordination of construction activities amongst the projects will provide logistical synergies which will serve to reduce impacts associated with traffic, dust, and noise.

3.4.1 Site Preparation

Prior to initial construction mobilization, preconstruction surveys will be performed and any required sediment and erosion control measures will be implemented in accordance with an approved Storm Water Pollution Prevention Plan (SWPPP). Stabilized construction entrance and exits would be installed at each driveway to reduce tracking of sediment onto the adjacent public roadway. Fencing, gates and communication and security systems would be installed.

Given the relatively flat topography of the sites, and adaptability of the support structures, a minimal amount of surface smoothing and grading by wheeled or tracked scrapers and graders would be performed. A water truck(s) would be utilized for dust control purposes. The rough locations of all foundations, trenches, roads, fences, and equipment would be surveyed and marked. The internal access road would be graded and compacted as required for construction, operations, maintenance, and emergency vehicle access per the grading plan drafted by a licensed California Professional Engineer.

3.4.2 System Installation

Trenching would be performed for placement of underground electrical and communications lines, and may include the use of trenchers, backhoes, excavators, haul vehicles, compaction equipment and water trucks. Concrete required for any foundations or equipment pads would be purchased from an off-site supplier and trucked into the project sites for placement. The steel beam/tube foundations ("posts") for the support structures would be driven into the soil using vibratory or hydraulic press-in methods. Once the posts have been installed, the horizontal cross-members and other hardware/equipment associated with the single-axle tracking structural system would be placed and secured. The electronic/electrical equipment would be mounted or installed in place and electrical interconnected to IID's electrical distribution system. The PV modules would be mechanically attached to the support structure in the correct position for maximum exposure to sunlight and electrically interconnected to the inverters.

3.4.3 Facility Commissioning

Facility commissioning includes final inspections testing, start-up and certification. Once all of the equipment and components have been installed and inspected, all mechanical and electrical connections would be inspected. The facility would be brought on-line in stages starting at low power levels and methodically increasing the capacity until the facility is operating at full power. Testing would occur at every stage to correlate electricity output to weather conditions.



3.4.4 Existing Utilities

The project applicant's contractors would implement an underground services alert (USA) to identify existing underground utilities and service connections prior to commencing any excavation work. Existing utility locations would be determined by hand-excavated test pits dug at locations determined and approved by the construction manager (also referred to as "potholing"). Temporary disruption of service may be required to allow for construction. Service on such lines would not be disrupted until prior approval is received from the construction manager and the service provider.

3.5 POWER PURCHASE AGREEMENT

The projects have a 20-year Power Purchase Agreement (PPA) with the IID awarded through its Feed-in Tariff (FIT) program. SB 32, enacted in 2009, required the IID to implement a FIT. This tariff is mandated to be offered on a first-come, first-served basis. The tariff provides a simple mechanism for small renewable generators (less than 3MW) to sell power to the utility at predefined terms and conditions, without engaging in contract negotiations. Eligibility criteria for IID's FIT consists of the following:

- 1) The project must be located within the IID service territory;
- 2) The project must be between 1kW and 3MW;
- 3) The project must be located and interconnected in a manner that optimizes deliverables of generation to load centers; and
- 4) The project must install eligible renewable generation.

Through the tariff, IID will purchase all generation from the facility and all Renewable-Energy Credits (REC) will belong to IID. The projects will help California meets its Renewable Portfolio Standard of 33 percent of retail electricity sales from renewable sources by the end of 2020.

3.6 **RESTORATION OF THE PROJECT SITES**

Electricity generated by the facility will be sold under the terms of a 20 year PPA with the IID. At the end of the PPA term, the owner of the facility may choose to enter into a subsequent PPA, update technology and re-commission, or decommission and remove the generating facility and its components. Upon decommissioning, the site could be converted to other uses in accordance with applicable land use regulations in effect at that time. A collection and recycling program will be executed to promote recycling of project components and minimize disposal in landfills. All permits related to decommissioning would be obtained, where required.

Project decommissioning would include the following activities:

- The facility would be disconnected from the utility power grid.
- Project components would be dismantled and removed using conventional construction equipment and recycled or disposed of safely.
- PV panel support steel and support posts would be removed and recycled off-site by an approved metals recycler.
- All compacted surfaces within the project sites and temporary on-site haul roads would be decompacted.
- Electrical and electronic devices, including inverters, transformers, panels, support structures, lighting fixtures, and their protective shelters would be recycled off-site by an approved recycler.
- All concrete used for the underground distribution system would be recycled off-site by a concrete recycler or crushed on-site and used as fill material.
- Fencing would be removed and recycled off-site by an approved metals recycler.



- Gravel roads would be removed; filter fabric would be bundled and disposed of in accordance with all applicable regulations. Road areas would be backfilled and restored to their natural contour.
- Soil erosion and sedimentation control measures would be re-implemented during the decommissioning period and until the site is stabilized.

3.7 **REQUIRED PROJECT APPROVALS**

3.7.1 Imperial County

The County would be required to approve the following pursuant to the California Environmental Quality Act (CEQA):

- 1. Approval of CUPs. Implementation of the solar farm projects would require the approval of two CUPs by the County to allow for the construction and operation of the proposed DESF and DWSF projects. The projects are located on a total of four privately-owned legal parcels zoned A-2 (General Agriculture). Pursuant to Title 9, Division 5, Chapter 9, "Solar Energy Plants" is a use that is permitted in the A-2 Zone, subject to approval of a CUP.
- 2. Site Plans. Site Plan and Architectural Review is required.
- 3. Roadway Abandonments. The applicant is requesting the abandonment of the following easements:
 - Abandonment of the public service easement alley intermediate between the two existing • parcels (APNs 051-035-001 and 051-035-002) on the west side of Brown Road.
 - Abandonment of the northern 20 feet of Potrero Avenue from the east line of Brown Road • to the west line of Canal Street.
 - Abandonment of the northern 20 feet of Cocupa Avenue from the east line of Broadway Avenue to the west line of Brown Road.
 - Abandonment of the eastern 40 feet of Broadway Avenue from the south line of Del Norte • Avenue to the north line of Cocupa Avenue.
- 4. Lot Line Merger. Approval of a Lot Merger application for APN 051-047-001 to create a single lot/parcel by merging the boundaries of the small internal lots and those portions of Cocupa Avenue, Cyuma Street, Del Norte Avenue and the unnamed alleys vacated by resolution recorded August 19, 1954, as Instrument No. 11, in Book 891, Page 575 of Official Records and those portions of Canal Street vacated by resolution recorded May 10, 1962, as Instrument No. 82, in Book 1110, Page 435 of Official Records. The Lot Merger will also include the land area created through approval of the road abandonment process.
- 5.4. Certification of the EIR. After the required public review for the Draft EIR, the County will respond to written comments, edit the document, and produce a Final EIR to be certified by the Planning Commission and/or Board of Supervisors prior to making a decision on the projects.
- 6-5. Reclamation Plans. The project applicant has prepared a site reclamation plan for each of the projects (EIR Appendix L). As required by the County, when the projects are decommissioned at the end of their life spans, the project applicant or its successor in interest would be responsible for implementing the reclamation plan, which includes the removal, recycling, and/or disposal of all solar arrays, inverters, transformers and other structures on each of the sites, as well as restoration of the site to its pre-project condition. The County is responsible for approving the reclamation plan for each project and confirming that financial assurances for each of the projects are in conformance with Imperial County ordinances.



Subsequent ministerial approvals may include, but are not limited to:

- Grading and clearing permits;
- Building permits;
- Septic system permits;
- Occupancy permits; and
- Encroachment permits.

3.7.2 Discretionary Actions and Approvals by Other Agencies

Responsible Agencies are those agencies that have discretionary approval over one or more actions involved with development of the project. Trustee Agencies are state agencies that have discretionary approval or jurisdiction by law over natural resources affected by a project. These agencies may include, but are not limited to the following:

- Imperial Irrigation District Encroachment Permit.
- Imperial Irrigation District Water Supply Agreements
- Imperial County Fire Department Approval of Final Design of the Proposed Fire System.
- California Regional Water Quality Control Board Notice of Intent for General Construction Permit.
- California Department of Fish and Wildlife (Trustee Agency) Endangered Species Act Compliance, Burrowing Owl Mitigation.
- U.S. Fish and Wildlife Service Endangered Species Act Compliance.
- Imperial County Air Pollution Control District Rule 801 Compliance.

4.0 INTRODUCTION TO ENVIRONMENTAL ANALYSIS

This section provides an overview of the environmental analysis and presents the format for the environmental analysis in each topical section.

ORGANIZATION OF ISSUE AREAS 4.0.1

This chapter provides an analysis of impacts for those environmental topics that the County determined could result in "significant impacts." Sections 4.1 through 4.14 discuss the environmental impacts that may result with approval and implementation of the projects. Each environmental issue area in Chapter 4 contains a description of the following:

- The environmental setting as it relates to the specific issue; •
- The regulatory framework governing that issue; •
- The threshold of significance (from Appendix G of the California Environmental Quality Act • (CEQA) Guidelines);
- The methodology used in identifying and considering the issues; •
- An evaluation of the project-specific impacts and identification of mitigation measures; •
- A determination of the level of significance after mitigation measures are implemented; and •
- The identification of any residual significant impacts following mitigation. •

4.0.2 FORMAT OF THE IMPACT ANALYSIS

This analysis presents the potential impacts that could occur under the projects along with any supporting mitigation requirements. For each impact statement, the impact discussion is sub-divided, as appropriate, to differentiate between the environmental effects for each project described in the Chapter 3, Project Description:

- Dixieland East Solar Farm (DESF); and
- Dixieland West Solar Farm (DWSF).

Where similar environmental impacts would occur, the impact discussion for the projects is consolidated. Likewise, in instances where impacts would be different, the discussion is separated accordingly to distinguish between key differences in the level of impact. Subheadings and sub-numbering is used. where appropriate, for transitions between major topics and particular distinctions in impact determinations for sub-issues covered by the impact statement. Terminology used in describing the range of impact mechanisms follows that described below. Where mitigation is prescribed, the analysis clearly indicates to which project(s) it would apply.

Each section identifies the resulting level of significance of the impact using the terminology described below following the application of the proposed mitigation. The section includes an explanation of how the mitigation measure(s) reduces the impact in relation to the applied threshold of significance. If the impact remains significant (i.e., at or above the threshold of significance) additional discussion is provided to disclose the implications of the residual impact and indicate why no mitigation is available or why the applied mitigation does not reduce the impact to a less than significant level.

DETERMINATION OF IMPACT SIGNIFICANCE 4.0.3

Changes that would result from the projects were evaluated relative to existing environmental conditions within the project sites as defined in Chapter 3 and illustrated in Figure 3-2. Existing environmental conditions are based on the time at which the Notice of Preparation was published on May 15, 2015. In



evaluating the significance of these changes, this Environmental Impact Report (EIR) applies thresholds of significance that have been developed using (1) criteria discussed in the CEQA Guidelines; (2) criteria based on factual or scientific information; and (3) criteria based on regulatory standards of local, state, and/or federal agencies. Mechanisms that could cause impacts are discussed for each issue area.

This EIR uses the following terminology to denote the significance of environmental impacts of the projects:

- No impact indicates that the construction, operation, and maintenance of the project would not • have any direct or indirect effects on the environment. It means no change from existing conditions. This impact level does not need mitigation.
- A less than significant impact is one that would not result in a substantial or potentially substantial adverse change in the physical environment. This impact level does not require mitigation, even if feasible, under CEQA.
- A significant impact is defined by CEQA Section 21068 as one that would cause "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project." Levels of significance can vary by project, based on the change in the existing physical condition. Under CEQA, mitigation measures or alternatives to the projects must be provided, where feasible, to reduce the magnitude of significant impacts.
- An unmitigable significant impact is one that would result in a substantial or potentially substantial adverse effect on the environment, and that could not be reduced to a less than significant level even with any feasible mitigation. Under CEQA, a project with significant and unmitigable impacts could proceed, but the lead agency would be required to prepare a "statement of overriding considerations" in accordance with State CEQA Guidelines CCR Section 15093, explaining why the lead agency would proceed with the project in spite of the potential for significant impacts.

4.1 AESTHETICS AND VISUAL RESOURCES

This section provides a description of the existing visual and aesthetic resources within the project area and pertinent federal, state, and local plans and policies regarding the protection of scenic resources. This section incorporates visual simulations prepared by Solar Electric Solutions, LLC (June 2015). The visual simulations are included in Appendix B of this Environmental Impact Report (EIR).

4.1.1 Environmental Setting

The project area is located in the Dixieland area in unincorporated Imperial County, California. The Yuha Desert is generally located to the west and is comprised of upland desert landscape that transitions into the Peninsular Mountain Range that extends south into Mexico. Carrizo Mountain rises 2,400 feet above mean sea level in the southern Yuha Desert, and is the prominent visual landscape feature west of the project sites. The eastern-most boundary of the project sites (Dixieland East) borders the Westside Main Canal, and is approximately 11.5 miles west of El Centro, California. Areas to the east of the project area (that is, east of the Westside Main Canal), are generally level and characterized as an agriculturally dominated landscape. Views to the north, south, and west are characterized as a desert environment. Prominent visual features near the project sites include an agricultural canal (Westside Main Canal) that supply water to the agricultural areas, the IID Dixieland substation, scattered agricultural structures or residences, and the Centinela State Prison.

4.1.1.1 Regulatory Setting

Federal

No federal visual resource regulations would apply to the proposed project.

State

California Department of Transportation

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program. The goal of the program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to the scenic corridor (Caltrans, 2008). The project sites are located approximately 1.25 miles north of the I-8 freeway. A portion of I-8 is listed in the Caltrans Scenic Highway designation of an "Eligible State Scenic Highway – Not Officially Designated" for the segment extending from the City of El Cajon until the junction of SR-98, where it terminates. The junction of I-8 and SR-98 is located approximately 15 miles west of the project sites.

Local

Imperial County General Plan

The Imperial County General Plan (Imperial County, as amended 2008) contains policies for the protection and conservation of scenic resources and open spaces within the County. These policies also provide guidance for the design of new development. The Conservation and Open Space Element of the General Plan provides specific goals and objectives for maintaining and protecting the aesthetic character of the region. Table 4.1-1 provides an analysis of the project's consistency with the Conservation and Open Space Element Goal 7. Additionally, the Circulation and Scenic Highways Element of the General Plan provides policies for protecting and enhancing scenic resources within highway corridors in Imperial County, consistent with Caltrans State Scenic Highway Program.



General Plan Policies	Consistency with General Plan	Analysis
Goal 7: The aesthetic character of the region shall be protected and enhanced to provide a pleasing environment for residential, commercial, recreational, and tourist activity.	Consistent	The projects would result in changes to the visual character of the project area, which is currently characterized as a desert landscape. As described in the Existing Conditions, Section 4.1.1.2, the project sites do not contain high levels of visual character or quality; therefore, the projects would not result in a significant deterioration in the visual character of the project sites or project area. Additionally, the projects would interconnect with existing transmission facilities, thereby limiting their overall footprint, which would limit their encroachment into background views of mountains. The PV modules, at their highest point of the solar tracking during the day, would be less than nine feet above the ground surface and would not distract from the overall unity of the viewshed facing the mountains. DWSF's project fence line and the project components will be set back at least 240 feet from Evan Hewes highway to minimize visual impacts.
Objective 7.1: Encourage the preservation and enhancement of the natural beauty of the desert and mountain landscape.	Consistent	The project study area is located adjacent to an agricultural area and is located within a previously disturbed desert habitat. The project sites are not considered a "desert landscape" due to the disturbed nature and proximity to agricultural land uses.

TABLE 4.1-1. CONSISTENCY WITH APPLICABLE GENERAL PLAN CONSERVATION AND OPEN SPACE POLICIES

4.1.1.2 **Existing Conditions**

4.1.1.2.1 **Existing Visual Resources**

The project sites are located on vacant land in a desert environment with limited natural vegetation, and large scale agricultural lands located to the east. Additional land uses surrounding the project sites include residential, recreational, and a state prison facility located north of the project sites.

The agricultural lands are located to the east and desert views to the west of the Peninsular Range Mountains (Carrizo Mountain) are considered "typical" views in Imperial County. The Westside Main Canal borders the Dixieland East Solar Farm (DESF) project site. Imperial Lakes Water Ski Community, a manmade recreation facility with bordering residences is located approximately 0.25 mile west of Dixieland West Solar Farm DWSF. The Dixieland electrical substation is located between the two project sites. The background views of the mountains would be considered the only existing visual resource in the area.

A site reconnaissance was conducted to identify visual resources in the project area, including the project sites. Key observation points (KOPs) within the project area were selected based on the public viewing areas. A general description of the visual quality for the project area is described below. To capture the existing visual quality for each of the project components, views within the project area were photodocumented. Visual simulations were completed by Solar Electric Solutions, LLC to provide a visual representation of the solar arrays (Appendix B of this EIR). Figures 4.1-1 and 4.1-2 illustrate the photodocumented key observation points and the direction to which the photographs were taken. The photographs depicting the existing condition at each project site are presented in Section 4.1.2.3. Impact Analysis along with visual simulations at each key view point depicting the proposed condition.





Figure 4.1-1. DWSF Key Observation Points



Figure 4.1-2. DESF Proposed Key Observation Points

The viewer's distance from landscape elements plays an important role in the determination of an area's visual quality. Landscape elements are considered higher or lower in visual importance based on their proximity to the viewer, which contribute to a project area's overall viewshed. Generally, the closer a resource is to the viewer, the more dominant, and therefore visually important, it is to the viewer.

Federal Highway Administration Assessment Method

The Federal Highway Administration (FHWA) methodology outlined in the *Visual Impact Assessment for Highway Projects* (1981) was used for this visual assessment. Per the FHWA guidelines, the aesthetic quality of an area is determined through the variety and contrasts of the area's visual features, the character of those features, and the scope and scale of the scene. The FHWA separates landscapes into foreground, middleground, and background views. Although this should be considered on a case-by-case basis, in general, the foreground is characterized by clear details (0 up to 0.25 - 0.5 mile from the viewer); the middleground is characterized by loss of clear texture within a landscape creating a uniform appearance (up to 0.25 - 0.5 to 0.05 to 3 - 5 miles in the distance); and the background extends from the middleground (3 - 5 miles) to the limit of human sight. The FHWA foreground, middleground, and background view approach is used for describing the relative quality of each of these landscapes.

The aesthetic quality of an area depends on the relationship between its features and their importance in the overall view. Evaluating resource change requires a method that: (1) characterizes visual character; and (2) assesses their quality (vividness, intactness, and unity). The viewer exposure and viewer sensitivity is evaluated to determine the viewer response. The resource change is combined with the viewer response to determine the overall visual impact. Figure 4.1-3 illustrates this FHWA methodology and the FHWA terminology definitions are listed below.

The FHWA attributes of form, dominance, scale, and continuity were used to determine the overall existing visual character. Vividness, intactness, unity were then applied to determine the visual quality. These visual resource changes were then combined with the viewer response to determine the visual impacts of the projects as discussed further in Section 4.1.2.3, Impact Analysis.



Figure 4.1-3. FHWA Visual Environment Concept Diagram

Visual impacts related to the visual environment are characterized by their potential levels of change based on these following category ratings:

- Low (L) Minor adverse change to the existing visual resource, with low viewer response to change in the visual environment. May or may not require mitigation.
- **Moderately Low (ML)** Low negative change to the visual resource with a moderate viewer response, or moderate negative change to the resource with a low viewer response. Impact can be mitigated.



- **Moderate (M)** Moderate adverse change to the visual resource with moderate viewer response. Impact can be mitigated within five years using conventional practices.
- **Moderately High (MH)** Moderate adverse visual resource change with high viewer response or high adverse visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required will generally take longer than five years to mitigate.
- **High (H)** –A high level of adverse change to the resource or a high level of viewer response to visual change such that architectural design and landscape treatment cannot mitigate the impacts. Viewer response level is high. An alternative project design may be required to avoid highly adverse impacts.

Assessing Visual Resources

Visual Character

Visual character includes attributes such as form, dominance, diversity, and continuity (as described below) to describe, not evaluate visual character; that is these attributes are neither considered good nor bad. However, a change in visual character can be evaluated when it is compared with the viewer response to that change. Changes in visual character are identified by how visually compatible a project would be with the existing condition by using visual character attributes as an indicator. For this project, the following pattern characters or attributes were considered:

- Form visual mass or shape;
- Dominance position, size, or contrast;
- Diversity pattern elements, as well as the variety among them;
- Continuity uninterrupted flow of form, line, color, or textural pattern.

Visual Quality

Both natural and created features in a landscape contribute to its visual quality. Landscape characteristics influencing visual quality include geologic, hydrologic, botanical, wildlife, recreation, and urban features. Several sets of criteria have been developed for defining and evaluating visual quality.

According to these criteria, none of these is itself equivalent to visual quality; all three must be considered high to indicate high quality. The visual quality terms are defined as follows:

- Vividness is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.
- Intactness is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.
- Unity is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

Assessing Viewer Response

Viewer response is based on the viewer exposure (location, quantity, and duration) combined with the viewer sensitivity (activity, awareness, and local values), as described in the following definitions:

Viewer Exposure

• Activity relates to the preoccupation of viewers. Are they preoccupied, thinking of something else, or are they truly engaged in observing their surroundings. The more they are actually observing their surroundings, the more sensitivity viewers will have of changes to visual resources.


- Awareness relates to the focus of view. If the focus is wide and the view general or the focus is narrow and the view specific the more specific the awareness, and the more sensitive a viewer is to change.
- Local values and attitudes also affect viewer sensitivity. If the viewer group values aesthetics in general or if a specific visual resource has been protected by local, state, or national designation, it is likely that viewers will be more sensitive to visible changes.

Viewer Sensitivity

- Location relates to the position of the viewer in relationship to the object being viewed. The closer the viewer is to the object, the more exposure.
- Quantity refers to how many people see the object. The more people who can see an object or the greater frequency an object is seen, the more exposure the object has to viewers.
- Duration refers to how long a viewer is able to keep an object in view. The longer an object can be kept in view, the more exposure. High viewer exposure helps predict that viewers will have a response to a visual change.

Table 4.1-2 provides the visual impact ratings, and how they are quantified. The table illustrates how the combination of resource change and viewer response is used to determine the resource impact further discussed in Section 4.1.2.3, Impact Analysis.

	Viewer Response									
Resource Change	Ratings	Low (L)	Moderately- Low (ML)	Moderate (M)	Moderately- High (MH)	High (H)				
	Low (L)	L	ML	ML	М	М				
	Moderately Low (ML)	ML	ML	М	М	MH				
	Moderate (M)	ML	М	М	MH	MH				
	Moderately High (MH)	М	М	MH	MH	Н				
	High (H)	М	MH	MH	Н	Н				

TABLE 4.1-2. FHWA VISUAL IMPACT RATINGS

Visual Character

The project sites are located at the intersection of an agricultural landscape (to the east) and a desert landscape (to the west). The area possesses a continuous pattern between the two landscapes because there are no dominant features. The diversity in the area comes from the intersection of the two landscapes; however, most of the desert landscape has been previously disturbed and is considered to have a low visual character.

Visual Quality

DWSF

The landscape in the vicinity of DWSF is characterized by level terrain. Foreground views include the Dixieland electrical substation to the east and associated power lines, Imperial Lakes Water Ski Community with residences to the west, and desert terrain to the north and south. Middleground views consist of the Dixieland Sand and Gravel mine, open fields, isolated trees, scattered agricultural structures or residences, and desert terrain. In addition, the Centinela State Prison is located approximately two miles to the north, and Interstate 8 (I-8) is located 1.25 miles to the south. Background views consist of mountain to the east.

The prominent visual features in the area are agriculture farmland and desert terrain depending on the view direction. The visual quality of the project site is assessed below.



- **Vividness:** The foreground is characterized by typical views of desert vegetation. No unique physical or geographic features add to the vividness of the project site. Due to the level terrain, the agriculture in the middleground view is barely visible. No distinctive views of the surrounding mountains in the background or memorable landscapes are visible from this project site. The DWSF project site is considered to have low vividness.
- **Intactness:** The landscape can be characterized as a desert landscape, with the exception of the trees that line the Imperial Lakes Water Ski Community area. Considering the adjacent electrical substation and associated power lines in the foreground, and the Centinela State Prison and the Dixieland Sand and Gravel mine in the middleground view, the project site has some visual intrusions to the area. In addition, off-site agricultural ground disturbing activities (plowing) causes particulate matter into the air which compromises visibility. Furthermore, the air quality is reduced during high temperature events, further reducing the background views. The DWSF project site is considered to have a moderately low level of intactness.
- **Unity:** The project area is predominately desert terrain which results in a harmonious visual pattern. The DWSF project site is considered to have a moderately high level of unity.

As described above, the DWSF project site has low vividness, moderately low intactness, and moderately high visual unity, resulting in a moderate visual quality.

DESF

Considering the close proximity of DESF to DWSF, the visual quality is the same. Similar to DWSF, the landscape in the vicinity of the DESF project site is characterized by level terrain. Foreground views include the Westside Main Canal, and a residence to the east. The remaining area includes desert terrain with power lines. Middleground views consist of Imperial Lakes Water Ski Community with residences to the west, open fields, isolated trees, scattered agricultural structures or residences, and desert terrain. In addition, the Centinela State Prison is located approximately two miles to the northwest, Dixieland Sand and Gravel mine 1.4 miles to the west, and I-8 is located 1.25 miles south of the project site. Background views consist of mountain to the east.

The prominent visual features in the area are agriculture farmland and desert terrain depending on the direction. No distinctive mountain background views are present from this key viewpoint. The visual quality of the project site is assessed below.

- **Vividness:** The foreground is characterized by typical views of desert vegetation. No unique physical or geographic features add to the vividness of the project site. Due to the level terrain, the agriculture in the middleground view is barely visible. No distinctive views of the surrounding mountains in the background or are considered memorable landscapes from this project site. The DESF project site is considered to have low vividness.
- **Intactness:** The landscape can be characterized as a desert landscape, with the exception of the trees that line the Imperial Lakes Water Ski Community area. Considering the nearby electrical substation and associated power lines in the foreground, and the Centinela State Prison and the Dixieland Sand and Gravel mine in the middleground view, the project site has some visual intrusions to the area. In addition, off-site agricultural ground disturbing activities (plowing) causes particulate matter into the air which compromises visibility. Furthermore, the air quality is reduced during high temperature events, further reducing the background views. The DESF project site is considered to have a moderately low level of intactness.
- **Unity:** The project area is predominately desert terrain which results in a harmonious visual pattern. The DESF project site is considered to have a moderately high level of unity.

As described above, the DESF project site has low vividness, moderately low intactness, and moderately high visual unity, resulting in a moderate visual quality.



The combination of the low visual character combined with a moderate visual quality, both project sites contain a moderately low existing visual resource as shown in Table 4.1.3, Existing Visual Resource Determinations.

Project Study Area	Visual Character	+	Visual Quality	=	Existing Visual Resource
DWSF	L		М		ML
DESF	L		М		ML

TABLE 4.1-3. EXISTING VISUAL RESOURCE DETERMINATIONS

The project sites would be seen by two types of sensitive viewer groups: roadway travelers along West Evan Hewes Highway (or S80), and people residing or working (residential users) near the project area.

- Roadway Travelers
 - Exposure: West Evan Hewes Highway is situated south and adjacent to both of the project sites, however, it is not a heavily traveled roadway. These travelers are anticipated to be residents who live in the area or farm workers that work in the area. Roadway speeds in the area are anticipated to be between 45 to 65 miles per hour (mph). The terrain within the project area is relatively flat, which provides open space viewing opportunities. Roadway Traveler's (traveling towards the west) awareness would be visually drawn toward the background views of the Coyote Mountains to the west. Roadway traveler exposure is considered to be moderate.
 - Sensitivity: The outlying area of Dixieland has a limited population due to the agricultural
 nature and does not contain a diverse visual environment. Given the limited population in
 this area, the roadway traveler sensitivity is considered to be low.
- Residential
 - Exposure: The residences in this area are primarily associated with people living and working in the agricultural industry. This viewer type has a prolonged view of the area. The nearest residences to the DESF site are east of the canal along Foxglove Street, and in a trailer located at the northwest corner of West Evan Hewes Highway and Canal Street. Another single family residence adjacent to DESF is approximately 120 feet west of the western edge of the site, adjacent to the Imperial Irrigation District (IID) substation. Approximately 1,500 feet west of DWSF is the Imperial Lakes Development which includes 20 residences surrounding two man-made lakes. These locations are illustrated in Figure 4.3-1, Residence Locations. This housing area is shielded by trees along the perimeter of the development reducing the potential views of the project sites. Given the limited view from these residences, the residential viewer exposure is considered low.
 - Sensitivity: Residents are generally considered a sensitive viewer group due to the prolonged exposures (potentially 24 hours a day). Residents typically have an elevated concern regarding views from their homes that correlate to property values and would be considered engaged in their surrounding visual environment. Given the limited number of residences in the area with limited views of the project sites and the farming operations in the area, the residential viewer's sensitivity is considered moderate.

The viewer response within the project area is considered to be moderately low. Table 4.1-4 provides a summary of the FHWA viewer response ratings for each of the project sites.

Viewer Type	Viewer Exposure	+	Viewer Sensitivity	=	Viewer Response
Roadway Travelers	М		L		ML
Residential Viewers	L		М		ML

TABLE 4.1-4. FHWA VIEWER RESPONSE RATINGS



Light, Glare, and Glint

Glare is considered a continuous source of brightness, relative to diffused light, whereas glint is a direct redirection of the sun beam in the surface of a PV solar module. Glint is highly directional, since its origin is purely reflective, whereas glare is the reflection of diffuse irradiance; it is not a direct reflection of the sun.

Due to the nature of the existing agricultural land uses and few residences, limited light is generated from within the project area. The majority of the light and glare that emits within the project sites is a result of motor vehicles traveling on surrounding roadways, airplanes, and farm equipment. Local roadways generate glare both during the night hours when cars travel with lights on, and during daytime hours because of the sun's reflection from cars and pavement surfaces. Additional sources of light and glare include exterior and interior building lighting, in addition to windows and reflective building materials such as metal roofs. When light is not sufficiently screened and spills over into areas outside of a particular development area the effect is called "light trespassing."

4.1.1.2.2 Scenic Roadway Designation

The nearest officially designed as an eligible state scenic highway is I-8 at the junction of SR-98 near Coyote Wells, approximately 15 miles to the west.

4.1.2 Impacts and Mitigation Measures

4.1.2.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to visual resources are considered significant if any of the following occur:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.1.2.2 Methodology

This visual impact analysis is based on field observations, visual simulations created by Solar Electric Solutions, LLC (Appendix B of this EIR), as well as a review of maps and aerial photographs for the project area.

The analysis of potential impacts was based on changes to the existing visual character that would result from project implementation. In making a determination of the extent and implications of the visual changes, consideration was given to:

- Specific changes in the visual composition, character, and valued qualities of the affected environment;
- The visual context of the affected environment;
- The extent to which the affected environment contained places or features that have been designated in plans and policies for protection or special consideration; and
- The numbers of viewers, their activities, and the extent to which these activities are related to the aesthetic qualities affected by the project-related changes.



It should be noted that an assessment of visual quality is a subjective matter, and reasonable people can disagree as to whether alteration in the visual character of the project area would be adverse or beneficial. For this analysis, a conservative approach was taken, and the potential for substantial change to the visual character of the project sites area is generally considered a significant impact.

4.1.2.3 Impact Analysis

IMPACTSubstantial Adverse Effect on a Scenic Vista.4.1-1Implementation of the projects would not degrade of the visual quality of a scenic vista.

Dixieland East Solar Farm and Dixieland West Solar Farm

The perimeter of the project facilities would be secured with six-foot tall chain-link security fencing with barbed wire. A remotely monitored security system will be installed to discourage and record any incidents of vandalism or trespassing. Access to each of the site locations would be provided using a 20 feet minimum swinging or sliding gate. Additionally, controlled access gates would be maintained at entrances into the each of the project site locations. Emergency response personnel would be provided with manual override capability in order to access the site facilities.

As stated in Section 4.1.1, the project sites are located in the western portion of the Imperial Valley, adjacent to an agricultural landscape. The project sites are not located within an area containing a scenic vista designated by the State or the County's General Plan (Imperial County, amended 2008). None of the key observation points described in Section 4.1.1.2 characterize the physical attributes necessary to qualify as a designated scenic vista; however, there are scenic mountains identified as background views of the project. The solar arrays (up to a height of 30 feet) and collector lines would extend along private lands, traversing the project area both west to east and north to south along major roads and other local roadways.

The solar arrays would not create a visual obstruction for the background views of the mountains. Furthermore, due to the agricultural ground disturbing activities (plowing) particulate matter in the air is increased, which compromises the visibility in the area. In addition, air quality is reduced during high temperature events, further impeding the background views of the mountains. The low air quality acts like a visual intrusion to the background views. Based on these factors, implementation of the projects would not have a substantial direct or indirect effect on a scenic vistas and **no impact** is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Substantial Adverse Effect on a Scenic Highway.

Implementation of the projects would not result in substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and ridgelines within a state scenic highway.

Dixieland East Solar Farm and Dixieland West Solar Farm

The project sites are located approximately 1.25 miles north of I-8. The I-8 freeway has the Caltrans Scenic Highway designation of an "Eligible State Scenic Highway – Not Officially Designated" from the city of El Cajon until the junction of SR-98, where it terminates. The junction of I-8 and SR-98 is located approximately 15 miles west of the project sites. The views to the project sites from I-8 are limited due to the level terrain in the area. No scenic resources have been identified on the project sites. Based on these considerations, the projects would not result in damage to scenic resources, including trees, rock outcroppings, or historic buildings, including those listed as eligible for the Scenic Highway Program (May, 2014). The proposed project would not result in impacts to scenic highways. **No impact** is identified for this issue area.



4.1-2

Mitigation Measure(s)

No mitigation measures are required.

 IMPACT
 Changes to Visual Character

 4.1-3
 Implementation of the projects would not substantially degrade the existing visual character or auality of the project sites and their surroundings.

The DESF project site consists of three parcels totaling 24 acres within the eastern portion of the project area. The project site is generally located between the Westside Main Canal to the east and the Dixieland Substation to the west with W. Evan Hewes Highway to the south. Primary and secondary access to DESF is via W. Evan Hewes Highway to Brown Road.

The DWSF project site consists of one parcel totaling 29 acres within the western portion of the project area. The project site is generally bounded by W. Evan Hewes Highway to the south, vacant land to the west and north, and the Dixieland Substation on the east. The Imperial Lakes Estates is located approximately 1,500 west of the DWSF project site. Primary and secondary access to the DWSF is via W. Evan Hewes Highway to Carriso Avenue. Carriso Avenue extends north of W. Evan Hewes Highway along the eastern perimeter of the site. The Imperial Irrigation District's existing electrical distribution line runs north-south along the eastern edge of the project site along Carriso Avenue and within the existing 140-foot-wide IID transmission easement.

The projects consist of the construction of solar arrays, access roads and security fencing. The project components would result in a change of the existing land use at the two project sites from partially disturbed habitat to a solar facility. This would alter the visual character of the project area, both in terms of the on-site features proposed under the projects and in the context of the study area's relationship within the currently surrounding desert landscape. Surrounding land uses consists of vacant desert land, rural residential, and agricultural. The Centinela State Prison is located approximately two miles to the northwest. The project sites have the potential to be used for agricultural purposes as the sites are designated as Agriculture under the County's General Plan (as amended through 2008) and zoned as General Agriculture (A-2).

Each of these frames of reference is considered under the associated headings below.

On-site Changes to Existing Visual Character

As previously described, the project sites are currently disturbed natural habitat. No distinctive visual resources, with the exception of background views of the mountains are located within the general area. Construction of the projects would alter the existing visual character of the project areas and their surroundings as a result of converting existing vacant desert land to a small-scale solar energy facility. The general area is essentially flat; therefore, no substantial site grading and landform change would occur. Although the project sites would be visually disrupted in the short-term during construction due to soil disturbance activities, these activities. Because extensive grading would not be required, these activities would be temporary. The visual character of the project sites during construction would not be substantially degraded in the short-term and related impacts would be considered **less than significant**.

Dixieland East Solar Farm and Dixieland West Solar Farm

As discussed in Chapter 3.0, the major generation equipment that would be installed in conjunction with the projects includes solar arrays, and ancillary equipment that includes; switch/fuse panels, control and protection equipment, communications hardware, and meteorological data equipment. Additional auxiliary facilities would include lighting and security systems. As described in Chapter 3.0, the project sites would be enclosed by a 6-foot security fence.



Visual simulations were created for five KOPs of the project sites (as identified in Figures 4.1-1 and 4.1-2) to represent "typical views" that are associated with the project components. Figures 4.1-4 through 4.1-8 present the existing conditions and visual simulations to illustrate the visual representation of the proposed condition to illustrate the potential changes of the visual environment.

Visual simulations (also termed "photographic simulations" or "photo-simulations") are realistic, computergenerated, three-dimensional images of a project that simulate certain project features in their context (as they would be seen from critical views and under specific viewing conditions), matching baseline photographs of the same views. These conditions include angle of view, distance, and time of day, ambient lighting, and atmospheric perspective (the attenuation of details due to particulates or moisture). The computer imaging is generally restricted to features of the project, with the context being represented by a photograph. The image and photograph are then blended to realistically portray the project in its context. Three-dimensional (3-D) photo-simulations are simulations based on a photographic montage and 3-D modeling of geographic elevation information with other associated pertinent information that is representative and accurate.

Current industry standard procedures were used for the development of the visual simulations, resulting in the visual simulation that is both seamless and accurate. The photo simulations presented are by no means representative of all views affected. They are included to provide the reader with a better overall sense of project changes to the existing environment as well as to help visualize public perception and responses to these changes.

As previously discussed, the existing visual resources in the area are limited to the background views of the Peninsular Range Mountains that include Carrizo Mountain. The views to the project sites from I-8 are limited due to the level terrain in the area. No scenic resources have been identified on the project sites.

The project sites would have similar visual impacts. Figures 4.1-4 through 4.1-8 illustrates the visual changes from five perspective KOPs. The changes from the existing condition to the proposed condition would have a significant visual change from a disturbed habitat to a solar farm facility. As stated in the Existing Conditions, Section 4.1.1.2, the sites have low vividness, moderately low intactness, and moderately high visual unity, resulting in a moderate low visual quality. The combination of the low visual character and moderate visual quality results in a moderately low existing visual resource.

Roadway travelers would have a moderate viewer exposure and low sensitivity resulting in a moderately low viewer response. Given the limited views of the project area, residential viewers having a low exposure, combined with a moderately low sensitivity results in a moderately low viewer response.

The surrounding area has a moderately low existing visual quality, and no resources were identified in the area with the exception of the background views of the mountains. The proposed heights of project components would not obscure the background views of the mountains. In addition, the power lines that will connect with the existing substation would be similar to the existing conditions in the area.

Figures 4.1-4 through 4.1-8 illustrate that the impacts would be similar across the two project sites. The viewer response ratings as identified in Table 4.1-5, Summary of Key View Ratings, are considered to be moderately low, combined with a moderately low resource change that would result in a moderately low visual impact due to the construction of the project, these changes would have a **less than significant** impact on the existing onsite visual character.

Project Study Area	Key View	Existing Visual Resource	Viewer Response	+	Resource Change	=	Visual Impact		
DESE	1	ML	ML		ML	-	ML		
DESF	2 ML		ML		ML		ML		
DWCE	1	ML	ML		ML		ML		ML
DWSF	2	ML	ML		ML		ML		

TABLE 4.1-5. SUMMARY OF KEY VIEW RATINGS





Figure 4.1-4. Existing and Proposed Views at DWSF KOP 1 (looking north)

Existing Condition: Intersection of Evan Hewes Highway and Carriso Avenue. View is toward the north.



Proposed Condition: View of the solar arrays.





Figure 4.1-5. Existing and Proposed Views at DWSF KOP 1 (looking west)

Existing Condition: Intersection of Evan Hewes Highway and Carriso Avenue. View is toward the west.



Proposed Condition: View of the solar arrays.





Figure 4.1-6. Existing and Proposed Views at DWSF KOP 2

Existing Condition: Approximately mid-point of Imperial Lakes Water Ski Community (residential) boundary looking east towards the project.



Proposed Condition: View of the solar arrays.



Figure 4.1-7. Existing and Proposed Views at DESF KOP 1

Existing Condition: East of the Westside Main Canal, looking northwest from the intersection of Evan Hewes Highway and Foxglove Street



Proposed Condition: View of the solar arrays





Figure 4.1-8. Existing and Proposed Views at DESF KOP 2

Existing Condition: Intersection of Evan Hewes Highway and Brown Road. View is toward the north.



Proposed Condition: View of the solar arrays



Mitigation Measure(s)

No mitigation measures are required.

IMPACTNew Sources of Nighttime Lighting and Glare.4.1-4The projects would not create new source of light and glare, which could adversely affect day or
nighttime views in the project area.

Dixieland East Solar Farm and Dixieland West Solar Farm

As described in Chapter 3.0, the projects would include new sources of nighttime lighting. In addition, given the nature of the projects (e.g., solar facilities), this discussion also considers potential glare-related impacts generated by the proposed solar arrays. This discussion considers each issue under the associated headings below.

Nighttime Lighting

Minimal lighting would be required for operations and would be limited to safety and security functions. Motion sensitive, directional security lights would be installed to provide adequate illumination at points of ingress/egress pursuant to County of Imperial Building Code Requirements (see Title 9, Division 3, Chapter 1: Special Development Standards, of the County's Zoning Ordinance). All lighting will be directed downward and shielded to focus illumination on the desired areas only and to minimize light trespass in accordance with applicable County requirements. If additional lighting should be required for nighttime maintenance, portable lighting equipment would be used. Based on these considerations, the projects are not anticipated to create a new source of substantial light which would adversely affect nighttime views in the project area and the impact is considered **less than significant**.

Glare and Glint

The projects would not result in a significant glint or glare impact to motorists driving on I-8. The project sites are located approximately 1.25 miles north of I-8 and the views to the project sites from I-8 are limited or otherwise unavailable due to the distance and intervening terrain in the area. Furthermore, <u>The projects would involve the installation of PV solar systems</u>, which convert sunlight directly into electricity, and by their shear nature, are non-reflective. By nature, PV panels are designed to absorb as much of the solar spectrum as possible in order to convert sunlight to electricity and are furnished with anti-reflective coating for that purpose. Reflectivity levels of solar panels are decisively lower than standard glass or galvanized steel, and should not pose a reflectance hazard to area viewers. Other glare sources in nature (free water surfaces) have a higher glare effect than PV modules. Reflected light from standard PV modules surface is between 10 to 20 percent of the incident radiation (as low as free water surfaces), while galvanized steel (used in industrial roofs) is between 40 to 90 percent (Aztec 2014). Therefore, impacts related to glare or glint to motorists driving on I-8 is considered **less than significant**.

Furthermore, given the project areas distance from the Naval Air Facility El Centro of 6.0 miles to the northeast, the projects would not use materials that would reflect significant levels of glare or glint upwards in a manner that could affect flight operations. Based on these considerations, impacts related to glare or glint to aircraft is considered **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.



4.1.3 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Topography within each of the project sites is relatively flat and primarily characterized by a level elevation. Therefore, no grading or significant land form modifications would be required during decommissioning activities upon site restoration in the future. Although the project sites would be visually disrupted in the short-term during decommissioning activities, because extensive grading is not required and these activities would be temporary, the visual character of the project sites would not be substantially degraded in the short-term and related impacts would be **less than significant**.

Residual

Impacts related to glare and glint impacts to roadway travelers would be less than significant and no additional mitigation measures are required. Impacts related to substantial alteration of a scenic vista and damage to designated scenic corridor would be less than significant and no additional mitigation measures are required. Changes to visual character of the project area would be less than significant and would be transitioned back to their prior (pre-solar project) conditions following site decommissioning. Based on these conclusions, implementation of the project area or add substantial amounts of light and glare.



4.2 AGRICULTURAL RESOURCES

This section provides an overview of existing agricultural resources within the project sites and identifies applicable federal, state, and local policies related to the conservation of agricultural lands (see Section 4.2.1). This includes a summary of the production outputs, soil resources and adjacent operations potentially affected by the projects. The impact assessment in Section 4.2.2 provides an evaluation of potential adverse effects to agricultural resources based on criteria derived from the California Environmental Quality Act (CEQA) Guidelines in conjunction with actions proposed in Chapter 3, Project Description. Section 4.2.3 provides a discussion of residual impacts, if any. Environmental Management Associates prepared Land Evaluation Site Assessments (LESA) for the SEPV Dixieland East and West Solar Farm sites in April 2015, and these are included in Appendix C. The site reclamation plans for the sites are included in Appendix L.

No forestry resources are present within the project sites and, therefore, this section focuses on issues related to agricultural resources.

4.2.1 Environmental Setting

In 2013, Imperial County (County) was ranked tenth among the 58 counties in the State of California with respect to production of agricultural goods, earning \$1,945,759,000 (gross) for the State's economy (California Department of Food and Agriculture 2015). Vegetable and melon crops were the top commodities in Imperial County producing \$865,401,000 in the year 2013. Livestock and field crops were the next two largest commodities generating \$617,371,000 and \$471,461,000, respectively, for Imperial County (Imperial County Agricultural Commissioner 2013).

4.2.1.1 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the projects.

State

California Land Conservation Act

The Williamson Act (California Land Conservation Act, California Government Code, Section 51200 et seq.) is a statewide mechanism for the preservation of agricultural land and open space land. The Act provides a comprehensive method for local governments to protect farmland and open space by allowing land in agricultural use to be placed under contract (agricultural preserve) between a local government and a land owner.

Under the provisions of the Williamson Act (California Land Conservation Act 1965, Section 51200), landowners contract with the County to maintain agricultural or open space use of their lands in return for reduced property tax assessment. The contract is self-renewing and the landowner may notify the County at any time of intent to withdraw the land from its preserve status. Withdrawal involves a ten-year period of tax adjustment to full market value before protected open space can be converted to urban uses. Consequently, land under a Williamson Act Contract can be in either a renewal status or a nonrenewable status. Lands with a nonrenewable status indicate the farmer has withdrawn from the Williamson Act Contract and is waiting for a period of tax adjustment for the land to reach its full market value. Nonrenewable and cancellation lands are candidates for potential urbanization within a period of ten years.

The requirements necessary for cancellation of land conservation contracts are outlined in Government Code Section 51282. The County must document the justification for the cancellation through a set of findings. Unless the land is covered by a Farmland Security Zone (FSZ) contract, the Williamson Act



requires that local agencies make both the Consistency with the Williamson Act and Public Interest findings.

On February 23, 2010, the Imperial County Board of Supervisors voted to not accept any new Williamson Act contracts and not to renew existing contracts, due to the elimination of the subvention funding from the state budget. The County reaffirmed this decision in a vote on October 12, 2010, and notices of nonrenewal were sent to landowners with Williamson Act contracts following that vote. The applicable deadlines for challenging the County's actions have expired, and therefore all Williamson Act contracts in Imperial County will terminate on or before December 31, 2018.

According to the 2011/2012 Imperial County Williamson Act Map produced by the California Department of Conservation's Division of Land Resource Protection, the project sites are not located on Williamson Act contracted land (California Department of Conservation 2012).

Farmland Security Zones

In August 1998, the Williamson Act's FSZ provisions were enacted with the passage of Senate Bill 1182 (Costa, Chapter 353, Statutes of 1998). This sub-program, dubbed the "Super Williamson Act," enables agricultural landowners to enter into contracts with the County for 20-year increments with an additional 35 percent tax benefit over and above the standard Williamson Act contract. The project sites are not located on Farmland Security Zone contracted land.

California Farmland Mapping and Monitoring Program

The California Department of Conservation (DOC), under the Division of Land Resource Protection, has set up the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the state's farmland to and from agricultural use. The map series identifies eight classifications and uses a minimum mapping unit size of ten acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates its "Important Farmland Series Maps" every two years. Table 4.2-1 provides a summary of agricultural land within Imperial County converted to non-agricultural uses during the time frame from 2008 to 2010 (California Department of Conservation 2014).

According to the farmland maps prepared by the California Department of Conservation (2012), the project sites do not contain prime farmland or farmland of statewide importance. As shown in Figure 4.2-1, the project sites are primarily designated as Other Land. The northern edge of Dixieland East Solar Farm (DESF) and the northeastern corner of Dixieland West Solar Farm (DWSF) are designated as Farmland of Local Importance. The California Department of Conservation defines Other Land as, "Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land. According to the Department of Conservation, Farmland of Local Importance is either currently producing, or has the capability of production, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland" (California Department of Conservation 2004).

Local

County of Imperial General Plan

The Agricultural Element of the County's General Plan serves as the primary policy statement for implementing development policies for agricultural land use in Imperial County. The goals, objectives, implementation programs, and policies found in the Agricultural Element provide direction for new development as well as government actions and programs. Imperial County's Goals and Objectives are intended to serve as long-term principles and policy statements to guide agricultural use decision-making and uphold the community's ideals.





Figure 4.2-1. FMMP Designations

	Total A Inven	creage toried	2008-2010 Acreage Changes			es
Land Use Category	2008	2010	Acres Lost (-)	Acres Gained (+)	Total Acreage Changed	Net Acreage Changed
Prime Farmland Farmland of Statewide Importance Unique Farmland/Farmland of Local Importance	195,589 311,048 2,196 32,109	194,137 307,221 2,141 35,774	1,865 4,579 65 1,664	414 753 9 5,329	2,279 5,332 74 6,993	-1,451 -3,826 -56 3,665
Important Farmland Subtotal	540,942	539,273	8,173	6,505	14,678	-1,668
Grazing Land	0	0	0	0	0	0
Agricultural Land Subtotal	540,942	539,273	8,173	6,505	14,678	-1,668
Urban and Built-Up Land Other Land Water Area	27,709 458,829 1,029	28,485 460,001 749	83 338 293	859 1,510 13	942 1,848 306	776 1,172 -280
Total Area Inventoried	1,028,509	1,028,508	8,887	8,887	17,774	0

TABLE 4.2-1. IMPERIAL COUNTY CHANGE IN AGRICULTURAL LAND USE SUMMARY (2008-2010)

Source: DOC 2014

Agriculture has been the single most important economic activity in the County throughout its history. The County recognizes the area as one of the finest agricultural areas in the world due to several environmental and cultural factors including good soils, a year-round growing season, the availability of adequate water transported from the Colorado River, extensive areas committed to agricultural production, a gently sloping topography, and a climate that is well-suited for growing crops and raising livestock. The Agricultural Element in the County General Plan demonstrates the long-term commitment by the County to the full promotion, management, use, and development and protection of agricultural production, while allowing logical, organized growth of urban areas (County of Imperial, as amended through 2008).

The County's Agricultural Element identifies several Implementation Programs and Policies for the preservation of agricultural resources. The Agricultural Element recognizes that the County can and should take additional steps to provide further protection for agricultural operations and at the same time provide for logical, organized growth of urban areas. The County must be specific and consistent about which lands will be maintained for the production of food and fiber and for support of the County's economic base. The County's strategy and overall framework for maintaining agriculture includes the following policy directed at the preservation of Important Farmland:

The overall economy of the County is expected to be dependent upon the agricultural industry for the foreseeable future. As such, all agricultural land in the County is considered as Important Farmland, as defined by federal and state agencies, and should be reserved for agricultural uses. Agricultural land may be converted to non-agricultural uses only where a clear and immediate need can be demonstrated, such as requirements for urban housing, commercial facilities, or employment opportunities. All existing agricultural land will be preserved for irrigation agriculture, livestock production, aquaculture, and other agriculture-related uses except for non-agricultural uses identified in this General Plan or in previously adopted City General Plans.

The following program is provided in the Agricultural Element:

No agricultural land designated except as provided in Exhibit C [of the Agricultural Element] shall be removed from the Agriculture category except where needed for use by a public agency, for geothermal purposes, where a mapping error may have occurred, or where a clear long-term economic benefit to the County can be demonstrated through the planning and environmental review process. The Board (or Planning Commission) shall be required to prepare and make specific findings and circulate same for



60 days (30 days for parcels considered under Exhibit C of this [Agricultural] element) before granting final approval of any proposal, which removes land from the Agriculture category.

Also, the following policy addresses Development Patterns and Locations on Agricultural Land:

"Leapfrogging" or "checkerboard" patterns of development have intensified recently and result in significant impacts to the efficient and economic production of adjacent agricultural land. It is a policy of the County that leapfrogging will not be allowed in the future. All new non-agricultural development will be confined to areas identified in this plan for such purposes or in Cities' adopted Spheres of Influence, where new development must adjoin existing urban uses. Non-agricultural residential, commercial, or industrial uses will only be permitted if they adjoin at least one side of an existing urban use, and only if they do not significantly impact the ability to economically and conveniently farm adjacent agricultural land.

Agricultural Element Programs that address "leapfrogging" or "checkerboard" development include:

All non-agricultural uses in any land use category shall be analyzed during the subdivision, zoning, and environmental impact review process for their potential impact on the movement of agricultural equipment and products on roads located in the Agriculture category, and for other existing agricultural conditions which might impact the projects, such as noise, dust, or odors.

The Planning and Development Services Department shall review all proposed development projects to assure that any new residential or non-agricultural commercial uses located on agriculturally zoned land, except land designated as a Specific Plan Area, be adjoined on at least one entire property line to an area of existing urban uses. Developments that do not meet this criteria should not be approved.

Table 4.2-2 provides a General Plan goal and policy consistency evaluation for the projects.

County of Imperial Right to Farm Ordinance No. 1031

The purpose and intent of the County's Right to Farm Ordinance is to reduce the loss to the County of its agricultural resources by clarifying the circumstances under which agricultural operations may be considered a nuisance. The ordinance includes a requirement for disclosure of agricultural operations as part of real estate transactions that may occur in the vicinity of agricultural operations.

4.2.1.2 Existing Conditions

Agricultural Cropping Patterns

The projects are located on privately owned, primarily undeveloped vacant land. The surrounding land uses consists primarily of vacant land. The sites are located adjacent to the Westside Main canal (DESF) and are in the vicinity of the existing Dixieland substation. A large area of cultivated agricultural croplands is situated on the east side of Westside Main Canal, approximately 0.3 miles from the eastern boundary of DESF.



	Consistency with General	
General Plan Policies	Plan	Analysis
Goal 1. All Important Farmland, including the categories of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance, as defined by federal and state agencies, should be reserved for agricultural uses.	Consistent	The project sites do not contain Prime Farmland or Farmland of Statewide Importance. Therefore, the proposed project would not convert land designated as Prime Farmland and Farmland of Statewide Importance to non-agricultural uses. The northern edge of DESF and the northeastern corner of DWSF are designated as Farmland of Local Importance. The projects would temporarily convert Farmland of Local Importance. However, as part of the projects, the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the projects are decommissioned at the end of their life spans. The reclamation plan includes the removal, recycling, and/or disposal of all solar arrays, inverters, transformers and other structures on each of the sites, as well as restoration of the site to its pre-project condition. Therefore, the proposed projects would not permanently convert Farmland of Local Importance to non-agricultural uses.
Goal 2. Adopt policies that prohibit "leapfrogging" or "checkerboard" patterns of nonagricultural development in agricultural areas and confine future urbanization to adopted Sphere of Influence area.	Consistent	The project sites are designated for agriculture land use in the County General Plan. The projects would include development of solar facilities on privately owned, undeveloped, but partially disturbed land. Land immediately adjacent to the project sites is not currently under agricultural production. The nearest area of cultivated agricultural croplands is situated on the east side of Westside Main Canal, approximately 0.3 miles from the eastern boundary of DESF. This development would not include a residential component that would induce urbanization adjacent to the projects. Furthermore, with the approval of a Conditional Use Permit the projects would be consistent with the County's Land Use Ordinance. Consistency with the Land Use Ordinance implies consistency with the General Plan land use designation.
Objective 2.1. Do not allow the placement of new non-agricultural land uses such that agricultural fields or parcels become isolated or more difficult to economically and conveniently farm.	Consistent	Land immediately adjacent to the project sites is not currently under agricultural production. The nearest area of cultivated agricultural croplands is situated on the east side of Westside Main Canal, approximately 0.3 miles from the eastern boundary of DESF. The Westside Main Canal provides a buffer between the proposed solar facilities and the existing cultivated agricultural croplands located on the east side of the Canal. Neither construction nor operation of the solar facilities would not make it difficult to economically or conveniently farm.
Objective 2.2. Encourage the infilling of development in urban areas as an alternative to expanding urban boundaries.	Consistent	The projects consist of the construction and operation of a solar facility. The projects are an industrial use and would not induce growth in the area nor result in the expansion of urban boundaries.
Objective 2.4. Discourage the parcelization of large holdings.	Consistent	See response to Objective 2.3 above.

TABLE 4.2-2. PROJECT CONSISTENCY WITH APPLICABLE GENERAL PLAN AGRICULTURAL POLICIES



	Consistency with General	• • • •
General Plan Policies	Plan	Analysis
Objective 2.6. Discourage the development of new residential or other non-agricultural areas outside of city "sphere of influence" unless designated for non-agricultural use in the County General Plan, or for necessary public facilities.	Consistent	The projects are an allowable use within the agricultural zones of the property subject to approval of a Conditional Use Permit. Therefore, the projects are consistent with the agriculture land use designation of the General Plan.
Goal 3. Limit the introduction of conflicting uses into farming areas, including residential development of existing parcels which may create the potential for conflict with continued agricultural use of adjacent property.	Consistent	With approval of a Conditional Use Permit, the projects would be an allowable use in agricultural zones. Additionally, the projects do not include the development of housing.
Objective 3.2. Enforce the provisions of the Imperial County Right-to-Farm Ordinance (No. 1031).	Consistent	The Imperial County Right-to-Farm Ordinance would be enforced.
Objective 3.3. Enforce the provisions of the State nuisance law (California Code Sub-Section 3482).	Consistent	The provisions of the State nuisance law would be incorporated into the projects.
Objective 3.5. As a general rule, utilize transitional land uses around urban areas as buffers from agricultural uses. Such buffers may include rural residential uses, industrial uses, recreational areas, roads, canals, and open space areas.	Consistent	Land immediately adjacent to the project sites is not currently under agricultural production. The nearest area of cultivated agricultural croplands is situated on the east side of Westside Main Canal, approximately 0.3 miles from the eastern boundary of DESF. The Westside Main Canal provides a buffer between the proposed solar facilities and the existing cultivated agricultural croplands located on the east side of the Canal.
Objective 3.6. Where a development permit is sought adjacent to agricultural land use, protect agricultural operations by requiring appropriate buffer zones between the agricultural land and new developments, and then keep these zones aesthetically pleasing and free of pests by cleaning them of all garbage and noxious vegetation. Vegetation for the purpose of dust control shall be planted and maintained in an attractive manner. The buffer shall occur on the parcel for which the development permit is sought and shall favor protection of the maximum amount of farmland.	Consistent	The project applicant would implement a noxious weed control management plan during the construction and operational phases of the projects. The burden of maintaining public roads falls upon the County of Imperial.

Source: County of Imperial General Plan, as amended through 2008.

Farmland Quality

To assess the quality of the project sites for agricultural cultivation, the LESA model¹ developed by the DOC was utilized for the DESF and DWSF. The LESA model is an approach used to rate the relative quality of land resources based upon six specific measureable features. Two land evaluation factors are

¹ LESA is a point-based approach for rating the relative importance of agricultural land resources based upon specific measurable features. LESA evaluates measures of soil resource quality, a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, the factors are rated, weighted, and combined, resulting in a single numeric score. The project score becomes the basis for making a determination of a project's potential significance.



based upon measures of soil resource quality. Four site assessment factors provide measures of a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. Based on the results for the LESA analysis, the project sites are not classified as Important Farmland. The results of the LESA model for DESF and DWSF are provided in Appendix C.

Results obtained from the LESA model closely correlate with Important Farmland Maps produced by the DOC's FMMP. The project sites do not contain prime farmland or farmland of statewide importance. As shown in Figure 4.2-1, the project sites are primarily designated as Other Land. The northern edge of DESF and the northeastern corner of DWSF are designated as Farmland of Local Importance. "Other Land" is defined as land not included in any other mapping category with common examples including low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines, borrow pits; and, water bodies smaller than 40 acres. According to the Department of Conservation, Farmland of Local Importance is either currently producing, or has the capability of production, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland" (California Department of Conservation 2004).

Soil Resources

The suitability of the local soil resource plays a crucial part in the determination of a plot's farmland designation. The land capability classification (LCC) system developed by the USDA, Natural Resources Conservation Service (NRCS), rates each of the soil types within the County in relation to its limitations for crop management. A soil rated as Class I is considered to have few limitations whereas a soil rated as Class VIII could have severe limitations that, in many circumstances, would preclude it from commercial crop production. According to the LESAs prepared for the projects, the project sites are primarily comprised of soil types with an LCC rating of VII.

Soils are also rated by the Storie Index, a numerical system expressing the relative degree of suitability, or value of a soil for general intensive agriculture use. The index considers a soil's color and texture, the depth of nutrients, presence of stones, and slope, all of which relate to the adequacy of a soil type for use in crop cultivation. The rating does not take into account other factors, such as the availability of water for irrigation, the climate, and the distance from markets. Values of the index range from 1 to 100 and are divided into six grades, with an index of 100 and a grade of 1 being the most suitable farmland. According to the LESAs prepared for the projects, the Storie Index for soil resources within the project sites is generally classified as Grade 3 (Fair) with isolated areas classified as Grade 1 (Excellent) and Grade 2 (Good).

4.2.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to agricultural resources, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

4.2.2.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to agricultural resources are considered significant if any of the following occur:

- Convert economically viable Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract in an area in which continued agriculture is economically viable;
- Involve other changes in the existing environment that, due to their location or nature, could individually or cumulatively result in loss of economically viable Farmland, to non-agricultural uses; or
- Impair agricultural productivity of the project site or use of neighboring areas.



4.2.2.2 Methodology

This analysis evaluates the potential for the projects, as described in Chapter 3, Project Description, to adversely impact agricultural resources within the project sites based on the applied significance criteria as identified above. This analysis utilizes the LESA model in conjunction with other readily available information sources in assessing impacts on agriculture and farmland. As indicated in the environmental setting, two LESA models have been prepared that address DESF and DWSF. These reports are included as Appendix C. The analysis prepared for this Environmental Impact Report (EIR) also relied on NRCS soil survey data, Important Farmland maps for Imperial County prepared by the State, and Williamson Act contract maps prepared by Imperial County. A combination of these sources was used to determine the agricultural significance of the lands in the project sites.

Additionally, potential conflicts with existing agricultural zoning, incompatibility with existing Williamson Act contracts, or other changes resulting from the implementation of the projects, which could indirectly remove Important Farmland from agricultural production or reduce agricultural productivity were considered. Sources used in this evaluation included, but were not limited to, the Imperial County General Plan, as amended through 2008, and zoning ordinance. Additional background information on land uses was obtained through field review and consultation with appropriate agencies. Conceptual site plans for the projects were also used to evaluate potential impacts. These conceptual exhibits are provided in Figures 3-5 and 3-7.

4.2.2.3 Impact Analysis

Impact Conversion of Important Farmlands to Non-Agricultural Use.

4.2-1 Implementation of the projects would not result in the conversion of economically viable Important Farmland, including Prime Farmland and Farmland of Statewide Importance, to non-agricultural uses.

Dixieland East Solar Farm and Dixieland West Solar Farm

The project sites do not contain prime farmland or farmland of statewide importance, and these sites have not been irrigated for purposes of agricultural production for over 30 years. As shown in Figure 4.2-1, the project sites are primarily designated as Other Land. The northern edge of DESF and the northeastern corner of DWSF are designated as Farmland of Local Importance. It should be noted that analysis of Other Land and Farmland of Local Importance is not required under CEQA significance criteria, as these designations are not considered an "agricultural land" per CEQA Statute Section 21060.1(a).

The LESA assessed the agricultural viability of the land and soils to determine the potential impact of the conversion of agricultural resources to non-agricultural uses. Based on the LESA's scoring methodology, a site scoring of 60 points or higher is typically considered "significant." A site scoring of 0 to 39 points is not considered significant. The LESA scoring for the site locations analyzed in conjunction with the projects are provided in Table 4.2-3. As shown, the LESA scores for the projects are below the numerical significance threshold of 39 points. Therefore, the project sites are not considered to have significant agricultural resources. Therefore, development of the DESF and DWSF sites would result in **no impact** to important farmlands.

As part of the projects, the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the projects are decommissioned at the end of their life spans. The reclamation plan includes the removal, recycling, and/or disposal of all solar arrays, inverters, transformers and other structures on each of the sites, as well as restoration of the site to its pre-project condition. The County is responsible for approving the reclamation plan for each project and confirming that financial assurances for each of the projects are in conformance with Imperial County ordinances prior to the issuance of any building permits. This shall be made a condition of approval and included in the CUPs.



Project	LESA Score	LE Factors ¹	SA Factors ²	Significant?
DESF	16.56	16.56	0	No
DWSF	14.69	14.69	0	No

TABLE 4.2-3. LESA SCORING FOR THE PROJECT SITES

Source: Environmental Management Associates 2015.

Notes: 1. Land evaluation (LE) includes soil LCC and Storie Index.

2. Site assessment (SA) factors include water availability, project size, and Surrounding Agricultural Land & Surrounding Protected Resource Land.

Mitigation Measure(s)

No mitigation measures are required.

IMPACTResult in the Non-Renewal or Cancellation of an Active Williamson Act Contract.4.2-2T

The projects would not conflict with the existing agricultural zoning for the project sites or with the provisions of an existing Williamson Act contract.

Dixieland East Solar Farm and Dixieland West Solar Farm

Williamson Act. According to the 2011/2012 Imperial County Williamson Act Map produced by the California Department of Conservation's Division of Land Resource Protection, the project sites are not located on Williamson Act contracted land (California Department of Conservation, 2012). Therefore, the projects would not conflict with a Williamson Act contract and **no impact** would occur.

Agricultural Zoning. Pursuant to the County General Plan, the project sites are located on land designated for agricultural uses. The solar energy facility components of the projects would be constructed on lands currently zoned A-2 (General Agriculture). Solar energy plants are allowed uses within these zones, subject to the approval of a CUP. Upon approval of a CUP, the projects' use would be consistent with the Imperial County Land Use Ordinance and thus is also consistent with the General Plan land use designation of the site. Additionally, the operation of the solar generating facilities is not expected to inhibit or adversely affect adjacent agricultural operations through the placement of sensitive lands uses, generation of excessive dust or shading, or place additional development pressures on adjacent areas. Based on these considerations, the impact is considered **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Result in Other Effects that could Contribute to the Conversion of Active Farmlands to Non-4.2-3 Agricultural Use.

The projects could result in direct and indirect impacts to adjacent agricultural lands that could indirectly contribute to conversion of active farmland to non-agricultural use.

Dixieland East Solar Farm and Dixieland West Solar Farm

The Agricultural Element of the County's General Plan serves as the primary policy statement for implementing development policies for agricultural land use in Imperial County. The goals, objectives, implementation programs, and policies found in the Agricultural Element provide direction for private development as well as government actions and programs. A summary of the relevant Agricultural goals and objectives and the projects' consistency with applicable goals and objectives is summarized in Table 4.2-2. As provided, the projects are generally consistent with certain Agricultural Element Goals and Objectives of the County General Plan, but mitigation is required for the projects.



Per County policy, agricultural land may be converted to non-agricultural uses only where a clear and immediate need can be demonstrated, such as requirements for urban housing, commercial facilities, or employment opportunities. Further, no agricultural land designated except as provided in Exhibit C shall be removed from the agriculture category except where needed for use by a public agency, for geothermal purposes, where a mapping error may have occurred, or where a clear long-term economic benefit to the County can be demonstrated through the planning and environmental review process. As discussed under Impact 4.2-1, the project sites do not contain prime farmland or farmland of statewide Furthermore, based on the LESA's scoring methodology, the project sites are not importance. considered to have significant agricultural resources. As part of the projects, the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the projects are decommissioned at the end of their life spans. The reclamation plan includes the removal, recycling, and/or disposal of all solar arrays, inverters, transformers and other structures on each of the sites, as well as restoration of the site to its pre-project condition. The County is responsible for approving the reclamation plan for each project and confirming that financial assurances for each of the projects are in conformance with Imperial County ordinances prior to the issuance of any building permits. This shall be made a condition of approval and included in the CUPs.

The nature of the projects warrants that they be located adjacent to existing electrical transmission infrastructure. The interconnection for the proposed projects will occur at the 12 kV side of the Imperial Irrigation District (IID) Dixieland Substation, located between the DESF and DWSF project sites. Land immediately adjacent to the project sites is not currently under agricultural production. The nearest area of cultivated agricultural croplands is situated on the east side of Westside Main Canal, approximately 0.3 miles from the eastern boundary of DESF. The Westside Main Canal provides a buffer between the proposed solar facilities and the existing cultivated agricultural croplands located on the east side of the Canal. With the approval of a Conditional Use Permit, the projects would be consistent with the County's Land Use Ordinance. Consistency with the Land Use Ordinance implies consistency with the General Plan land use designation.

The projects would not directly impact the movement of agricultural equipment on roads located within the agriculture category and access to existing agriculture-serving roads would not be precluded or hindered by the projects. No modifications to roadways are proposed in the project sites that would otherwise affect other agricultural operations in the area. Furthermore, existing nuisance issues such as noise, dust, and odors from existing agricultural use would not impact the projects given the general lack of associated sensitive uses (e.g. residences). Likewise, with mitigation measures proposed in other resource sections (e.g. air quality, noise, etc.) project-related activities would not adversely affect adjacent agricultural operations. Additionally, the projects would not develop infrastructure that would attract or encourage new development of adjacent farmlands. Further, the provisions of the Imperial County Right-to-Farm Ordinance (No. 1031) and the State nuisance law (California Code Sub-Section 3482) would continue to be enforced. Based on these considerations, the projects are not expected to adversely impact adjacent landowners' abilities to economically and conveniently farm adjacent agricultural land and the impact is considered **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Adversely Affect Agricultural Productivity.

4.2-4 The projects could impair the agricultural productivity of the project sites or use of neighboring areas for agricultural use.

Dixieland East Solar Farm and Dixieland West Solar Farm

As previously noted in the setting discussion, soil resources within the project sites have a LCC rating of VII. Based on this classification, one may conclude that on-site soil resources rank relatively low in terms of their suitability for agricultural cultivation (e.g., effective rooting depth, soil texture, nutrient holding



capacity, etc.). With the implementation of the projects, it is possible that the physical and chemical makeup of the soil materials within the upper soil horizon may change during construction and associated stockpiling operations. Improper soil stockpiling and management of the stockpiles could result in increased decomposition of soil organic materials, increased leaching of plant-available nitrogen, and depletion of soil biota communities (e.g., Rhizobium or Frankia). However, as indicated in Chapter 3, the project applicant will be required to implement site reclamation plans for each of the project sites. The reclamation plan includes restoration of the site to its pre-project condition.

There is the potential that weeds or other pests may occur within the solar fields if these areas are not properly maintained and managed to control weeds and pests. This is considered a **significant impact**. Implementation of Mitigation Measure AG-1 would reduce this impact to a level **less than significant**.

Mitigation Measure(s)

The following mitigation measures are required for the DESF and DWSF.

- AG-1 Prior to the issuance of a grading permit or building permit (whichever occurs first), a Weed and Pest <u>Control Management</u> Plan shall be developed by the project applicant and approved by the County of Imperial Agricultural Commissioner. The plan shall provide the following:
 - 1. Monitoring, preventative, and management strategies for weed and pest control <u>management</u> during construction activities at any portion of the project (e.g., transmission line);
 - 2. Control and management of weeds and pests in areas temporarily disturbed during construction where native seed will aid in site revegetation as follows;
 - Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner's office that a pest problem is present on the project site. The assistance of a licensed pest control advisor is recommended;
 - All treatments must be performed by a qualified applicator or a licensed pest control operatorbusiness;
 - "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation. Effective control methods may include physical/mechanical removal, bio control, cultural control, or chemical treatments;
 - <u>Use of "permanent" soil sterilants to control weeds or other pests is</u> prohibited due to the fact that this would interfere with reclamation.
 - Notify the Agricultural Commissioner's office immediately regarding any suspected exotic/invasive pest species such as A- and Q-rated pest species as defined by the California Department of Food and Agriculture (CDFA) and the United States Department of Agriculture (USDA). Request a sample be taken by the Agricultural Commissioner's office of a suspected invasive species. Eradication of exotic pests shall be done under the direction of the Agricultural Commissioner's Office and/or CDFA;
 - Obey all pesticide use laws, regulations, and permit conditions;
 - <u>Allow access</u> <u>Access shall be allowed</u> by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties;



- <u>Ensure that Aa</u>ll project employees that handle pest control issues shall beare appropriately trained and certified, that and all required records are shall be maintained and made available for inspection, and that all. All required permits and other required legal documents are shall be maintained current;
- <u>Maintain Rrecords of pests found and treatments or pest management methods used. controlled shall be maintained and available for review, or submitted to the Agricultural Commissioner's office on a quarterly basisRecords shall include the date, location/block, project name (current and previous if changed), and methods used. For pesticides include the chemical(s) used, EPA Registration numbers, application rates, etc. A pesticide use report may be used for this;</u>
- Submit a report on pest finds and treatments or other pest management methods to the Agricultural Commissioner quarterly within 15 days after the end of the previous quarter, and upon request. The report may consist of a copy of all records for the previous quarter, or may be a summary letter/report as long as the original detailed records are available upon request.
- 3. A long-term strategy for weed and pest control and management during the operation of the proposed project. Such strategies may include, but are not limited to:
 - a. Use of specific types of herbicides and pesticides on a scheduled basis.
- 4. Maintain a Pest Management Plan until reclamation is complete.
- 5. Maintenance and management of project site conditions to reduce the potential for a significant increase in pest-related nuisance conditions on adjacent agricultural lands. Develop and implement a Pest Management Plan that will reduce negative impacts to surrounding (not necessarily adjacent) farmland.
- 4.6. The project shall reimburse the Agricultural Commissioner's office for the actual cost of investigations, inspections, or other required non-routine responses to the site that are not funded by other sources.

Significance After Mitigation

The project applicant would be required to adhere to the terms of the comprehensive reclamation plan that would restore the project sites to their existing conditions following decommissioning of the projects (after their use for solar generation activities). In addition, the proposed projects would be required to implement a weed and pest <u>management control</u> plan per Mitigation Measure AG-1 Compliance with these measures would reduce this impact to a level **less than significant**.

4.2.3 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

As previously noted in the setting discussion, soil resources within the project sites have a LCC rating of VII. Based on this classification, one may conclude that on-site soil resources rank relatively low in terms of their suitability for agricultural cultivation (e.g., effective rooting depth, soil texture, nutrient holding capacity, etc.). With the implementation of the projects, it is possible that the physical and chemical makeup of the soil materials within the upper soil horizon may change during construction and associated stockpiling operations. Improper soil stockpiling and management of the stockpiles could result in increased decomposition of soil organic materials, increased leaching of plant-available nitrogen, and depletion of soil biota communities (e.g., rhizobium or frankia). However, as indicated in Chapter 3, the project applicant shall adhere to the terms of the site reclamation plan that has been submitted to Imperial



County to return the property to its pre-project condition. In any land restoration project, it is necessary to minimize disruption to topsoil or stockpiled topsoil for later use during restoration following project decommissioning. With implementation of the site reclamation plans for each of the project sites, this impact is considered **less than significant**.

Residual

The project sites do not contain prime farmland or farmland of statewide importance. Therefore, the proposed project would not convert land designated as Prime Farmland and Farmland of Statewide Importance to non-agricultural uses. Operation of the projects, subject to the approval of a CUP, would generally be consistent with applicable federal, state, regional, and local plans and policies. Following the proposed use (e.g., solar facilities), the projects would be decommissioned and project sites restored to pre-project conditions. Based on these circumstances, the projects would not result in any residual significant and unmitigable impacts to agricultural resources.



4.3 AIR QUALITY

This section provides an overview of existing air quality within the project area and identifies applicable federal, state, and local policies related to air quality. The impact assessment provides an evaluation of potential adverse effects to air quality based on criteria derived from the California Environmental Quality Act (CEQA) Guidelines and the Imperial County Air Pollution Control District's (ICAPCD) Air Quality Handbook in conjunction with actions proposed in Chapter 3.0, Project Description. OB-1 Air Analyses prepared an Air Quality/ Greenhouse Gas Report in August 2015 November 2015 for the SEPV Dixieland East and West Solar Farm Projects. This report is included in Appendix D of this EIR.

4.3.1 Environmental Setting

Regional Setting

The project area is located in the Salton Sea Air Basin (SSAB) under the jurisdiction of the ICAPCD. The SSAB, which contains part of Riverside County and all of Imperial County, is governed largely by the large-scale sinking and warming of air within the semi-permanent subtropical high-pressure center over the Pacific Ocean. The high-pressure ridge blocks out most mid-latitude storms, except in winter when the high is weakest and farthest south. When the fringes of mid-latitude storms pass through the Imperial Valley in winter, the coastal mountains create a strong "rainshadow" effect that makes Imperial Valley the second driest location in the United States. The flat terrain near the Salton Sea, intense heat from the sun during the day, and strong radiational cooling at night create deep convective thermals during the daytime and equally strong surface-based temperature inversions at night. The temperature inversions and light nighttime winds trap any local air pollution emissions near the ground. The area is subject to frequent hazy conditions at sunrise, followed by rapid daytime dissipation as winds pick up and the temperature warms.

The lack of clouds and atmospheric moisture creates strong diurnal and seasonal temperature variations ranging from an average summer maximum of 108 degrees Fahrenheit (° F) down to a winter morning minimum of 38° F. The most pleasant weather occurs from about mid-October to early May when daily highs are in the 70s and 80s with very infrequent cloudiness or rainfall. Imperial County experiences significant rainfall an average of only four times per year (>0.10 inches in 24 hours). The local area usually has three days of rain in winter and one thunderstorm day in August. The annual rainfall in this region is less than three inches per year.

Winds in the area are driven by a complex pattern of local, regional and global forces, but primarily reflect the temperature difference between the cool ocean to the west and the heated interior of the entire desert southwest. For much of the year, winds flow predominantly from the west to the east. In summer, intense solar heating in the Imperial Valley creates a more localized wind pattern, as air comes up from the southeast via the Gulf of California. During periods of strong solar heating and intense convection, turbulent motion creates good mixing and low levels of air pollution. However, even strong turbulent mixing is insufficient to overcome the emissions that emanate from the Mexicali, Mexico area due to the limited air pollution controls on those emission sources. Imperial County is predominately agricultural land. This is a factor in the cumulative air quality of the SSAB. The agricultural production generates dust and small particulate matter through the use of agricultural equipment on unpaved roads, land preparation, and harvest practices. The Imperial County experiences unhealthful air quality from photochemical smog and from dust due to extensive surface disturbance and the very arid climate.

Major Air Pollutants

Criteria Pollutants

Air quality is defined by ambient air concentrations of specific pollutants determined by the United States Environmental Protection Agency (U.S. EPA) to be of concern with respect to the health and welfare of the general public. Seven major pollutants of concern, called criteria pollutants, are carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), ozone (O₃), suspended particulate matter less than or



equal to 10 microns in diameter (PM_{10}), fine particulate matter less than or equal to 2.5 microns in diameter ($PM_{2.5}$), and lead (Pb). Table 4.3-1 describes the health effect of these criteria pollutants.

Air Pollutant	Health Effects
Carbon Monoxide (CO)	Reduces ability of blood to bring oxygen to body cells and tissues; cells and tissues need oxygen to work. CO may be particularly hazardous to people who have heart or circulatory (blood vessel) problems and people who have damaged lungs or breathing passages.
Sulfur Dioxide (SO ₂)	Breathing problems; may cause permanent damage to lungs.
Nitrogen Dioxide (NO ₂)	Lung damage, illnesses of breathing passages and lungs (respiratory system).
Ozone (O ₃)	Breathing problems, reduced lung function, asthma, irritates eyes, stuffy nose, reduced resistance to colds or other infections, and may speed up aging of lung tissue.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Nose and throat irritation, lung damage, bronchitis, early death.
Lead (Pb)	Brain and other nervous system damage; children are at special risk. Some lead- containing chemicals cause cancer in animals. Lead causes digestive and other health problems.

TABLE 4.3-1. HEALTH	EFFECTS OF CRITERIA	AIR POLLUTANTS

Source: http://www.epa.gov/oaqps001/urbanair/

Toxic Air Contaminants

Toxic air contaminants (TACs) are substances that have the potential to be emitted into the ambient air that have been determined to present some level of acute or chronic health risk (cancer or non-cancer) to the general public. These pollutants may be emitted in trace amounts from various types of sources, including combustion sources. There are almost 200 compounds that have been designated as TACs in California. The ten TACs posing the greatest known health risk in California, based primarily on ambient air quality data, are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, formaldehyde, methylene chloride, para-dichlorobenzene, perchloroethylene, and diesel particulate matter (DPM).

4.3.1.1 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the projects.

Federal

Federal Clean Air Act

The Federal Clean Air Act (CAA) requires areas with unhealthy levels of criteria pollutants to develop State Implementation Plans (SIPs) that describe how and when they will attain the National Ambient Air Quality Standards (NAAQS). SIPs are a compilation of state and local regulations, such as new and previously submitted plans and programs, and district rules that a state uses to achieve healthy air quality under the CAA. State and local agencies must involve the public in the adoption process before SIP elements are submitted to the U.S. EPA for approval or disapproval. The U.S. EPA must provide an opportunity for public comment before taking action on each SIP submittal. If the SIP is not acceptable to the U.S. EPA, the U.S. EPA can take over enforcing the CAA in that state (EPA, 2006).

The 1990 amendments to the Federal CAA set new deadlines for attainment based on the severity of the pollution problem and launched a comprehensive planning process for attaining the NAAQS. The promulgation of the new national 8-hour O_3 standard and $PM_{2.5}$ standards in 1997 resulted in additional statewide air quality planning efforts. In response to new federal regulations, future SIPs will also address ways to improve visibility in national parks and wilderness areas.



The consistency of future projects with the SIP would be assessed through the land use and growth assumptions that are incorporated into the air quality planning document. If a project is consistent with the applicable General Plan of the jurisdiction where it is located, then the project presumably has been anticipated within the regional air quality planning process. Such consistency would ensure that the project would not have an adverse regional air quality impact.

National Ambient Air Quality

Ambient air quality refers to the atmospheric concentration of a specific compound (amount of pollutants in a specified volume of air) that occurs at a particular geographic location. The U.S. EPA establishes ambient air quality standards for criteria pollutants (NAAQS). The ambient air quality levels measured at a particular location are determined by the interactions of emissions, meteorology, and chemistry. Emission considerations include the types, amounts, and locations of pollutants emitted into the atmosphere. Meteorological considerations include wind and precipitation patterns affecting the distribution, dilution, and removal of pollutant emissions. Chemical reactions can transform pollutant emissions into other chemical substances. Ambient air quality data are generally reported as a mass per unit volume (e.g., micrograms per cubic meter of air) or as a volume fraction (e.g., parts per million [ppm] by volume). Table 4.3-2 provides the federal and state ambient air quality standards.

Air Pollutant	Averaging Time	California Standard	National Standard
Ozone	1 hour	0.09 ppm	
	8 hour	0.070 ppm	0.075 ppm
Respirable particulate	24 hour	50 μg/m ³	150 µg/m³
matter (PM ₁₀)	Mean	20 μg/m ³	—
Fine particulate matter	24 hour		35 μg/m ³
(PM _{2.5})	Mean	12 µg/m³	12.0 μg/m ³
Carbon monoxide (CO)	1 hour	20 ppm	35 ppm
	8 hour	9.0 ppm	9 ppm
Nitrogen dioxide (NO ₂)	1 hour	0.18 ppm	100 ppb
	Mean	0.030 ppm	0.053 ppm
Sulfur dioxide (SO ₂)	1 hour	0.25 ppm	75 ppb
	24 hour	0.04 ppm	
Lead	30-day	1.5 μg/m ³	
	Rolling 3-month	—	0.15 μg/m ³
Sulfates	24 hour	25 μg/m ³	
Hydrogen sulfide	1 hour	0.03 ppm	
Vinyl chloride	24 hour	0.01 ppm	No Fodoral
Visibility-reducing particles	8 hour	Extinction coefficient of 0.23 per kilometer, visibility of ten miles or more due to particles when relative humidity is less than 70%.	Standard

TABLE 4.3-2. AMBIENT AIR QUALITY STANDARDS

Abbreviations:

ppm = parts per million $\mu g/m^3$ = micrograms per cubic meter

 $\mu g/m = micrograms per cubic meter$

ppb = parts per billion Mean = Annual Arithmetic Mean 30-day = 30-day average

Source: California Air Resources Board. Ambient Air Quality Standards (6/4/13). http://www.arb.ca.gov/research/aaqs/aaqs2.pdf

State

California Clean Air Act

The California Clean Air Act (CCAA) was enacted on September 30, 1988, and became effective January 1, 1989. The purpose of the CCAA is to achieve the more stringent health-based state clean air standards at the earliest practicable date. The state standards are more stringent than the federal air quality standards. Similar to the federal Clean Air Act, the CCAA also classifies areas according to pollution levels. The California Air Resources Board (CARB) establishes the state ambient air quality standards (CAAQS). Table 4.3-2 identifies the CAAQS. The CCAA requires attainment of the standards at the earliest practicable date. Further, district-wide air emissions must be reduced at least five percent per year (averaged over three years) for each non-attainment pollutant or its precursors. A district may achieve a smaller average reduction if the district can demonstrate that, despite inclusion of every feasible measure in its air quality plan, it is unable to achieve the 5% annual reduction in emissions. On June 20, 2002, the CARB approved revisions to the PM₁₀ annual average standard, and established an annual average standard for PM_{2.5}.

Regional

Imperial County Air Pollution Control District

The ICAPCD is responsible for regulating stationary sources of air emissions in Imperial County. Stationary sources that have the potential to emit air pollutants into the ambient air are subject to the Rules and Regulations adopted by the ICAPCD. Monitoring of ambient air quality in Imperial County began in 1976. Since that time, monitoring has been performed by the ICAPCD, CARB, and by private industry. There are six monitoring sites in Imperial County from Niland to Calexico.

Ozone Air Quality Management Plan. Due to Imperial County's "moderate" nonattainment status for 1997 federal 8-hour ozone standards, the ICAPCD was required to develop an 8-hour Attainment Plan for Ozone. On December 3, 2009, the U.S. EPA made a final determination that the Imperial County attained the 1997 8-Hour NAAQS for ozone. As long as Imperial County continues to attain the 1997 8-hour ozone standard, the state does not have to submit an attainment demonstration, a reasonable further progress plan, contingency measure and other planning requirements. Because this determination does not constitute a re-designation to attainment under the CAA Section 107(d)(3), the designation status will remain "moderate" nonattainment for the 1997 8-hour ozone standard. However, the ICAPCD is required to submit a Modified Air Quality Management Plan (AQMP) to the U.S. EPA for approval. The final "Modified" 2009 8-hour Ozone Air Quality Management Plan was adopted by ICAPCD on July 13, 2010. On November 18, 2010, the CARB approved the Imperial County 8-Hour Ozone Air Quality Management Plan.

Particulate Matter State Implementation Plan. Imperial Valley is classified as nonattainment for federal and state PM_{10} standards. As a result, the ICAPCD was required to develop a PM_{10} Attainment Plan. The final plan was adopted by ICAPCD on August 11, 2009.

ICAPCD Rules and Regulations

The ICAPCD has the authority to adopt and enforce regulations dealing with controls for specific types of sources, emissions of hazardous air pollutants, and New Source Review. The ICAPCD Rules and Regulations are part of the SIP and are separately enforceable by the EPA.

Rule 310 – Operational Development Fee. The purpose of this rule is to provide the ICAPCD with a sound method for mitigating the emissions produced from the operation of new commercial and residential development projects throughout the County of Imperial and incorporated cities. All project proponents have the option to either provide: off-site mitigation, pay the operational development fee, or do a combination of both. This rule will assist the ICAPCD in attaining the State and federal ambient air quality standards for PM₁₀ and O_3 .



Rule 403 - General Limitations on the Discharge of Air Contaminants. Rule 403 sets forth limitations on emissions of pollutants, including particulate matter, from individual sources.

Rule 407 - Nuisance. Rule 407 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Regulation VIII – Fugitive Dust Rules. Regulation VIII sets forth rules regarding the control of fugitive dust, including fugitive dust from construction activities. The regulation requires implementation of fugitive dust control measures to reduce emissions from earthmoving, unpaved roads, handling of bulk materials, and control of track-out/carry-out dust from active construction sites. Best Available Control Measures to reduce fugitive dust during construction and earthmoving activities include but are not limited to:

- Phasing of work in order to minimize disturbed surface area;
- Application of water or chemical stabilizers to disturbed soils;
- Construction and maintenance of wind barriers; and •
- Use of a track-out control device or wash down system at access points to paved roads. •

Compliance with Regulation VIII is mandatory on all construction sites, regardless of size. However, compliance with Regulation VIII does not constitute mitigation under the reductions attributed to environmental impacts. In addition, compliance for a project includes: (1) the development of a dust control plan for the construction and operational phase; and (2) notification to the Air District is required 10 days prior to the commencement of any construction activity. Furthermore, any use of engine(s) and/or generator(s) of 50 horsepower or greater may require a permit through the ICAPCD.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the designated metropolitan planning organization for Los Angeles, Ventura, Orange, San Bernardino, Riverside and Imperial Counties. CEQA requires that regional agencies like SCAG review projects and plans throughout its jurisdiction. SCAG, as the region's "Clearinghouse", collects information on projects of varying size and scope to provide a central point to monitor regional activity. SCAG has the responsibility of reviewing dozens of projects, plans, and programs every month. Projects and plans that are regionally significant must demonstrate to SCAG their consistency with a range of adopted regional plans and policies. The applicable SCAG goal for this analysis is the Regional Transportation Plan (RTP) Goal 5: Protect the environment, improve air quality and promote energy efficiency.

Imperial County General Plan

The Imperial County General Plan serves as the overall guiding policy for the county. The Conservation and Open Space Element includes objectives for helping the County achieve the goal of improving and maintaining the quality of air in the region. The Imperial County Board of Supervisors ultimately determines consistency with the General Plan. The following objectives are applicable to the projects:

- **Objective 9.1:** Ensure that all facilities shall comply with current federal and state requirements for attainment of air quality objectives.
- **Objective 9.2:** Cooperate with all federal and state agencies in the effort to attain air quality • objectives.

As discussed in greater detail below, the proposed projects comply with these objectives through implementation of mitigation measures to reduce emissions of criteria pollutants to below a level of significance.



4.3.1.2 Existing Conditions

Currently, the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of 8-Hour ozone, PM₁₀, and PM_{2.5}. Imperial County is classified as a "serious" non-attainment area for PM₁₀ for the NAAQS<u>- and non-attainment for PM_{2.5} for the urban areas of Imperial County.</u> On November 13, 2009, EPA published Air Quality Designations for the 2006 24-Hour Fine Particle (PM_{2.5}) National Ambient Air Quality Standards wherein Imperial County was listed as designated nonattainment for the 2006 24-hour PM_{2.5} NAAQS. However, the nonattainment designation for Imperial County is only for the urban area within the County and it has been determined that the proposed projects are located within the nonattainment to Area Designations for CAAQSs. For the State PM_{2.5} standard, effective July 1, 2014, the City of Calexico will be designated nonattainment, while the rest of the SSAB will be designated attainment.

Air pollutants transported into the SSAB from the adjacent South Coast Air Basin (Los Angeles, San Bernardino County, Orange County, and Riverside County) and from Mexicali, Mexico substantially contribute to the non-attainment conditions in the SSAB. The closest air quality monitoring station to the project sites is the El Centro-9th station within the City of El Centro (150 9th Street, El Centro, CA 92243). This monitoring station measures PM_{10} , $PM_{2.5}$, CO, and NO_2 . Table 4.3-3 provides a summary of background air quality data representative of the area from 2009 to 2014. As shown, the general air quality problems of the basin exceed the State and federal ozone standards and State PM_{10} standard in all six years. The Federal PM_{10} stand was only exceeded in the year 2009 and 2011. The State or federal CO standards were not exceeded and the CO monitor was removed after the 2012 year. This station exceeded the NO₂ federal standard in three of the six years.

Air Pollutant			Monitor	ing Year		
Ozone	2009	2010	2011	2012	2013	2014
Max 1 Hour (ppm) Days > CAAQS (0.09 ppm)	0.111 9	0.122 3	0.103 5	0.111 9	0.110 7	0.101 2
Max 8 Hour (ppm) Days > NAAQS (0.075 ppm) Days > CAAQS (0.070 ppm)	0.085 11 30	0.082 10 29	0.084 12 21	0.091 14 26	0.088 11 23	0.080 5 13
Inhalable Particulate Matter (PM ₁₀)	2009	2010	2011	2012	2013	2014
Max Daily California Measurement Days > NAAQS (150 μg/m³) Days > CAAQS (50 μg/m³)	233.7 2 17	70.2 0 5	80.3 0 9	72.1 0 6	114.7 0 10	118.9 0 15
Fine Particulate Matter (PM _{2.5})	2009	2010	2011	2012	2013	2014
Max Daily National Measurement Days > NAAQS (35 µg/m ³)	37.7 1	19.9 0	54.4 2	26.4 0	30.0 0	27.5 0
Carbon Monoxide (CO)	2009	2010	2011	2012	2013	2014
Max 8 Hour (ppm) Days > NAAQS (9 ppm) Days > CAAQS (9.0 ppm)	3.20 0 0	5.61 0 0	9.01 0 0	3.64 0 0	N/A	N/A
Nitrogen Dioxide (NO ₂)	2009	2010	2011	2012	2013	2014
Max Hourly (ppb) Days > NAAQS (100 ppb) Days > CAAQS (0.18 ppm)	121.6 1 0	140.5 1 0	117.4 1 0	72.0 0 0	53.0 0 0	59.3 0 0

TABLE 4.3-3. AMBIENT AIR QUALITY MONITORING SUMMARY FOR EL CENTRO-9 [™] STA	TION
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Abbreviations:

> = exceed **Bold** = exceedance ppm = parts per million ppb = parts per billion CAAQS = California Ambient Air Quality Standard

N/A = not available

 $\mu g/m^3 = micrograms per cubic meter$

NAAQS = National Ambient Air Quality Standard



Sensitive Receptors

High concentrations of air pollutants pose health hazards for the general population, but particularly for the young, the elderly, and the sick. Typical health problems attributed to smog include respiratory ailments, eye and throat irritations, headaches, coughing, and chest discomfort. Certain land uses are considered to be more sensitive to the effects of air pollution. Schools, hospitals, residences, and other facilities where people congregate, especially children, the elderly and infirm, are considered particularly sensitive to air pollutants.

Residential land uses are also generally more sensitive to noise than commercial and industrial land uses. Sensitive residential uses adjacent to the project area (within approximately 1,500 feet) are shown on Figure 4.3-1, and include the following:

- **DESF** The nearest residence (a mobile home) is adjacent to the DESF site to the east, 175 feet from the project boundary where construction equipment would be used. Eight more residences (four houses and four mobile homes) are located east of the project across the Westside Main Canal with the closest construction noise approximately 350 feet from the nearest residence.
- **DWSF** South of the project are two rural residences, with the nearest located approximately 350 feet from the project. The Imperial Lakes Water Ski Community is located west of DWSF. This development includes 20 residences (mobile homes). The eastern boundary of the Imperial Lakes Water Ski Community is approximately 1,500 feet from the DWSF western boundary. No residences are located immediately to the north.

4.3.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to air quality, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

4.3.2.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to air quality are considered significant if any of the following occur:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.








Imperial County Air Pollution Control District

The ICAPCD amended the *Air Quality Handbook: Guidelines for the Implementation of CEQA* in November 2007. The ICAPCD established significance thresholds based on the state CEQA thresholds. The handbook was used to determine the proper level of analysis for the projects. The ICAPCD identifies two tiers of emission thresholds to evaluate whether operational impacts from a project have the potential for a significant air quality impact, and to address whether a project must implement additional feasible mitigation measures to reduce emissions to the extent possible. Table 4.3-4 presents the emission thresholds that are identified by the ICAPCD.

Criteria Pollutant	Tier 1	Tier 2
NO _x and ROG	Less than 55 lbs/day	55 lbs/day and greater
PM ₁₀ and SO _x	Less than 150 lbs/day	150 lbs/day and greater
СО	Less than 550 lbs/day	550 lbs/day and greater
Level of Significance	Less than Significant	Significant Impact

TABLE 4.3-4. ICAPCD SIGNIFICANCE THRESHOLDS FOR OP	ERATION
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Source: ICAPCD 2007.

Projects with emissions below Tier 1 would not have a significant impact to air quality. Projects with emissions above Tier 1 but below Tier 2 would be required to implement all applicable standard mitigation measures. Projects with emissions above Tier 2 would be required to implement all applicable standard mitigation measures, plus all feasible discretionary mitigation measures as listed in the ICAPCD's guidance. These thresholds apply to operational emissions.

For construction projects, the Air Quality Handbook indicates that the significance threshold for NO_x is 100 lbs/day and for ROG is 75 lbs/day. As discussed in the ICAPCD's handbook, the approach to evaluating construction emissions should be qualitative rather than quantitative. In any case, regardless of the size of the project, the standard mitigation measures for construction equipment and fugitive PM_{10} must be implemented at all construction sites. The implementation of discretionary mitigation measures, as listed in Section 7.1 of the ICAPCD's Air Quality Handbook, apply to those construction sites which are five acres or more for non-residential developments or 10 acres or more in size for residential developments. The mitigation measures found in Section 7.1 of the ICAPCD's handbook are intended as a guide of feasible mitigation measures and are not intended to be an all inclusive comprehensive list of all mitigation measures.

Diesel Toxic Risk Thresholds

There are inherent uncertainties in risk assessment with regard to the identification of compounds as causing cancer or other health effects in humans, the cancer potencies and Reference Exposure Levels (RELs) of compounds, and the exposure that individuals receive. It is common practice to use conservative (health protective) assumptions with respect to uncertain parameters. The uncertainties and conservative assumptions must be considered when evaluating the results of risk assessments.

There is debate as to the appropriate levels of risk assigned to diesel particulates. The U.S. EPA has not yet declared diesel particulates as a toxic air contaminant. Using the CARB threshold, a risk concentration of one in one million (1:1,000,000) per micrograms per cubic meter (μ g/m³) of continuous 70-year exposure is considered less than significant.

4.3.2.2 Methodology

The analysis criteria for air quality impacts are based on the approach and methods discussed in the ICAPCD's Air Quality Handbook. The handbook establishes aggregate emission calculations for determining the potential significance of a project. In the event that the emissions exceed the established thresholds, air dispersion modeling may be conducted to assess whether the projects result in an exceedance of an air quality standard.



The criteria used to evaluate air emissions associated with the projects is based primarily on the combustion emissions generated by motor vehicles and area source emissions (paved and unpaved roads, construction projects, open areas, etc.). An air quality technical report was prepared by OB-1 Air Analyses in August 2015 (Appendix D). This report was used in the evaluation of construction and operational air quality impacts.

The air quality impacts are mainly attributable to the construction of the projects, including any erosion control measures deemed necessary; stabilization of construction entrances and exits to reduce tracking internal access roads; construction of PV modules; and testing/ certification. Operational impacts include inspection and maintenance operations, which includes washing of the solar panels.

4.3.2.3 Impact Analysis

IMPACTConflict with or Obstruct Implementation of the Applicable Air Quality Plan.4.3-1The projects would not obstruct implementation of applicable air quality plans.

Dixieland East Solar Farm and Dixieland West Solar Farm

The Air Quality Attainment Plan (AQAP) for the SSAB, through the implementation of the AQMP (previously AQAP) and SIP for PM₁₀, sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections, meeting the land use designation set forth in the local General Plan, and comparing assumed emissions in the AQMP to proposed emissions. The projects must demonstrate compliance with all ICAPCD applicable rules and regulations, as well as local land use plans and population projections.

The projects do not contain a residential component; therefore, the projects would not result in an increase in regional population that exceeds the forecasts in the AQMP. Furthermore, the projects are consistent with future build-out plans for the project sites under the General Plan as well as with the State's definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California Public Resources Code. The projects will not exceed future population forecasts for future AQMPs. As discussed in the Impact 4.3-2 discussion below, with implementation of mitigation and compliance with all ICAPCD applicable rules and regulations, the projects' operational contribution to PM_{10} would be below a level of significance. The projects would therefore not interfere with the SIP for PM_{10} . A **less than significant** impact is identified.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation.

The projects would result in a temporary increase of emissions during construction and operation activities.

The following analysis is broken out by a discussion of potential impacts during construction of the projects followed by a discussion of potential impacts during operation of the projects.



Construction

Air emissions are generated during construction through activities such as grading, clearing, hauling, underground utility construction, paving, and building assembly. Diesel exhaust emissions are generated through the use of heavy equipment such as dozers, loaders, scrapers, and vehicles such as dump/haul trucks. During site clearing and grading, PM_{10} is released as a result of soil disturbance. Construction emissions vary from day-to-day depending on the number of workers, number and types of active heavy-duty vehicles and equipment, level of activity, the prevailing meteorological conditions, and the length over which these activities occur.

Construction activities are proposed to start in <u>midearly</u>-2016. Construction is expected to conservatively last for 22 weeks for DESF and 26 weeks for DWSF. The DESF facility is scheduled to begin first, with the DWSF facility construction starting 11 weeks later. Construction of the proposed projects is scheduled to take approximately 36 weeks total to complete. Each separate site would be divided into four potentially overlapping broad phase activities: 1) site preparation, fencing, and ingress/egress; 2) civil improvements – grading/roads/earthwork; 3) PV panel construction; and 4) testing and commissioning. The proposed phase activity duration per project is presented in Table 4.3-5. Please refer to Chapter 3.0, Project Description for a discussion of construction equipment and construction workforce.

Emissions from off-road construction equipment used in construction of the projects were estimated based on the underlying emission and load factors of URBEMIS and CalEEMod computer models. Emissions from vehicular activity related to construction employees and vendors were estimated using CARB's EMFAC2014 Web Based Data Access. Grading fugitive dust was estimated using methodology described in Section 11.9, Western Surface Coal Mining, of the EPA AP-42 and as presented in the CalEEMod User's Guide.

Emissions are presented below for each of the two individual solar projects and the combined SEPV Project. Since the thresholds for criteria pollutants are in pounds per day, emissions are estimated from each activity phase for each facility, and then combined with other activity phases where they overlap, to generate the maximum emissions per day. There is some overlap of activity phases for each separate facility, as well as some overlap between facilities in the overall scheduling of the entire SEPV Project. Emissions presented below are considered unmitigated, which is to mean hypothetical emissions from construction activity, which does not apply equipment or activity restrictions or controls, even those required by ICAPCD regulations.

	Duration (mon		
Activity Phase	DESF	DWSF	
Phase 1 - Site Preparation, Fencing, and Ingress/Egress	1.4	1.6	
Phase 2 - Civil Improvements -Grading/Roads/Earthwork	1.9	2.2	
Phase 3 - PV Panel Construction	3.9	4.6	
Phase 4 - Testing and Commissioning	0.7	0.8	
Solar Site Facility Duration	5.1	6.0	

TABLE 4.3-5. PROJECT PHASE DURATIONS

Note: The sum of the individual activity phase durations do not add up to the overall project duration due to activity phase overlap.

Source: OB-1 Air Analyses, 2015 (Appendix D)

Dixieland East Solar Farm

The DESF project is estimated to be complete within six months from project start. Table 4.3-6 presents the daily maximum hypothetical unregulated and regulated emissions for each month of construction for the DESF project. As shown in Table 4.3-6, the DESF project would not exceed the ICAPCD significance thresholds for ROG, CO, NO_x , and PM_{10} . Although no significant air quality would occur during construction, all construction projects within Imperial County must comply with the requirements of



ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. Mitigation Measures AQ-1 and AQ-2 would provide additional reduction strategies to further improve air quality. Therefore, a **less than significant** impact is identified.

	Criteria Emissions (Ibs/day)					
Month/Activity	ROG	СО	NOx	PM ₁₀	PM _{2.5}	
1 st Month – Phases 1, 2, & 3	6.9	39.8	50.1	74.0	10.5	
2 nd Month – Phases 1, 2, & 3	6.9	39.8	50.1	74.0	10.5	
3 rd Month – Phases 2 & 3	5.6	32.6	41.0	60.6	8.7	
4 th Month – Phase 3	3.2	20.4	24.2	33.9	5.1	
5 th Month – Phases 3 & 4	3.3	22.1	24.5	46.9	6.5	
6 th Month – Phase 4	0.1	1.7	0.3	12.9	1.4	
DESF Maximum Daily	6.9	39.8	50.1	74.0	10.5	
ICAPCD Threshold	75	550	100	150	NI/A	
Exceed Thresholds?	No	No	No	No	IV/A	

 TABLE 4.3-6. UNMITIGATED CONSTRUCTION EMISSIONS FOR DIXIELAND EAST SOLAR FARM

Source: OB-1 Air Analyses, 2015 (Appendix D)

Dixieland West Solar Farm

The DWSF project is estimated to be completed within six months from project start. Table 4.3-7 presents the daily maximum hypothetical unregulated and regulated emissions for each month of construction for the DWSF project. As shown in Table 4.3-7, the DWSF project would not exceed the ICAPCD significance thresholds for ROG, CO, NO_x , and PM_{10} . Although no significant air quality would occur during construction, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. Mitigation Measures AQ-1 and AQ-2 would provide additional reduction strategies to further improve air quality. Therefore, a **less than significant** impact is identified.

	Criteria Emissions (Ibs/day)					
Month/Activity	ROG	СО	NOx	PM ₁₀	PM _{2.5}	
3 rd Month – Phases 1 & 2	3.6	19.5	26.0	40.1	5.5	
4 th Month – Phases 1, 2, & 3	7.1	40.9	51.8	74.1	10.6	
5 th Month – Phases 1, 2, & 3	7.1	40.9	51.8	74.1	10.6	
6 th Month – Phase 3	3.4	21.5	25.9	34.0	5.2	
7 th Month – Phase 3	3.4	21.5	25.9	34.0	5.2	
8 th Month – Phases 3 & 4	3.5	23.1	26.2	47.0	6.6	
9 th Month – Phase 4	0.1	1.7	0.3	12.9	1.4	
DWSF Maximum Daily	7.1	40.9	51.8	74.1	10.6	
ICAPCD Threshold	75	550	100	150	NI/A	
Exceed Thresholds?	No	No	No	No	IV/A	

TABLE 4.3-7. UNMITIGATED CONSTRUCTION EMISSIONS FOR DIXIELAND WEST SOLAR FARM

Source: OB-1 Air Analyses, 2015 (Appendix D)



SEPV Project

Table 4.3-8 shows the hypothetical unregulated combined emissions from the construction of both solar projects. As shown in Table 4.3-8, the unregulated emissions from the construction of the entire SEPV Project would not exceed the ICAPCD significance thresholds for ROG, CO, NO_x , and PM_{10} . Although no significant air quality would occur during construction, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. Mitigation Measures AQ-1 and AQ-2 would provide additional reduction strategies to further improve air quality. Therefore, a **less than significant** impact is identified.

Month			Criteria	Emissions (lbs/day)	
#	Solar Farm	ROG	СО	NOx	PM ₁₀	PM _{2.5}
4	DESF	6.88	39.83	50.12	74.03	10.53
1	Month 1 Totals	6.9	39.8	50.1	74.0	10.5
2	DESF	6.88	39.83	50.12	74.03	10.53
2	Month 2 Totals	6.9	39.8	50.1	74.0	10.5
	DESF	5.64	32.65	40.97	60.62	8.67
3	DWSF	3.65	19.47	25.96	40.09	5.47
	Month 3 Totals	9.3	52.1	66.9	100.7	14.1
	DESF	3.23	20.37	24.16	33.93	5.06
4	DWSF	7.08	40.92	51.84	74.13	10.62
	Month 4 Totals	10.3	61.3	76.0	108.1	15.7
	DESF	3.29	22.06	24.46	46.88	6.47
5	DWSF	7.08	40.92	51.54	74.13	10.62
	Month 5 Totals	10.4	63.0	76.3	121.0	17.1
	DESF	0.06	1.69	0.30	12.95	1.41
6	DWSF	3.43	21.45	25.88	34.03	5.15
	Month 6 Totals	3.5	23.1	26.2	47.0	6.6
7	DWSF	3.43	21.45	25.88	34.03	5.15
1	Month 7 Totals	3.4	21.5	25.9	34.0	5.2
0	DWSF	3.49	23.14	26.18	46.98	6.56
0	Month 8 Totals	3.5	23.1	26.2	47.0	6.6
0	DWSF	0.06	1.69	0.30	12.95	1.41
9	Month 9 Totals	0.1	1.7	0.3	12.9	1.4
SEPV P	roject Maximum Daily	10.4	63.0	76.3	121.0	17.1
ICAPCE) Threshold	75	550	100	150	NI/A
Exceed	Thresholds?	No	No	No	No	IV/A

TABLE 4.3-8. UNMITIGATED CRITERIA TEMPORAL SUMMARY FOR SEPV PROJECT

Operation

Dixieland East Solar Farm and Dixieland West Solar Farm

The solar facilities would operate seven days a week, 24 hours a day, generating electricity during normal daylight hours when the solar energy is available. The facilities would be remotely operated, controlled, and monitored and with no requirement for daily on-site employees. Local and remote operations and maintenance staff would be on-call to respond to any alerts generated by the monitoring systems, and would be present on the site periodically to perform maintenance.



A part-time operations and maintenance staff of two to three people per project would be responsible for performing all routine and emergency operational and maintenance activities. Such activities include inspections, equipment servicing, site and landscape clearing, and periodic washing of the PV modules if needed (up to four times per year) to increase the performance of the panels. DESF would require approximately 7,000 gallons of water for each routine panel washing operation. Approximately 10,000 gallons of water would be required for DWSF for each routine panel washing operation. Replacement parts and components would be warehoused off site and deployed as needed. Most scheduled maintenance would occur during daytime hours but work may be performed at night for safety reasons.

Table summarizes each site's total project-related annual operational air emissions. As shown in Table 4.3-9, operational emissions would be below ICAPCD's Tier 1 Regional thresholds for operational emissions. Furthermore, the project applicant is required to submit a Dust Suppression Management Plan for both construction and operations to reduce fugitive dust emissions (Mitigation Measures AQ-3 and AQ-4). The impact is considered **less than significant** for each individual site.

	Criteria Emissions (lbs/d)						
Activity Type	ROG	СО	NOx	PM ₁₀	PM _{2.5}		
Onsite Activity	0.001	0.039	0.005	0.001	0.000		
Offsite Activity	0.007	0.260	0.035	0.006	0.003		
Dixieland East Solar Farm Total	0.01	0.30	0.04	0.01	0.00		
Onsite Activity	0.001	0.039	0.005	0.001	0.000		
Offsite Activity	0.007	0.260	0.035	0.006	0.003		
Dixieland West Solar Farm Total	0.01	0.30	0.04	0.01	0.00		
Maximum Daily for SEPV Project	0.02	0.60	0.08	0.01	0.01		
ICAPCD Regional Thresholds	55	550	55	150	N/A		
Exceed Thresholds?	No	No	No	No	NA		

TABLE 4.3-9. ESTIMATED OPERATIONAL CRITERIA EMISSIONS

Mitigation Measure(s)

The following mitigation measures are required for DESF and DWSF. Records sufficient to document compliance with mitigation measures shall be maintained on site at all times and available for ICAPCD inspection.

- AQ-1 Construction Equipment. The operator shall insure the use of Tier 2 vehicles or the equivalent alternative fueled or catalyst equipped diesel construction equipment, where practicable, including all off-road and portable diesel powered equipment.
- AQ-2 Fugitive Dust Control. Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII-Fugitive Dust Control Measures. Whereas these Regulation VIII measures are mandatory and are not considered project environmental mitigation measures, the ICAPCD CEQA Handbook's required additional standard and enhanced mitigation measures listed below shall be implemented prior to and during construction. The County Department of Public Works will verify implementation and compliance with these measures as part of the grading permit review/approval process.

ICAPCD Standard Measures for Fugitive Dust (PM₁₀) Control

• The operator shall insure that all disturbed areas, including bulk material storage, which is not being actively utilized, will be effectively stabilized and visible emissions will be limited to no greater than 20% opacity for dust emissions by using water,



chemical stabilizers, dust suppressants, tarps, or other suitable material such as vegetative ground cover.

- The operator shall insure that all on-site unpaved roads will be effectively stabilized and visible emissions be limited to no greater than 20% opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
- The operator shall insure that all transport (import or export) of borrow material used as cover material will be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of borrow material. In addition, the cargo compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material.
- The operator shall insure that all track-out or carryout will be cleaned at the end of each workday.

ICAPCD "Discretionary" Measures for Fugitive Dust (PM10) Control

- Water exposed soil with adequate frequency for continued moist soil, including a minimum of three wettings per day during grading activities.
- Replace ground cover in disturbed areas as quickly as possible.
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
- Implement the trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees.
- Implement a shuttle service to and from retail services and food establishments during lunch hours.

Standard Mitigation Measures for Construction Combustion Equipment

- Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.
- Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
- Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

To help provide a greater degree of reduction of PM emissions from construction combustion equipment the ICAPCD recommends the following enhanced measures.

Enhanced Mitigation Measures for Construction Equipment

- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak hour of vehicular traffic on adjacent roadways.
- Implement activity management (e.g., rescheduling activities to reduce short-term impacts).
- AQ-3 Dust Suppression. The project applicant shall employ a method of dust suppression (such as water or chemical stabilization) approved by ICAPCD. The project applicant shall apply chemical stabilization as directed by the product manufacturer to control dust between the panels as approved by ICAPCD, and other non-used areas (exceptions will be the paved



entrance and parking area, and Fire Department access/emergency entry/exit points as approved by Fire/OES Department).

- AQ-4 Dust Suppression Management Plan. Prior to any earthmoving activity, the applicant shall submit and obtain approval from the ICAPCD and Imperial County Planning and Development Services Department (ICPDSD) a construction Dust Control Plan.
- <u>AQ-5</u> <u>Operational Dust Control Plan.</u> Prior to the issuance of a Certificate of Occupancy, the applicant shall submit and obtain approval from the ICAPCD and ICAPDSD an Operations Dust Control Plan.

ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits are submitted for the proposed projects, the ICAPCD shall review the project to determine if Rule 310 fees are applicable to the proposed projects.

Significance After Mitigation

Although the proposed projects would not exceed ICAPCD's threshold, Mitigation Measures AQ-1 through AQ-4-<u>5</u> would provide additional reduction strategies to further improve air quality and reductions in criteria pollutants (ozone precursors). A **less than significant** impact is identified.

IMPACT Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the 4.3-3 *Project Region is Non-Attainment.*

The projects would result in a temporary increase of PM_{10} , CO, ROG, and NO_x (ozone precursors) during construction activities.

The following analysis is broken out by a discussion of potential impacts during construction of the projects followed by a discussion of potential impacts during operation of the projects.

Construction

Dixieland East Solar Farm and Dixieland West Solar Farm

Imperial County is classified as a "serious" non-attainment area for PM_{10} and a "moderate" nonattainment area for 8-hour ozone for the NAAQS and non-attainment for $PM_{2.5}$ for the urban areas of Imperial County. The proposed projects are located within the non-attainment boundaries for $PM_{2.5}$. As identified above in Impact 4.3-2, the projects would result in emissions of the air pollutants ROG, NO_x , CO, and PM_{10} . However, construction activities would not result in a significant increase in CO, ROG, and NO_x that would exceed ICAPCD thresholds. The projects' emissions of ozone precursors and particulate matter are mainly attributable to temporary construction activities. These activities would reduce the emissions to a level **less than significant**.

Operation

Dixieland East Solar Farm and Dixieland West Solar Farm

The operational impacts associated with the projects were less than significant. However, the proposed projects, in conjunction with cumulative projects, could result in a cumulatively considerable impact related to PM_{10} before implementation of mitigation. With mitigation, a **less than significant** impact is identified. Please refer to Section 6.0 Cumulative Impacts.

Mitigation Measure(s)

No mitigation measures are required.



IMPACT Expose Sensitive Receptors to Substantial Pollutant Concentrations?

4.3-4 The projects would result in a temporary increase of PM_{10} , CO, ROG, and NO_x during construction activities, in addition to diesel particulate matter.

Dixieland East Solar Farm and Dixieland West Solar Farm

As shown in Figure 4.3-1, there are residential uses adjacent to the project sites (within approximately 1,500 feet). Construction activities would result in emissions of diesel particulate matter from heavy construction equipment used on site and truck traffic to and from the site, as well as minor amounts of TAC emissions from motor vehicles (such as benzene, 1,3-butadiene, toluene, and xylenes). Health effects attributable to exposure to diesel particulate matter are long-term effects based on chronic (i.e., long-term) exposure to emissions. Health effects are generally evaluated based on a lifetime (70 years) of exposure. Due to the short-term nature of construction at the site, no adverse health effects would be anticipated from short-term diesel particulate emissions. In addition, motor vehicle emissions would not be concentrated in any one area but would be dispersed along travel routes and would not be anticipated to pose a significant health risk to receptors. The projects compliance with Regulations VIII will prevent the residences exposure to substantial pollutant concentrations. The hours of construction will occur during the day when most people are at work. A **less than significant** impact is identified.

Mitigation Measure(s)

No mitigation measures are required.

IMPACTCreate Objectionable Odors Affecting a Substantial Number of People.4.3-5The projects would not result in objectionable odors during construction and operation.

Dixieland East Solar Farm and Dixieland West Solar Farm

An odor impact depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies.

Among physical harms that are possible are inhalation of volatile organic compounds (VOCs) that cause smell sensations in humans. These odors can affect human health in four primary ways:

- The VOCs can produce toxicological effects;
- The odorant compounds can cause irritations in the eye, nose, and throat;
- The VOCs can stimulate sensory nerves that can cause potentially harmful health effects; and
- The exposure to perceived unpleasant odors can stimulate negative cognitive and emotional responses based on previous experiences with such odors.

Land uses commonly considered to be potential sources of odorous emissions include wastewater treatment plants, sanitary landfills, food processing facilities, chemical manufacturing plants, rendering plants, paint/coating operations, and concentrated agricultural feeding operations and dairies. The construction and operation of a solar farm is not an odor producer and the project sites are not located near an odor producer.

No major sources of odors were identified in the vicinity of the project sites that could potentially affect proposed on-site land uses. Development of the projects could generate trace amounts (less than $1 \ \mu g/m^3$) of substances such as ammonia, carbon dioxide, hydrogen sulfide, methane, dust, organic dust, and endotoxins (i.e., bacteria are present in the dust). Additionally, proposed on-site uses could generate



such substances as volatile organic acids, alcohols, aldehydes, amines, fixed gases, carbonyls, esters, sulfides, disulfides, mercaptans, and nitrogen heterocycles. Any odor generation would be intermittent and would terminate upon completion of the construction activities. It is unlikely that heavy construction that could result in the emission of objectionable odors will occur immediately adjacent to any residence. A **less than significant** impact is identified.

Mitigation Measure(s)

No mitigation measures are required.

4.3.3 Decommissioning/ Restoration and Residual Impacts

Decommissioning/Restoration

Similar to construction activities, decommissioning and restoration of the project sites would generate air emissions. A summary of the daily construction emissions for each of the projects as well as the projects during concurrent construction is provided in Tables 4.3-6 through 4.3-8. A similar scenario would be expected to occur during the decommissioning and site restoration stage for each of the projects. Air quality emissions would be similar to or less than the emissions presented for construction. No significant air quality impacts are anticipated during decommissioning and restoration of the project sites. However, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. Mitigation Measures AQ-1 through AQ-5 would provide additional reduction strategies to further improve air quality. Therefore, a **less than significant** impact is identified during decommissioning and site restoration.

Residual

The projects would not result in short-term significant air quality impacts during construction. Implementation of Mitigation Measures AQ-1 and AQ-2 would provide additional reduction strategies to reduce ROG, NO_x , PM_{10} , and CO emissions during construction. Operation of the projects, subject to the approval of a CUP, would be consistent with applicable federal, state, regional, and local plans and policies. Implementation of Mitigation Measures AQ-3 and AQ-4 would ensure that fugitive dust emissions would be reduced during operations. The projects would not result in any residual operational significant and unavoidable impacts with regards to air quality.



4.4 **BIOLOGICAL RESOURCES**

This section discusses biological resources that may be impacted by the proposed projects. The following identifies the existing biological resources in the project area, analyzes potential impacts due to the implementation of the proposed projects, and recommends mitigation measures to avoid or reduce potential impacts of the proposed projects. Information for this section is summarized from the Biological Habitat Assessment and Focused Burrowing Owl, Flat-Tailed Horned Lizard, and Botanical Surveys for SEPV Dixieland East and West (herein referred to as "Biological Technical Report") and Jurisdictional Delineation Report for SEPV Dixieland East and West prepared by Phoenix Biological Consulting. These reports are included in Appendix E of this Environmental Impact Report (EIR).

4.4.1 **Environmental Setting**

The Biological Technical Report (BTR) integrates information collected from a variety of literature sources and field survey to describe the biological resources within the vicinity of the project sites. A biological assessment of the project study area was conducted on April 27, 2015. Burrowing owl, flat-tailed horned lizard and rare plant surveys were conducted during the spring of 2015. These surveys were conducted to map vegetation communities, inventory species present at the time of the survey, and assess the presence or potential for occurrence of sensitive and priority plant and animal species within the project area.

4.4.1.1 **Regulatory Setting**

Federal

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) prohibits anyone without a permit to "take" bald or golden eagles. 'Take' is defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." 'Disturb' is defined as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior" (USFWS 2011).

Federal Endangered Species Act

Enacted in 1973, the federal Endangered Species Act (ESA) provides for the conservation of threatened and endangered species and their ecosystems. The ESA prohibits the "take" of threatened and endangered species except under certain circumstances and only with authorization from the U.S. Fish and Wildlife Service (USFWS) through a permit under Section 4(d), 7 or 10(a) of the Act. Under the ESA, "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

Migratory Bird Treaty Act

Congress passed the Migratory Bird Treaty Act (MBTA) in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The prohibition applies to birds included in the respective international conventions between the U.S. and Great Britain, the U.S. and Mexico, the U.S. and Japan, and the U.S. and Russia.



Section 404 Permit (Clean Water Act)

The Clean Water Act (CWA) establishes a program to regulate the discharge of dredge and fill material into waters of the U.S. including wetlands. Activities regulated under this program include fills for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands for farming and forestry. Either an individual 404b permit or authorization to use an existing U.S. Army Corps of Engineers (USACE) Nationwide Permit will need to be obtained if any portion of the construction requires fill into a river, stream, or stream bed that has been determined to be a jurisdictional waterway. When applying for a permit a company or organization must show that they would avoid wetlands when practicable, minimize wetland impacts, and provide compensation for any unavoidable destruction of wetlands.

State

California Environmental Quality Act

Title 14 California Code of Regulations (CCR) 15380 requires that endangered, rare or threatened species or subspecies of animals or plants be identified within the influence of the project. If any such species are found, appropriate measures should be identified to avoid, minimize or mitigate to the extent possible the effects of the project.

California Department of Fish and Wildlife Code 1600 (as amended)

The California Department of Fish and Wildlife (CDFW) regulates activities that substantially diverts or obstructs the natural flow of any river, stream, or lake or uses materials from a streambed. This can include riparian habitat associated with watercourses.

California Department of Fish and Wildlife Codes 3503, 3503.5, and 3513

CDFW Codes 3503, 3503.5, and 3513 protect migratory birds, bird nests and eggs including raptors (birds of prey) and raptor nests from take unless authorized by CDFW. Additionally, the State further protects certain species of fish, mammals, amphibians and reptiles, birds and mammals through CDFW's Fully Protected Animals which prohibits any take or possession of classified species. No licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. Most Fully Protected Species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations (CDFW 2011).

California Department of Fish and Wildlife Code Sections 1900-1913 – Native Plant Protection Act

The Native Plant Protection Act (NPPA) prohibits the taking, possessing, or sale within the state of any plant listed by CDFW as rare, threatened, or endangered. An exception to this prohibition in the Act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify CDFW at least 10 days prior to the initiation of activities that would destroy them. The NPPA exempts from "take" prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way."

Porter-Cologne Water Quality Control Act, as Amended

Administered by the State Water Resource Control Board (SWRCB), protects water quality and is an avenue to implement California responsibilities under the CWA. This act regulates discharge of waste into a water resource.



Local

Imperial County General Plan

The 1993 Conservation Element and Open Space Element provides detailed plans and measures for the preservation and management of biological and cultural resources, soils, minerals, energy, regional aesthetics, air quality, and open space. The purpose of the Conservation and Open Space Element is to promote the protection, maintenance, and use of the County's natural resources with particular emphasis on scarce resources, and to prevent wasteful exploitation, destruction, and neglect of the State's natural resources. Additionally, the purpose of this Element is to recognize that natural resources must be maintained for their ecological value for the direct benefit to the public, protect open space for the preservation of natural resources, the managed production of resources, outdoor recreation, and for public health and safety. It should be noted that Imperial County has received funding from the California Energy Commission (CEC) Renewable Energy and Conservation Planning Grant to amend and update the County's General Plan in order to facilitate future development of renewable energy projects. The CEC grant includes an update to the 1993 Conservation/Open Space Element to facilitate future development of renewable energy projects. The update of the 1993 Conservation/Open Space Element will assist in identifying areas that will conserve habitat areas on federal, state, military, tribal and private lands in the County. Table 4.4-1 analyzes the consistency of the projects with specific policies contained in the Imperial County General Plan (Imperial County, as amended through 2008) associated with biological resources.

General Plan Policies	Consistency with General Plan	Analysis
Open Space Conservation Policy: The County shall participate in conducting detailed investigations into the significance, location, extent, and condition of natural resources in the County.	Yes	Biological assessments and reports have been conducted at the project study areas in regard to the proposed projects.
Program: Notify any agency responsible for protecting plant and wildlife before approving a project which would impact a rare, sensitive, or unique plant or wildlife habitat.		Applicable agencies responsible for protecting plants and wildlife will be notified of the proposed projects and provided an opportunity to comment on this EIR prior to the County's consideration of any approvals for the projects.
Land Use Element Policy: The General Plan covers the unincorporated area of the County and is not site specific, however, a majority of the privately owned land is located in the area identified by the General Plan as "Agriculture," which is also the predominate area where burrowing owls create habitats, typically in the brims and banks of agricultural fields.	Yes	See response to the Open Space Conservation Policy above. Additionally, Burrowing Owl Focused Surveys have been conducted in accordance with the wildlife agency protocols. The results and mitigation are provided in this section of this EIR.
Program: Prior to approval of development of existing agricultural land either in form of one parcel or a numerous adjoining parcels equally a size of 10 acres or more shall prepare a Biological survey and mitigate the potential impacts. The survey must be prepared in accordance with the United States Fish and Wildlife and California Department of Fish and Game regulations, or as amended.		

TABLE 4.4-1. PROJECT CONSISTENCY WITH GENERAL PLAN BIOLOGICAL RESOURCE POLICIES



4.4.1.2 Existing Conditions

4.4.1.2.1 Vegetation Communities

The project sites are surrounded by relatively undeveloped, moderately disturbed desert scrubland. Open access BLM lands are adjacent to the west and north sides of Dixieland West Solar Farm (DWSF), and the Westside Main Canal is located to the east of Dixieland East Solar Farm (DESF). A large area of cultivated agricultural croplands is situated on the east side of the Westside Main Canal, approximately 0.3 miles from the eastern boundary of DESF.

Disturbance levels for the project site are as follows; DWSF is relatively undisturbed, DESF (central parcels, Assessor Parcel Number (APN) 051-035-001 and -002) is moderately disturbed, and DESF (eastern parcel, APN 051-047-001) is disturbed. Major disturbances within the project vicinity include evidence of historic surface flooding/agriculture within DESF, the Dixieland Substation located in between the project sites, a concrete lined irrigation canal that intersects the northeastern corner of DWSF and traverses across Brown Road extending through the northern portion of DESF, and a rural private residence (bordering the DESF (central parcel). Other disturbances consist of a dirt road that transects the northern portion of DWSF, an existing Imperial Irrigation District (IID) transmission line and right-of-way (ROW) that borders the southern and eastern sides of the DWSF boundary, and two major paved roads; Brown Road and Evan Hewes Highway. There is also evidence of off-road vehicular travel throughout the project area. Additional disturbances specific to DESF (eastern parcel) include irrigation rows, with inkweed (*Suaeda nigra*), a berm that divides the parcel, and a fenced area previously used as a cattle corral.

As shown in Table 4.4-1 and Figure 4.4-1, the dominant habitat types within DWSF consist of approximately 35.5 acres of creosote scrub and 2.5 acres of mesquite. The habitat types within DESF consist of 4.1 acres of creosote scrub, 19.7 acres of ruderal habitat and 1.1 acres of Tamarix thicket. None of the aforementioned habitat communities are considered sensitive. Each habitat type is described in more detail below.

Vegetation Community/ Habitat Type	DESF (acres)	DWSF (acres)	Total
Creosote bush scrub	4.1	35.5	39.6
Mesquite		2.5	2.5
Ruderal	19.7		19.7
Tamarix thicket	1.1		1.1
Total	24.9	38	62.9

TABLE 4.4-2. VEGETATION COMMUNITIES/HABITAT TYPES WITHIN THE PROJECT STUDY AREAS

Source: Phoenix Biological Consulting, 2015.

Creosote Bush Scrub

DWSF and DESF (central parcel) consist predominately of Creosote bush scrub (*Larrea tridentata*). Creosote bush scrub occurs on alluvial fans, bajadas, upland slopes, and minor intermittent washes at elevations between -75 to 1000 meters. Soils of creosote bush scrub are well drained, with open to intermittent vegetation; sometimes containing desert pavement. Some of the common plant species associated with creosote bush scrub are goldenhead (*Acamptopappus* spp.), ragweed or bursage (*Ambrosia spp.*), and saltbush (*Atriplex spp.*).





Figure 4.4-1. Existing Vegetation Communities

Mesquite

Within the creosote bush scrub in DWSF, is a patch of western honey mesquite (*Prosopis glandulosa var. torreyana*), which is recognized by the USFWS Wetland Inventory as a non-hydrophyte facultative upland plant that usually occurs in non-wetlands, but may occur in wetlands. Mesquite habitats generally occur on fringes of playa lakes, river terraces, stream banks, floodplains, rarely flooded margins of arroyos and washes, and sand dunes.

Ruderal

DESF (eastern parcel) is dominated by ruderal habitat, which is composed of nonnative herbaceous species that generally colonize areas of sustained disturbance. Plant species associated with ruderal habitats include: tumbleweed (*Salsola tragus*), ripgut (*Bromus diandrus*), red brome (*Bromus madritensis*), and Mediterranean grass (*Schismus spp.*). Ruderal habitat offers limited opportunities for wildlife species due to the lack of native species cover, continued disturbance, and overall habitat degradation.

The northern portion of DESF (eastern parcel) that was previously used as a cattle corral is dominated by saltbush (*Atriplex canescens*) scrub re-growth habitat. Saltbush scrub habitat occurs in playas, old beach and shores, lake deposits, dissected alluvial fans, and rolling hills at elevations between -75 and 1500 meters. Soils associated with saltbush scrub are alkaline, sandy or sandy clay loams. The USFWS Wetland Inventory recognizes *Atriplex canescens* as a nonhydrophyte facultative upland plant that usually occurs in non-wetlands, but may occur in wetlands.

Tamarisk Thicket

The northern edge of DESF (eastern parcel) is composed of Tamarisk (Tamarix spp.), which is associated with arroyo margins, lake margins, ditches, washes, rivers, and other watercourses.

4.4.1.2.2 Wildlife Species

A thorough California Natural Diversity Database (CNDDB) literature review was conducted to determine which species occur within a ten mile search radius of the project sites (see Table 3 in Appendix E). Twenty-six sensitive species were detected within the ten mile CNDDB search radius. An additional sixteen special status target species, considered for potential occurrence, were included in the search results. Multiple habitat types fall within the ten mile radius; therefore, several species fall out of range limits for potential habitat type given the specific characteristics of the site.

In addition to the CNDDB literature review, on April 27, 2015, a biological habitat assessment was conducted on the project sites to determine the potential for special-status biological resources to occur on or within the project vicinity. Based on the biological habitat assessment, focused surveys were conducted for burrowing owl, flat-tailed horned lizard and rare plants during the spring of 2015. The results of the CNDDB literature review, biological habitat assessment, and focused surveys are discussed below.

Threatened or Endangered Wildlife Species

The literature review process identified three federal and/or state of California endangered and/or threatened wildlife species known to occur within the CNDDB ten mile search radius of the project site: California black rail (*Laterallus jamaicensis coturniculus*), Yuma clapper rail (*Rallus longirostris yumanensis*), and barefoot gecko (*Coleonyx switaki*). Based on habitat requirements and geographic restrictions, no species listed as state or federally endangered and/or threatened included in the literature search results is likely to occur on the project sites.



Sensitive Wildlife Species

The following California Species of Concern and CDFW sensitive species that are either known to occur within the CNDDB ten mile search radius, or are target species of concern, have the potential to occur on the project sites:

- Burrowing owl (*Athene cunicularia*)
- Prairie falcon (*Falco mexicanus*)
- Loggerhead shrike (Lanius Iudovicianus)
- Vermillion flycatcher (Pyrocephalus rubinus)
- Le Conte's thrasher (Toxostoma lecontei)
- Lowland leopard frog (*Lithobates yavapaiensis*)
- Colorado Valley woodrat (Neotoma albigula venusta)
- Flat-tailed horned lizard (Phrynosoma mcallii)
- American badger (*Taxidea taxus*)
- Colorado Desert fringe-toed lizard (Uma notate)

Detailed information regarding the status of these potentially occurring California species of concern, along with their distribution and habitat requirements are provided below.

Birds

The CNDDB literature review process identified the occurrence of the burrowing owl, Mountain plover, California black rail, vermillion flycatcher, Yuma clapper rail, and Le Conte's thrasher within a ten mile radius. Other sensitive bird species, not included in the CNDDB ten-mile search results, but worth noting due to their declining status in the region, are the prairie falcon and loggerhead shrike. Of the bird species identified through the CNDDB literature search, none have the potential to occur within the project area. Those species in which suitable habitat is present are detailed below, however, these species are considered absent since they were not detected during focused surveys:

Burrowing Owl

Federal Status: None

State Status: California Species of Concern (CSC) CNDDB Element Ranking System (Global Ranking/State Ranking): Apparently Secure (G4)/Vulnerable (S3)

Burrowing owl inhabits open grassland, shrub-grasslands, savannas, farmland, prairies, vacant lots, airfields, and other open areas. Prefers flat open ground with bare soil or short grass. The presence of burrows is an essential component to burrowing owl habitat. Typically uses burrows excavated by other animals, such as ground squirrels or badgers, but may also use man-made structures. Artificial burrows may include culverts, concrete pipes, debris piles, and openings beneath cement and asphalt. Commonly found in early successional plant communities because ground cover is low with open cover; ideal conditions for burrow selection.

Based on the results of the habitat assessment, focused surveys were conducted for burrowing owl during the spring of 2015. The burrowing owl surveys were conducted by walking straight-line transects spaced 7 m to 20 m apart, adjusting for vegetation height and density. At the start of each transect and, at least, every 100 m, the entire visible project area was scanned for burrowing owls using binoculars. During the pedestrian surveys, the biologists recorded all potential burrows used by burrowing owls as determined by the presence of one or more burrowing owls, pellets, prey remains, whitewash, or decoration. The field biologists also paused at regular intervals to listen for owl vocalizations. Survey teams used hand-held mirrors to view into any potential burrows. Buffer zone surveys were conducted out to 150 meters from the project edge. The owl surveys started approximately a half hour after sunrise and



ending no later than a half hour before sunset. Surveys were conducted in all portions of the project sites and buffer areas that were identified in the habitat assessment.

The field results were negative for burrowing owls. During the field effort, nine coyote burrows were observed within the DWSF site. One coyote burrow was observed immediately north of the DWSF site (Figure 4.4-2). All of the burrows were absent of owl sign. The coyote burrows all appeared to be inactive and some appear to have been canid forage holes.

Prairie Falcon

Federal Status: None State Status: None CNDDB Element Ranking System: Secure (G5)/Apparently Secure (S4)

Prairie falcon are typically found in fairly arid open country, including deserts, grasslands, and high mountains (above tree line). Winters in farmland, around lakes and reservoirs, and sometimes found in southwestern cities. Nests on cliff edges and rock outcroppings; sometimes nests on dirt bank or in abandoned nest of raven or hawk. Prairie falcon was not observed on the project sites during field investigations.

Loggerhead Shrike

Federal Status: None State Status: CSC CNDDB Element Ranking System: Apparently Secure(G4)/Apparently Secure(S4)

Loggerhead shrike occupies semi-open terrain, in wooded regions with large clearings and open grassland or desert with a few scattered trees or large shrubs. Often found along mowed roadsides with fence lines and utility poles for perching. Loggerhead shrike was not observed on the project sites during field investigations.

Vermillion Flycatcher

Federal Status: None State Status: CSC CNDDB Element Ranking System: Secure (G5)/ Imperiled/Vulnerable (S2S3)

Vermillion flycatcher inhabits scrub, deserts, cultivated lands, and riparian woodlands. Generally found along streams or pond edges in arid country, savannas, and ranches. Occasionally found in dry grasslands or desert with scattered trees. Vermillion flycatcher was not observed on the project sites during field investigations.

LeConte's Thrasher

Federal Status: None State Status: None CNDDB Element Ranking System: Apparently Secure (G4)/ Vulnerable (S3)

LeConte's thrasher habitat consists of desert flats with scattered low shrubs, especially sparse saltbush growth, and sometimes creosote bush flats with a few slightly larger mesquites or cholla cactus. LeConte's thrasher was not observed on the project sites during field investigations.











Mountain Plover

Federal Status: None State Status: CSC CNDDB Element Ranking System: Vulnerable(G3)/Imperiled (S2)

Mountain plover breeds in open plains in Canada and central US. Nests in areas are characterized by very short vegetation, with at least 30% bare ground, and flat or gentle slopes. Overwinters from Sacramento, CA to Mexico on dry barren ground, smooth dirt fields, sandy deserts and shortgrass prairies. In southern California, heavily grazed native rangelands are preferred for wintering. Found at moderate elevations. Prefers alkali flats and generally avoids moist soils.

The mountain plover is not likely to occur on the project sites because its breeding habitat is out of geographic range. Mountain plover are known to be frequent agriculture fields in the desert during winter months. However, no agriculture fields are present on the site. The mountain plover breeds in southern Canada and the central U.S. including, Montana, Wyoming, Colorado, and New Mexico.

California Black Rail

Federal Status: None State Status: Threatened CNDDB Element Ranking System: Vulnerable, Apparently Secure (G3G4T1)/Critically Imperiled (S1)

California black rail inhabits a variety of areas from high coastal marshes to freshwater marshes along the Colorado River. In saltmarshes, favors areas dominated by pickleweed, bulrushes, and matted salt grass. Along the Colorado River, prefers areas of shallow water with flat shorelines with dense stands of three-square bulrush. Nests are in or along edge of marsh.

Due to habitat requirements, the California black rail is not likely to occur on the project sites. The California black rail inhabits high coastal marshes to freshwater marshes along the Colorado River. The project site is primarily composed of creosote bush scrub and ruderal habitat, and lacks the marshland habitat required for California black rail.

Yuma Clapper Rail

Federal Status: None State Status: CSC CNDDB Element Ranking System: Secure (G5)/Imperiled,Vulnerable(S2S3)

Yuma clapper rail inhabits freshwater marshlands containing dense stands of emergent riparian vegetation; preferred habitat dominated by cattails and bulrushes. Requires wet substrate (mudflat, sandbar) with dense woody or herbaceous vegetation for nesting and foraging, and a mosaic of vegetated areas interspersed with areas of shallow (<12") open water areas. Typically found below 4,500 feet in elevation.

Due to habitat requirements, the Yuma clapper rail is not likely to occur on the project sites. The Yuma clapper rail is found in freshwater marshlands containing dense stands of emergent vegetation. The project site is primarily composed of creosote bush scrub and ruderal habitat, and lacks the marshland habitat required for this species.

Invertebrates

No sensitive invertebrate species were found within the ten-mile CNDDB search radius.



Mammals

The CNDDB literature review process identified the western yellow bat (*Lasiurus xanthinus*), Colorado Valley woodrat, Yuma hispid cotton rat (*Sigmodon hispidus eremicus*), and American badger within the CNDDB ten-mile search radius. Of those mammal species, the Colorado Valley woodrat has potential to occur in the project area.

Western Yellow Bat

Federal Status: None State Status: CSC CNDDB Element Ranking System: Secure (G5)/Vulnerable (S3)

Western yellow bat inhabits valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Occupies arid regions in the southwest. Often roosts in trees, especially palm oases and ornamental palms. Tends to roost and feed in and near palm oasis and riparian habitat. In California, this species appears to roost exclusively in the skirts of palm trees. Elevation ranges from sea level to 2,000 meters.

The western yellow bat is not likely to occur on the project sites due to the lack of preferred roosting habitat. The western yellow bat prefers riparian woodland habitat, and, in California, the western yellow bat appears to roost exclusively in the skirts of palm trees, which do not occur within the project area.

Colorado Valley Woodrat

Federal Status: None State Status: None CNDDB Element Ranking System: Secure (G5T3T4) /Critically Imperiled, Imperiled (S1S2)

Common in low-lying desert areas; often associated with the presence of prickly pear and mesquite. Distribution is highly influenced by the abundance of den building materials such as, cholla, prickly pear, mesquite, and catclaw. Colorado Valley woodrat was not observed on the project sites during field investigations. However, den building materials are present on the project sites among the mesquite and tamarisk trees. Therefore, this species has the potential to occur on the project sites.

Yuma Hispid Cotton Rat

Federal Status: None State Status: CSC CNDDB Element Ranking System: Secure (G5T2T3) /Imperiled, Vulnerable (S2S3)

The Yuma hispid cotton rat inhabits agricultural lands and riparian habitats. Found mostly near the Colorado River or along sloughs adjacent to the river in brushy or weedy areas. Most common in marshes, but also in cottonwood-willow, screwbean mesquite, saltcedar, and saltcedar-honey mesquite associates. Also in frequently irrigated fields of Bermuda grass.

The Yuma hispid cotton rat is not likely to occur within the project sites, because the preferred habitat does not exist within the project area. The Yuma hispid cotton rat is primarily found near the Colorado River in riparian habitats and agricultural lands.

American Badger

Federal Status: None State Status: CSC CNDDB Element Ranking System: Secure (G5)/ Vulnerable (S3)

American badger is found in relatively dry grasslands, sagebrush meadows, valleys, and open forests. Prefers open areas with little groundcover, and enough soil to dig in. Occupies underground burrows



when inactive. Elevation range from sea level to 3,600 meters. Suitable habitat for the American badger exists in the project area, however, no badger dens or evidence of badger was observed during focused surveys, so this species is considered absent.

Reptiles and Amphibians

The CNDDB literature review process identified the following species known to occur within a ten-mile search radius: the barefoot gecko (*Coleonyx switaki*), lowland leopard frog, flat-tailed horned lizard, and Colorado Desert fringe-toed lizard. Of those species identified through the CNDDB literature search, none have the potential to occur within the project area. Those species in which suitable habitat is present are detailed below, however, these species are considered absent since they were not detected during focused surveys.

Barefoot gecko

Federal Status: None State Status: Threatened CNDDB Element Ranking System: Apparently Secure (G4)/ Critically Imperiled (S1)

Barefoot gecko inhabits arid rocky areas on flatlands, canyons and desert foothills. Prefers areas with large boulders and rock outcrops, with sparse vegetation. Elevation range up to 2,000+ feet (700 meters).

The barefoot gecko, a state of California threatened species, is not likely to occur on the project sites due to lack of habitat. The barefoot gecko inhabits areas with large boulders and rocky outcrops, with sparse vegetation; in arid regions on flatlands, canyons and desert foothills.

Lowland Leopard Frog

Federal Status: None State Status: CSC CNDDB Element Ranking System: Apparently Secure (G4)/Extirpated (SX)

The lowland leopard frog inhabits rivers, streams, cattle tanks, agricultural canals, ditches, river side channels, springs, ponds and other aquatic systems, which are absent on the project sites. Lowland leopard frog is unlikely to occur on the project sites.

Flat-tailed Horned Lizard

Federal Status: None State Status: CSC CNDDB Element Ranking System: Vulnerable (G3)/Imperiled (S2)

Inhabits sandy desert hardpan and gravel flats with scattered sparse vegetation of low species diversity. Most common in areas of fine windblown sand, but rarely occurs on dunes. Favorable habitat may include creosote bush, bur-sage, indigo bush, saltbush, ocotillo, and salt cedar. Flat-tailed horned lizard was not observed on the project sites.

Based on the results of the habitat assessment, focused surveys were conducted for flat-tailed horned lizard during the spring of 2015. The FTHL surveys focused on finding horned lizards along with both scat and potential tracks. The FTHL surveys were conducted from April through June when air temperatures were between 25 and 37 °C (75 and 100 °F). Four site visits were included for the FTHL surveys and each site visit lasted for over four to eight hours. The FTHL surveys started when temperatures were within the above mentioned thermal zone. During the survey, the surveyors searched for various indicators of potential presence for these species including horned lizard scat and tracks. Biologists recorded all types of lizards observed. Surveys were conducted in all portions of the project sites and buffer areas that were identified in the habitat assessment.



The field results were negative for flat-tailed horned lizards. No flat-tailed horned lizards were observed during the survey effort and no horned lizard scat was observed.

Colorado Desert Fringe-Toed Lizard

Federal Status: None State Status: CSC CNDDB Element Ranking System: Vulnerable (G3)/Imperiled (S2)

Habitat includes arid areas of sparse vegetation and fine wind-blown sand; including dunes, washes, river banks, and flats with sandy mounds around the base of vegetation. Requires fine, loose sand for burrowing. Colorado Desert fringe-toed lizard is considered absent since they were not detected during surveys.

Fish

No sensitive fish species were found within the 10-mile CNDDB search radius, and no viable waterways are present within the project area that might support sensitive fish species.

4.4.1.2.2 Botanical Species

The CNDDB literature review identified several sensitive plant species that have the potential to occur in the area. Based on the vegetation communities on site and in the surrounding area, and the elevation and general location of the site, the following species have been identified as having the potential to occur within the project sites, but they are considered absent since they were not observed during focused surveys:

- Chaparral sand-verbena (Abronia villosa var. aurita)
- Salton milk-vetch (Astragalus crotalariae)
- Gravel milk-vetch (Astragalus sabulonum)
- Abrams' spurge/Abrams' sandmat (*Euphorbia abramsiana/Chamaesyce abramsiana*)
- California satintail (Imperata brevifolia)
- Copper rush (*Juncus cooperi*)
- Mud nama (*Nama stenocarpum*)
- Roughstalk witch-grass (*Panicum hirticaule var. hirticaule*)
- Desert unicorn-plant (Proboscidea althaeifolia)
- Dwarf Germander (*Teucrium cubense ssp. depressum*)

Many of the rare plants species within the CNDDB literature review search have a low potential of occurring because they are associated with areas of sand dunes within the Imperial Valley. The project sites are generally suitable for some of the suspected rare plants, but because the project area has been altered by periodic natural and anthropogenic over-flooding, much of the soils/biota have been rendered limited for supporting upland-dwelling rare plant taxa.

Based on the results of the habitat assessment, focused surveys were conducted for rare plants during the spring of 2015. Botanical surveys were conducted on March 10th and 11th, 2015, to detect sensitive plant species, identify all vascular plants, and determine the number of special status plants. The project sites were found to have very low plant diversity, with widely spaced shrubs and little evidence of spring annuals. The sites lack potential for most rare plant species to occur, with the exception of a few summer annuals. Mediterranean splitgrass (*Schismus barbatus*) was the only annual observed on natural soils; all other annual species were restricted to the concrete lined irrigation ditch. All plants that could appear in the spring were accounted for, including past skeletons. No follow up botanical surveys are recommended.



4.4.1.2.5 Riparian Habitat or Sensitive Natural Communities

Sensitive vegetation communities are those that are considered rare or sensitive based on the level of disturbance or habitat conversion within their range. A high level of disturbance or habitat conversion within the range could convert the status of vegetative communities to rare or sensitive. Wetland or riparian habitat communities are considered sensitive by CDFW. No riparian habitat or sensitive natural communities were observed on the project sites.

4.4.1.2.6 Jurisdictional Waters

Army Corps of Engineers Jurisdiction

The U.S. Army Corps of Engineers (USACE) has jurisdiction over wetlands and other "waters of the United States" that are subject to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act. Typically, these waters include naturally occurring traditional navigable waters (TNWs), relatively permanent waters (RPWs), and/or ephemeral waters with a significant nexus to a TNW. Manmade drainages constructed wholly in uplands are typically only considered jurisdictional if they are RPWs. The most recent guidance on the topic states that "relatively permanent waters typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)." Conversely, man-made drainages constructed solely in uplands that are not RPWs are generally not federally jurisdictional.

Federally regulated wetlands are identified based on the Wetlands Delineation Manual and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. Three criteria must be fulfilled in order to classify an area as a wetland under the jurisdiction of the USACE: 1) a predominance of hydrophytic vegetation, 2) the presence of hydric soils, and 3) the presence of wetland hydrology. Areas meeting all three parameters would be designated as USACE wetlands. According to the jurisdictional delineation conducted on the project sites, no wetlands were identified in the study area based of the absence of hydric soil indicators and lack of hydrophytic vegetation.

With respect to non-tidal waters, federal jurisdiction over non-wetlands extends to the "Ordinary High Water Mark" (OHWM) [33 C.F.R. § 328.4(c)(1)]. The Ordinary High Water (OHW) zone in low gradient, alluvial ephemeral/intermittent channel forms in the Arid West is defined as the active floodplain. The dynamics of arid channel forms and the transitory nature of traditional OHWM indicators in arid environments render the limit of the active floodplain the only reliable and repeatable feature in terms of OHW zone delineation. The extent of flood model outputs for effective discharges (5 to 10 year events in arid channels) aligns well with the boundaries of the active floodplain.

Lateral jurisdictional limits were established for all drainage features/channels occurring within the project survey area in conjunction with field verification for a determination of the OHWM, which provides an acceptable estimate for the lateral jurisdictional limits.

Based on the results of the jurisdictional delineation conducted by Phoenix Biological Consulting and federal guidance outlined above, all waters delineated within the survey area are determined to be isolated waters and thus not regulated by the USACE. The basis for this finding is as follows:

- All ephemeral washes identified in the field survey flow for less than three (3) months per year, and would therefore be classified as non-RPW by the USACE;
- These ephemeral washes do not have a downstream outlet;
- As non-RPWs, these ephemeral washes have no downstream connectivity to a TNW, and no nexus to interstate or foreign commerce; and
- As non-RPWs, these ephemeral washes are not an (a)(3) water, and do not meet any of the i-iii criteria (no recreation or interstate commerce related to fisheries or industry).



The U.S. Army Corps of Engineers (USACE) reviewed the jurisdictional delineation report for the proposed project and conducted a site visit on August 26, 2015. Based on this review, the USACE has concluded that the project sites do not contain waters of the U.S. pursuant to 33 CFR Part 325.9 (Department of the Army, Los Angeles District, U.S. Army Corps of Engineers. August 31, 2015. Personal communication from Department of the Army to Freeman Hall).

California Department of Fish and Wildlife Jurisdiction

The California Department of Fish and Wildlife (CDFW) generally takes jurisdiction over all stream features, including drains and canals. The CDFW's jurisdiction extends from the top of bank to the opposite top of bank on these features, or to the limits of riparian vegetation if this vegetation extends beyond the top of the banks. Wetlands need to meet only one of the three USACE criteria (wetland vegetation, wetland hydrology, and/or hydric soils) to be considered CDFW jurisdictional wetlands. Under Section 1600 of the California Fish and Game Code, CDFW's jurisdiction includes "...bed, channel or bank of any river, stream or lake designated by the department in which there is any time an existing fish or wildlife resource or from which these resources derive benefit..." Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation or stream dependent terrestrial benefit.

Five ephemeral, intermittent washes totaling 0.739 acres (1,520 linear feet) were identified within the DWSF site. These areas are identified as S1, S2, S3, S4, and S5 in Figure 4.4-3. There are no jurisdictional drainages present within DESF. The size and location of each ephemeral wash is further described below.

S1

This unmapped, unnamed ephemeral wash (131 linear feet, 0.09 acres) is located along the eastern boundary of DWSF. It flows from west to east with no discernible outlet. The topography is level. The soils and topography suggest that, when inundated with water, it is stagnant. This drainage has a high clay content and evidence of cracked clay soils were observed. Changes in soil texture and vegetation types were the defining characteristics of the OHWM. Dominant vegetation includes saltbush, Creosote scrub, and Alkali goldenbush (*Isocoma acradenia*).

S2 (S2.1, S2.2, S2.3)

This unmapped, unnamed ephemeral wash (348 linear feet, 0.096 acres) is located along the northeastern quadrant of DWSF. It flows from west to east with no discernable outlet. The topography has a slight easterly aspect. The soils are sandy along the western portion and become silty-clay on the eastern end of the drainage where the sediments settle out and the water becomes ponded along the eastern edge of the parcel. This drainage has a high clay content and evidence of cracked clay soils were observed along the eastern end. Litter deposition, sandy soils and scour marks were observed along the western end of the drainage. Changes in soil texture, litter deposition, scour marks along the edge of the small embankments and vegetation types were the defining characteristics of the OHWM. Dominant vegetation includes saltbush, Creosote scrub and Alkali goldenbush.

S3

This unmapped, unnamed ephemeral wash (154 linear feet, 0.067 acres) is located along the central portion of DWSF. It flows from west to east with no discernible outlet. The topography has a slight easterly aspect and it is the drop in elevation that has created this feature. Most likely the drainage is active during monsoon events and is fed by sheet flow. The soils are sandy throughout the drainage. Litter deposition, scour marks and shelving were observed along the drainage. Changes in soil texture, litter deposition, scour marks along the edge of the small embankments and vegetation types were the defining characteristics of the OHWM. Dominant vegetation includes Creosote scrub.



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Figure 4.4-3. Jurisdictional Waters



S4

This unmapped, unnamed ephemeral wash (430 linear feet, 0.229 acres) is located along the southeast quadrant of DWSF. It flows from west to east with no discernible outlet. The topography has a slight easterly aspect. The soils are sandy along the western portion and become silty-clay on the eastern end of the drainage where the sediments settle out and the water becomes ponded near the eastern edge of the parcel. This drainage has a high clay content and evidence of cracked clay soils were observed along the eastern end. Litter deposition, sandy soils and scour marks were observed along the western end of the drainage. Changes in soil texture, litter deposition, scour marks along the edge of the small embankments and vegetation types were the defining characteristics of the OHWM. Dominant vegetation includes saltbush, Creosote scrub and Alkali goldenbush.

S5 (S5.1 & S5.2)

This unmapped, unnamed ephemeral wash (457 linear feet, 0.257 acres) is located along the southern boundary of DWSF. It flows from west to east with no discernable outlet. The topography has a slight easterly aspect. The soils are sandy along the western portion and become silty-clay on the eastern end of the drainage where the sediments settle out and the water becomes ponded near the eastern edge of the parcel. This drainage has a high clay content and evidence of cracked clay soils were observed along the eastern end. Litter deposition, sandy soils and scour marks were observed along the western end of the drainage. Changes in soil texture, litter deposition, scour marks along the edge of the small embankments and vegetation types were the defining characteristics of the OHWM. Dominant vegetation includes saltbush, Creosote scrub and Alkali goldenbush.

4.4.1.2.7 Wildlife Corridors and Habitat Connectivity

The concept of wildlife corridors incorporates the idea of linking together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, human disturbance, or encroachment of urban development. The fragmentation of open space by urbanization creates isolated 'islands' of wildlife habitat which can adversely impact genetic and species diversity by restricting the movement, gene flow, and mating potential of wildlife. Wildlife corridors help mitigate the effects of this fragmentation by allowing movement between habitats, promoting genetic exchange, providing escape routes from fire, predators, and human disturbance, and serving as travel paths for animals that require larger home ranges.

Wildlife corridors can exist along drainages, ridgelines, open spaces and utility corridors. The project area is adjacent to open access BLM land to the west and Westside Main Canal to the east; both providing adequate wildlife corridors.

4.4.1.2.8 California Desert Conservation Area

Areas of Critical Environmental Concern (ACEC) are limited use areas designated and managed by the BLM to protect sensitive biological, historical, and cultural resources; natural process or systems; and/or natural hazards. The Yuha Basin and West Mesa are nearby ACECs that primarily consist of undeveloped open space and are designated as limited use areas to protect sensitive biological and cultural resources; specifically archaeological sites and flat-tailed horned lizard habitat. The Yuha Basin is located approximately two miles southwest of the project area and West Mesa is located approximately 7.5 miles northwest of the project area. The project area is not within and does not border a designated ACEC.

4.4.1.2.9 Audubon Important Bird Areas

Audubon Important Bird Areas (IBAs) are areas designated by scientists as critically important because they provide habitat during breeding, wintering, and migrating seasons, for endangered birds, birds with



small or limited ranges, or birds that congregate in high numbers. The projects are located within the Imperial Valley IBA.

4.4.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to biological resources, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

4.4.2.1 Thresholds of Significance

Based on California Environmental Quality Act (CEQA) Guidelines Appendix G, project impacts related to biological resources are considered significant if any of the following occur:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW and USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.4.2.2 Methodology

This analysis evaluates the potential for the projects, as described in Chapter 3, Project Description, to interact with local biological resources in the project area. Based on the extent of these interactions, this analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

As indicated in the environmental setting, Phoenix Biological Consulting prepared a BTR and Jurisdictional Delineation which covered the DESF and DWSF sites. The BTR and Jurisdictional Delineation are included in Appendix E of this EIR. The information obtained from these sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the significance criteria presented in this section. Impacts associated with biological resources that could result from project construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, and duration of project construction and related activities. Conceptual site plans for the project were also used to evaluate potential impacts. These conceptual exhibits are provided in Figures 3-5 and 3-7.



4.4.2.3 Impact Analysis

IMPACT Possible Habitat Modification.

4.4-1 The construction and operation of the proposed projects within the project area could result in the indirect or direct habitat alteration on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or the CDFW or USFWS.

Impact to Vegetation Communities

DESF and DWSF

The habitat types identified on the project sites consist of creosote scrub, mesquite, ruderal habitat, and salt cedar. These habitat communities are not considered sensitive. Therefore, no impact is identified to sensitive vegetation communities.

Impact to Special Status Species

Special Status and Priority Plants

Dixieland East Solar Farm and Dixieland West Solar Farm

The CNDDB literature review identified several sensitive plant species that have the potential to occur in the area. Many of the rare plants species within the CNDDB literature review search have a low potential of occurring because they are associated with areas of sand dunes within the Imperial Valley. The project sites are generally suitable for some of the suspected rare plants, but because the project area has been altered by periodic natural and anthropogenic over-flooding, much of the soils/biota have been rendered limited for supporting upland-dwelling rare plant taxa. Furthermore, no sensitive plant species were observed on the project sites during focused surveys. Therefore, the proposed projects would **have no impact** to special status plant species.

Impacts to Sensitive Wildlife

Burrowing Owl

Construction Impacts

The CDFW Staff Report on Burrowing Owl (2012) lists impacts to burrowing owl as:

- Disturbance within 160 feet (September through January non-nesting season) or within 250 feet (February through August nesting season) of active burrows.
- Destruction of active burrows.
- Destruction/degradation of forage within 300-feet of active burrows.

Direct Impacts

Dixieland East Solar Farm and Dixieland West Solar Farm

The field results were negative for burrowing owls. During the field effort, nine coyote burrows were observed within the DWSF site. One coyote burrow was observed immediately north of the DWSF site (Figure 4.4-2). All of the burrows were absent of owl sign and appeared to be inactive and some appear to have been canid forage holes. Although no sign of burrowing owls were detected on the project sites during field surveys, burrowing owls have the potential to migrate onto the sites during construction. Because burrowing owl typically use burrows excavated by other animals, the coyote burrows could



potentially be occupied by burrowing owl during construction. A pre-construction survey should be conducted prior to grading, as the number and location of owls may change from year to year. Direct impacts to any burrowing owl individuals and/or active burrowing owl burrows within the project sites to be graded would be considered **potentially significant**, and mitigation in the form of avoidance and impact minimization would be required to reduce the impacts to a level of **less than significant**. Similar measures would be required for any future decommissioning, restoration activities that may occur at the end of the life of the projects.

Indirect Impacts

Noise and vibrations from construction equipment may disturb or disrupt burrowing owl nesting behavior if construction takes place within 250 feet of an active burrow during breeding season for the burrowing owl. These impacts would be considered a **significant impact** and mitigation would be required to minimize and/or avoid these impacts. Implementation of these measures would reduce the impact to a level **less than significant**. Similar measures would be required for any future decommissioning, restoration activities that may occur at the end of the currently anticipated 20 year life of the projects.

Operation Impacts

Direct impacts to burrowing owls may occur during O&M activities within the solar fields. Vehicles driving on access roads where burrowing owls are foraging may result in the direct mortality, injury, or harassment of this species. These impacts would be considered a **significant impact** and mitigation would be required. Mitigation Measure BR-2 requires preparation of a Worker Environmental Awareness Program (WEAP) and Mitigation Measure BR-3 requires that construction vehicles maintain a speed limit of 15 miles while driving on access roads. Implementation of these mitigation measures would reduce impacts to burrowing owls from O&M activities to **less than significant**.

After the solar fields are constructed, burrowing owls are expected to forage within the areas underneath the solar panels and within the solar facilities that provide foraging opportunities. While searching for prey, burrowing owls characteristically hover for periods of several minutes at heights of 8-15 meters (Coulumbe 1971). During the night the foraging behavior changes to suit the reduced visibility of small food items; they may pursue arthropods on the ground by walking and running. They also may glide about one meter above the ground when foraging for rodents (Coulumbe 1971). Given the static and highly visible nature of the solar panels, burrowing owls are not expected to collide with the structures during daytime foraging activities when they may be hovering or flying in search for prey. When foraging at night, they are not expected to collide with facility structures given their walking/hopping manner of foraging, coupled with the static and highly visible nature of the solar panels with facility structures, and no mitigation would be required.

All permanent lighting within the solar field will be by low-profile fixtures that point inward toward the solar field with directional hoods or shades to reduce light from shining into the adjacent lands. In addition, any lighting not required daily for security purposes will have motion sensor or temporary use capabilities. No significant impacts due to lighting are expected to occur to this species, and no mitigation is required. No equipment or component of the solar field is expected to produce noise that would exceed ambient noise in the vicinity. **No significant impacts** due to noise are expected to occur to this species, and no mitigation is required.

Colorado Valley Woodrat

Dixieland East Solar Farm and Dixieland West Solar Farm

Construction Impacts

The CNDDB literature review process identified the western yellow bat (*Lasiurus xanthinus*), Colorado Valley woodrat, Yuma hispid cotton rat (*Sigmodon hispidus eremicus*), and American badger within the



CNDDB ten-mile search radius. Of those mammal species, the Colorado Valley woodrat has potential to occur in the project area.

Colorado Valley woodrat was not observed on the project sites during field investigations. However, den building materials are present on the project sites among the mesquite and tamarisk trees. Therefore, this species has the potential to occur on the project sites. If present on the project sites, construction activities such as site clearing and any possible grading activities has the potential to impact Colorado Valley woodrat. Impacts are considered **potentially significant** in the absence of mitigation. Implementation of Mitigation Measure BR-4 would reduce construction impacts to **less than significant**. Similar measures would be required for any future decommissioning, restoration activities that may occur at the end of the currently anticipated 20-year life of the projects.

Operation Impacts

General operation related activities, such as equipment inspection and/or repairs, solar panel washing, and site security are expected to result in minimal noise and therefore, would not result in disturbance to the Colorado Valley woodrat. As a result, a **less than significant** impact is identified for this issue area.

Migratory Birds and Other Sensitive Non-Migratory Bird Species

Dixieland East Solar Farm and Dixieland West Solar Farm

Construction Impacts

The vegetation habitat within and adjacent to the project sites is suitable for providing nesting opportunities for avian species as evidenced in the red-tailed hawk nest observed immediately northeast of DWSF. The nest is located approximately 270 feet from the northeast corner of the DWF fence line (see Figure 4.4-2). Two hawk nestlings were observed in the nest during field investigations of the project sites. If nesting raptors are found within the project area, during construction, impacts to this issue area would be considered **potentially significant** and mitigation would be required in order to reduce the impact to a level less than significant. Implementation of Mitigation Measures BR-5 and BR-6 would reduce impacts to nesting birds during construction to **less than significant**.

Operations and Maintenance Impacts

Electrocution

All electrical components within the solar projects shall be either undergrounded or protected so that there will be no exposure to wildlife and therefore no potential for electrocution. The gen-tie line would be constructed in such a manner that energized components do not present an opportunity for "skin to skin" or wing span contact. However, the Avian Powerline Interaction Committee's (APLIC) 1996 report on power line electrocution in the United States reports that avian electrocution risk is highest along distribution lines (generally less than 69 kV) where the distance between energized phases, ground wires, transformers, and other components of an electrical distribution system are less than the length or skinto-skin contact distance of birds. The distance between energized components along transmission lines (>69 kV) is generally insufficient to present avian electrocution risk. No impact to raptors is anticipated to occur due to electrocution along the proposed gen-tie line. Therefore, no mitigation would be required. However, a **potentially significant impact** may occur to avian mortality during O&M activities along the gen-tie line. Therefore, an Avian and Bat Protection Plan (ABPP) will be developed that will incorporate guidance from USFWS (2010e) and the Avian Powerline Interaction Committee (APLIC 2006). and will include a wildlife mortality reporting program. Mitigation Measure BR-5, specifically the ABPP, will provide the project applicant the vehicle to comply with the Bald and Golden Eagle Protection Act as well as the MBTA. Implementation of that mitigation measure would reduce impacts to less than significant.



Mitigation Measure(s)

Burrowing Owls

The following mitigation measures are required for DESF and DWSF.

- **BR-1 Burrowing Owl Mitigation**. The following measures will avoid, minimize, or mitigate potential impacts to burrowing owl during construction activities:
 - 1. Within 30 days prior to initiation of construction, pre-construction clearance surveys for burrowing owl shall be conducted by qualified and agency-approved biologists to determine the presence or absence of this species within the project footprint. This is necessary, as burrowing owls may not use the same burrow every year; therefore, numbers and locations of burrowing owl burrows at the time of construction may differ from the data collected during previous focused surveys. The proposed project footprint shall be clearly demarcated in the field by the project engineers and biologist prior to the commencement of the pre-construction clearance survey. The surveys shall follow the protocols provided in the *Burrowing Owl Survey Protocol and Mitigation Guidelines*.
 - 2. If active burrows are present within the project footprint, the following mitigation measures shall be implemented. Passive relocation methods are to be used by the biological monitors to move the owls out of the impact zone. Passive relocation shall only be done in the non-breeding season in accordance with the guidelines found in the *Imperial Irrigation District Artificial Burrow Installation Manual*. This includes covering or excavating all burrows and installing one-way doors into occupied burrows. This will allow any animals inside to leave the burrow, but will exclude any animals from re-entering the burrow. A period of at least one week is required after the relocation effort to allow the birds to leave the impacted area before construction of the area can begin. The burrows shall then be excavated and filled in to prevent their reuse. The destruction of the active burrows on-site requires construction of new burrows at a mitigation ratio of 1:1 at least 50 meters from the impacted area and must be constructed as part of the above-described relocation efforts. The construction basins.
 - 3. As the project construction schedule and details are finalized, an agency-approved biologist shall prepare a Burrowing Owl Mitigation and Monitoring Plan that will detail the approved, site-specific methodology proposed to minimize and mitigate impacts to this species. Passive relocation, destruction of burrows, construction of artificial burrows, and a Forage Habitat Plan shall only be completed upon prior approval by and in cooperation with the CDFW. The Mitigation and Monitoring Plan shall include success criteria, remedial measures, and an annual report to CDFW and shall be funded by the project applicant to ensure long-term management and monitoring of the protected lands.
- **BR-2** Worker Awareness Program. Prior to project initiation, a Worker Environmental Awareness Program (WEAP) shall be developed and implemented by a qualified biologist, and shall be available in both English and Spanish. Wallet-sized cards summarizing this information shall be provided to all construction, operation, and maintenance personnel. The education program shall include the following aspects:
 - Biology and status of the burrowing owl;
 - CDFW/USFWS regulations;
 - Protection measures designed to reduce potential impacts to the species, function of flagging designated authorized work areas;



- Reporting procedures to be used if a burrowing owl (dead, alive, injured) is encountered in the field.
- **BR-3 Speed Limit.** The Designated Biologist or Biological Monitor(s) shall evaluate and implement best measures to reduce burrowing owl mortality along access roads.
 - A speed limit of 15 miles per hour when driving access roads. All vehicles required for O&M must remain on designated access/maintenance roads.

Colorado Valley Woodrat

The following mitigation measures are required for DESF and DWSF.

BR-4 Temporary Construction Suspension. During the clearing and grubbing of the project sites, a Designated Biological Monitor shall be present to relocate and remove any potential sensitive species that may have been unaccounted for during focused surveys and habitat assessment. Construction shall cease until sensitive species have been relocated from the project sites.

Migratory Birds and Other Sensitive Non-Migratory Bird Species

The following mitigation measures are required for DESF and DWSF.

BR-5 Construction and O&M Mitigation Measures. In order to reduce the potential indirect impact to migratory birds, bats and raptors, an Avian Bat Protection Plan ABPP shall be prepared following the USFWS's guidelines and implemented by the project applicant. This ABPP shall outline conservation measures for construction and O&M activities that might reduce potential impacts to bird populations and shall be developed by the project applicant in conjunction with and input from the USFWS.

Construction conservation measures to be incorporated into the ABPP include:

- 1. Minimizing disturbance to vegetation to the extent practicable.
- 2. Clearing vegetation outside of the breeding season. If construction occurs between February 1 and September 15, an approved biologist shall conduct a preconstruction clearance survey for nesting birds in suitable nesting habitat that occurs within the project footprint. Pre-construction nesting surveys will identify any active migratory birds (and other sensitive non-migratory birds) nests. If a nesting bird is detected, the area will be avoided and a 100-foot buffer will be installed until the nesting birds have fledged and have been observed to be foraging independently. In the event the red-tail hawk nest is active, a 300-foot buffer shall be installed around the hawk nest until the birds are observed to be foraging independently. Direct impact to any active migratory bird nest should be avoided.
- 3. Minimize wildfire potential.
- 4. Minimize activities that attract prey and predators.
- 5. Control of non-native plants.

O&M conservation measures to be incorporated into the ABPP include:

- 1. Incorporate APLIC guidelines for overhead utilities as appropriate to minimize avian collisions with transmission facilities (APLIC 2006).
- 2. Minimize noise.
- 3. Minimize use of outdoor lighting.



- 4. Implement post-construction avian monitoring that will incorporate of the Wildlife Mortality Reporting Program.
- **BR-6** Raptor and Active Raptor Nest Avoidance. Raptors and active raptor nests are protected under CFGC 3503.5, 3503, 3513. In order to prevent direct and indirect noise impact to nesting raptors such as red-tailed hawk, the following measures shall be implemented:

If construction occurs between February 1 and July 15, a qualified biologist shall conduct a pre-construction clearance survey for nesting raptors in suitable nesting habitat (e.g., tall trees or transmission towers) that occurs within 300 feet of the site. If any active raptor nest is located, the nest area will be flagged, and a 300-foot buffer zone delineated, flagged, or otherwise marked. No work activity may occur within this buffer area, until a qualified biologist determines that the fledglings are independent of the nest.

Significance After Mitigation

The implementation of Mitigation Measures 4.4-1a through 4.4-1d would reduce impacts to burrowing owls to a level **less than significant.** Implementation of Mitigation Measure 4.4-1e would reduce the potential impact to mountain plover, long billed curlew, short billed dowitcher, horned lark, and loggerhead shrike to levels **less than significant**. Mitigation Measures 4.4-1f and 4.4-1g would reduce impacts to migratory and non-migratory birds and nesting raptors to levels **less than significant**.

IMPACTPossible Impact to Riparian Habitats or Other Sensitive Natural Communities.4.4-2Construction and operation of the proposed projects within the project sites would not impact
riparian or other sensitive natural communities identified in local or regional plans, policies,
regulations, or by the CDFW and USFWS.

Dixieland East Solar Farm and Dixieland West Solar Farm

The project sites contain creosote scrub, mesquite, tamarisk thicket, and ruderal vegetation communities. These vegetation communities are not considered riparian or sensitive natural communities. Therefore, no impacts are identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Possible Impact to Wetlands.

4.4-3 Construction and operation of the proposed projects within the project sites would not impact jurisdictional resources as defined by Section 404 of the CWA (including, but not limited to: marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Dixieland East Solar Farm

Based on the results of the jurisdictional delineation conducted by Phoenix Biological Consulting, there are no potential USACE, CDFW, or RWQCB jurisdictional resources within the DESF project site. Therefore, no jurisdictional resources will be directly affected with implementation of the DESF project and **no impact** is identified.



Dixieland West Solar Farm

Based on the results of the jurisdictional delineation conducted by Phoenix Biological Consulting, there are no potential USACE jurisdictional resources within the DWSF project site that would be directly affected with implementation of the DWSF project. However, implementation of the DWSF project would result in the potential permanent impact to 0.739 acres or 1,520 linear feet of potential CDFW and RWQCB jurisdictional resources (Table 4.4-3). This is considered a **potentially significant impact** and would require mitigation. *[Applicant is currently consulting with agencies to verify jurisdiction]*

					Permanent Impacts		
Water ID	Total Area (sf)	Total Acres	Width	Linear Feet	Impact Area (acres)	Impact Length (feet)	
S1	3,909	0.09	55	131	0.09	131	
S2.1	3,107	0.071	18	186	0.071	186	
S2.2	434	0.001	5	67	0.001	67	
S2.3	1,018	0.024	13	95	0.024	95	
S3	2,926	0.067	28	154	0.067	154	
S4	9,986	0.229	36	430	0.229	430	
S5.1	7,858	0.18	15	354	0.18	354	
S5.2	3,345	0.077	57	103	0.077	103	
Total	32,583	0.739	227	1,520	0.739	1,520	

 TABLE 4.4-3. POTENTIALLY JURISDICTIONAL RESOURCES IMPACTS

Source: Phoenix Biological Consulting 2015

Mitigation Measure(s)

4.4-4

BR-7 Burrowing Owl Mitigation

IMPACT Possible Impact to Wildlife Movement and Nursery Sites.

Construction and operation of the proposed projects within the project area would not interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Dixieland East Solar Farm and Dixieland West Solar Farm

Wildlife corridors can exist along drainages, ridgelines, open spaces and utility corridors. The project area is adjacent to open access BLM land to the west and Westside Main Canal to the east; both providing adequate wildlife corridors. However, **no impact** to habitat connectivity is anticipated, due to the fact that the surrounding BLM lands and the nearby irrigation canals, which serve as wildlife corridors, will remain intact.

The projects' ABPP will also ensure that movement and corridor uses to avian species will not be impacted by the proposed projects (Mitigation Measure BR-5). Thus, there are no anticipated impacts to wildlife movement or nursery sites, and no additional mitigation would be required. Therefore, impacts identified for this issue area are **less than significant**.



Mitigation Measure(s)

No mitigation measures are required beyond those previously identified in this section for raptors (Mitigation Measure BR-5).

Significance After Mitigation

With the implementation of the mitigation measure previously identified for raptors (Mitigation Measure BR-5), impacts to wildlife movement would be reduced to **less than significant.**

IMPACTPossible Conflict with Policies Protecting Biological Resources.4.4-5The projects do not conflict with local policies, such as a tree preservation policy, or ordinances.

Dixieland East Solar Farm and Dixieland West Solar Farm

The BLM manages all land uses within the ACEC to protect sensitive biological, historical, and cultural resources; natural process or systems; and/or natural hazards. As previously indicated, the Yuha Basin ACEC is located approximately two miles southwest of the project area and the West Mesa ACEC is located approximately 7.5 miles northwest of the project area. The project sites are not within and do not border a designated ACEC. Therefore, the proposed projects would not conflict with biological resources policies contained in the California Desert Conservation Area Plan.

The projects consist of the construction and operation of solar energy facilities. Development of the solar facilities is subject to the County's zoning ordinance. Pursuant to Title 9, Division 5, Chapter 9, "Solar Energy Plants" is a use that is permitted in the A-2 zone, subject to securing a Conditional Use Permit (CUP). As demonstrated in Table 4.4-1, with implementation of CUPs, the projects would be consistent with Imperial County General Plan biological resources policies. Therefore, **no impacts** are identified for this issue area.

Mitigation Measure(s)

4.4-6

No mitigation measures are required.

IMPACT Possible Conflict with Local Conservation Plan(s).

Construction and operation of the proposed projects within the project area does not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Dixieland East Solar Farm and Dixieland West Solar Farm

The project sites are not located in a Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan. **No impact** is identified.

Mitigation Measure(s)

No mitigation measures are required.


4.4.3 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning activities will require construction vehicles to drive across the solar farms and access roads, which could result in ground disturbance and transportation of invasive weeds. Mitigation measures required to reduce potential impacts to sensitive wildlife species would be applicable during the decommissioning phase of the project as well as including the following Mitigation Measures: BR-1 through BR-6, and would reduce this impact to a level **less than significant**.

Residual

The implementation of Mitigation Measures BR-1 through BR-3 would reduce impacts to burrowing owls to a level less than significant. Implementation of Mitigation Measure BR-4 would reduce the potential impact to Colorado Valley woodrat to a level less than significant. Mitigation Measures BR-5 and BR-6 would reduce impacts to migratory and non-migratory birds and nesting raptors to levels less than significant. The projects would not result in residual significant and unmitigable impacts related to biological resources.



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4.5 CULTURAL RESOURCES

This section discusses cultural resources that may be impacted by the proposed projects. The following identifies the existing cultural resources in the project area, analyzes potential impacts due to the implementation of the proposed projects, and recommends mitigation measures to avoid or reduce potential impacts of the proposed projects. Information for this section is summarized from the *Cultural Resources Assessment and Archaeological Test Excavations* prepared by BCR Consulting LLC. This report includes a cultural resources records search, pedestrian field survey, archaeological test excavations, Native American consultation, and vertebrate paleontological resources overview which have been completed for the project sites pursuant to the California Environmental Quality Act (CEQA). This report is included in Appendix F of this Environmental Impact Report (EIR).

4.5.1 Environmental Setting

The project area is located in the Imperial Valley Area of the Colorado Desert. The elevation of the project sites ranges from approximately 15 to 35 feet above mean sea level. The region is characterized by an arid climate with dry, hot summers and mild winters. The project sites occupy the former western shoreline of prehistoric Lake Cahuilla, and at a depth the lake would have exhibited salinity levels suitable to sustain a variety of fish used by prehistoric human population. Lake Cahuilla is now partially occupied by the artificially created Salton Sea. Lake Cahuilla was formed by periodic prehistoric natural diversion of the Colorado River. Many lakes (now dry) in the Colorado Desert are thought to have supported small human populations during the terminal Pleistocene (22,000-11,000 years before present) and early Holocene (11,000-8,000 years before present). Since the desiccation of California's deserts during the later Holocene, local lakes have dried and significant sand dunes have formed.

The County of Imperial is rich in cultural resources and within the county, archaeological work can be separated into two distinct sections: prehistoric and historic. All prehistoric archaeology deals with the native culture and systems which existed prior to Spanish colonization in 1769. Historical archaeology deals with uncovering facts that no known historical documentation has provided (Imperial County Planning and Development 1993).

Thousands of prehistoric (aboriginal culture and systems existing prior to 1769) and hundreds of historic (uncovered facts containing no known historical documentation) are found throughout Imperial County. Prehistoric evidence in the form of trails, rock art, geoglyphs, fish traps, and resource procurement and manufacturing locations are found in the regions surrounding the fertile valley portion of the county. From a historical standpoint, the intensive use of Imperial Valley for irrigation agriculture since the beginning of the 1900s has impacted any resources that may have existed on land that is now farmland or under the Salton Sea. Historic resource sites date back to 1540, when the Hernando de Alcaron Expedition discovered Alta California from near the intersection of Interstate 8 and Highway 186. The next major historical event occurred in 1775 when Juan Bautista de Anza first passed through the area. The Anza Trail itself constitutes a significant cultural resource in the Yuha Desert, as does the later Sonoran/Southern Emigrant Trail which served as a major route to and from coastal California from 1825 to 1865. Although very few structures or artifacts may remain from the use of these trails, the routes themselves are of historical significance. Various other structures, such as missions (Spanish period 1769-1821) and a fort (Mexican period 1821-1848) are still evident in regions throughout the county (Imperial County Planning and Development, 1993).

4.5.1.1 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the projects.



Federal

National Historic Preservation Act (NHPA). Federal regulations (36 CFR Part 800.2) define historic properties as "any prehistoric or historic district, site, building, structure, or object included, or eligible for inclusion in, in the NRHP." Section 106 of the NHPA (Public Law 89-665; 80 Stat 915; USC 470, as amended) requires a federal agency with jurisdiction over a project to take into account the effect of the project on properties included in or eligible for the National Register of Historic Places (NRHP), and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The term "cultural resource" is used to denote a historic or prehistoric district, site, building, structure, or object, regardless of whether it is eligible for the NRHP.

Native American Graves Protection and Repatriation Act (1990); Title 25, United States Code (USC) Section 3001, et seq. The statute defines "cultural items," "sacred objects," and "objects of cultural patrimony;" establishes an ownership hierarchy; provides for review; allows excavation of human remains, but stipulates return of the remains according to ownership; sets penalties; calls for inventories; and provides for the return of specified cultural items.

State

State Office of Historic Preservation (OHP). The OHP administers state and federal historic preservation programs and provides technical assistance to federal, state, and local government agencies, organizations, and the general public with regard to historic preservation programs designed to *identify, evaluate, register,* and *protect* California's historic resources.

Section 15064.5 of the State California Environmental Quality Act (CEQA) Guidelines also requires that Native American concerns and the concerns of other interested persons and corporate entities, including but not limited to museums, historical commissions, associations and societies be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains (Health and Safety Code [HSC] Section 7050.5, PRC Sections 5097.94 et seq.).

Assembly Bill (AB) 52 amends Public Resource Code (PRC) 5097.94, and adds eight new sections to the PRC relating to Native Americans. AB 52 was passed in 2014 and took effect on July 1, 2015. It establishes a new category of environmental resource that must be considered under CEQA called tribal cultural resources (PRC 21074) and establishes a process for consulting with Native American tribes and groups regarding those resources. Under AB 52, a project that may substantially change the significance of a tribal cultural resource is a project that may have a significant impact on the environment. If a project may cause a significant impact on a tribal cultural resource, the lead agency shall implement measures to avoid the impacts when feasible. Environmental documents must incorporate a discussion of the impacts, mitigation measures, and notification and consultation conducted with tribes affiliated with the geographic area.

Public Resources Code (PRC) Section 21074 defines a tribal cultural resource as a site, feature, place, cultural landscape, sacred place, and any object with cultural value to a California Native American Tribe (CNAT). A tribal cultural resource must be on or eligible for the California Register of Historical Resources (CRHR) or must be included in a local register of historical resources. The lead agency can determine if a tribal cultural resource is significant even if it has not ben evaluated for the CRHR or is not included on a local register.

Assembly Bill (AB) 4239 established the Native American Heritage Commission (NAHC) as the primary government agency responsible for identifying and cataloging Native American cultural resources. The bill authorized the Commission to act in order to prevent damage to and insure Native American access to sacred sites and authorized the Commission to prepare an inventory of Native American sacred sites located on public lands.



Public Resources Code 5097.97. No public agency and no private party using or occupying public property or operating on public property under a public license, permit, grant, lease, or contract made on or after July 1, 1977, shall in any manner whatsoever interfere with the free expression or exercise of Native American religion as provided in the *United States Constitution* and the *California Constitution*; nor shall any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require.

Public Resources Code 5097.98 (b) and (e) require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until he/she confers with the NAHC-identified Most Likely Descendants (MLDs) to consider treatment options. In the absence of MLDs or of a treatment acceptable to all parties, the landowner is required to reenter the remains elsewhere on the property in a location not subject to further disturbance.

California Health and Safety Code, Section 7050.5. This code makes it a misdemeanor to disturb or remove human remains found outside a cemetery. This code also requires a project owner to halt construction if human remains are discovered and to contact the County Coroner.

Local

Imperial County General Plan

The Imperial County General Plan provides goals, objectives, and policies for the identification and protection of significant cultural resources. The Open Space Element of the General Plan includes goals, objectives, and policies for the protection of cultural resources and scientific sites that emphasize identification, documentation, and protection of cultural resources. While Section 4.10, Land Use and Planning of this EIR analyzes the project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors and Planning Commission ultimately make a determination as to the project's consistency with the *General Plan*. Goals and Objectives applicable to the proposed projects are summarized in Table 4.5-1.

TABLE 4.5-1. PROJECT CONSISTENCY WITH APPLICABLE GENERAL PLAN CULTURAL RESOURCES
GOALS AND OBJECTIVES

General Plan Goal/Objective	Consistency with General Plan	Analysis
Goal 3: Important prehistoric and historic resources shall be preserved to advance scientific knowledge and maintain the traditional historic element of the Imperial Valley landscape.	Consistent	The proposed solar farms will not impact any important prehistoric or historic resources.
Objective 3.1 Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	The proposed projects are considered sensitive for buried cultural resources due to the high number of resources recorded in the vicinity. An archaeological monitor will be present during all ground-disturbing activities associated with the project sites in native soils. If any cultural resource is found, the monitor will halt or redirect construction work.

4.5.1.2 Existing Conditions

Cultural Setting

The project sites are located in an unincorporated portion of Imperial County, California. The project occupies two contiguous sites on approximate 53 acres (cumulatively), north of the West Evan Hewes Highway. The two project sites are known as Dixieland East Solar Farm (DESF) and Dixieland West Solar Farm (DWSF). The project sites occupy the former western shoreline of prehistoric Lake Cahuilla. Lake Cahuilla was a freshwater lake that was filled by the Colorado River between 25,000 and 45,000 years ago during the late Pleistocene and then again during the late Holocene. There were numerous Lake Cahuilla filling and desiccation cycles during the late Holocene; however, the number of lakestands and their dates remain problematic (Schaefer 1994a; Waters 1980, 1983; Wilke 1978). These lakestands were significant water sources for prehistoric peoples. The Lake Cahuilla shoreline has been associated with extensive prehistoric use and occupation.

The prehistory of Imperial County, California, may be divided into four major temporal periods: Preprojectile, Paleoamerican, Archaic, and Late Prehistoric. These time periods have regional expression through various regional archaeological complexes or archaeological cultures.

Ethnohistory

The project area was utilized prehistorically by the Kumeyaay. The Kumeyaay were also known as Tipailpai, Kamia, and formerly as Diegueño. Kumeyaay boundaries are not strictly defined. Their territory ranges from the San Luis Rey River in the north to the Salton Sea and Sand Hills in the east, south to the Hardy River and west to the Todas Santos Bay in Baja, California. The Kumeyaay spoke three distinct Yuman language family dialects (still often generalized as Diegueño), including Ipai in the north, Tipai in the south, and a third hypothesized dialect in Baja's southern interior. The Kumeyaay occupied semisedentary villages, and subsisted by hunting and gathering small game, acorns, grass seeds, and other plant resources. Kumeyaay stone tools include complex chipped and groundstone industries, which are commonly manufactured using locally abundant quartzite, felsite, andesite, and fine-grained granitics. Obsidian, chalcedony, chert, and other stone tool materials were also used, but were acquired through trade.

Historic Period

The historic period is described as including the Spanish Period (1769-1821) in the Colorado Desert which begins with the Alarcon exploration up the Colorado River in 1540 and the land expedition to the Colorado River by Melchior Diaz in the same year, and the Mexican Period (1821-1848), in which the mission system was secularized by the Mexican government and these lands allowed for the dramatic expansion of the rancho system. The Mexican Period ended, when Mexico signed the Treaty of Guadalupe Hidalgo on February 2, 1848, concluding the Mexican-American War (1846-1848). The American Period (1848-present) began and in 1850 California was accepted into the Union of the United States primarily due to the population increase created by the Gold Rush of 1849. The cattle industry reached its greatest prosperity during the first years of the American Period.

Mexican Period land grants had created large pastoral estates in California, and demand for beef during the Gold Rush led to a cattle boom that lasted from 1849–1855. However, beginning about 1855, the demand for beef began to decline due to imports of sheep from New Mexico and cattle from the Mississippi and Missouri Valleys. When the beef market collapsed, many California ranchers lost their ranchos through foreclosure. A series of disastrous floods in 1861–1862, followed by a significant drought further diminished the economic impact of local ranching. This decline combined with ubiquitous agricultural and real estate developments of the late 19th century, set the stage for diversified economic pursuits that have continued to proliferate to this day.



Paleontological Resources

The project area is located in the Imperial Valley which is directly underlain by geologic units comprised of quaternary lake deposits of the ancient Lake Cahuilla. Lakebed deposits of ancient Lake Cahuilla have yielded fossil remains from numerous localities in Imperial Valley. These include extensive freshwater shell beds, fish, seeds, pollen, diatoms, foraminifera, sponges, and wood. Lake Cahuilla deposits have also yielded vertebrate fossils, including teeth and bones of birds, horses, bighorn sheep, and reptiles. Therefore, the paleontological sensitivity of these lakebed deposits within the project area is considered to be high.

Records Search/Previously Recorded Resources

On March 5, and 12, 2015 a records search was conducted at the South Coastal Information Center (SCIC). This archival research reviewed the status of all recorded historic and prehistoric cultural resources recorded, and survey and excavation reports completed within one mile of the project sites. Additional resources reviewed included the National Register of Historic places (national Register), the California Register, and documents and inventories published by the California Office of Historic Preservation (OHP). These include the lists of California Historical Landmarks, California Points of Historical Interest, Listing of National Register Properties, and the Inventory of Historic Structures.

Data from the SCIC reveal that 20 previous cultural resources studies have taken place within or adjacent to the project sites, and 47 cultural resources have been recorded within one-mile of the project sites. Four of the previous studies have assessed portions of the project sites, and seven cultural resources have been previously recorded within the boundaries of SEPV Dixieland West. These included six isolated prehistoric artifacts, and one secondary deposit of mixed prehistoric artifacts and modern materials. No cultural resources have been previously recorded within the boundaries of SEPV Dixieland East. The records search is summarized in Table 4.5-2.

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5

USGS 7.5 Minute	Cultural Resources Within One Mile	Studies Within One Mile
Quadrangle	of Project Sites	of Project Sites
Plaster City, California (1979)	P-13-435, 1724, 3399, 6390, 6391, 6392, 6394, 6398, 7816, 7834, 7886, 8334, 8418, 8489, 8653, 8657, 8658, 8820, 8821, 9302, 9539*, 9540*, 9589*, 9594, 9880, 10538, 10656, 11401, 11644, 11645, 11646, 11647, 11648, 11742, 11743, 13118, 13122*, 13123*, 13124*, 13125*, 13126, 13220, 13221, 13222, 13276, 13286, 14652	IM106-203**, 207** 210**, 252, 297, 757, 804, 820, 916, 1057, 1092, 1182, 1228, 1330, 1350**, 1517, 1534, 1535, 1541, 1542

*Recorded within DWSF.

**Previously assessed portions of the project sites.

Field Inventory Results

A pedestrian cultural resources field survey of the project sites was conducted on March 3 and April 2, 2015. The survey was conducted by walking parallel transects spaced approximately 15 meters apart across 100 percent of the project sites, where accessible. Cultural resources were recorded on DPR 523 forms. Digital photographs included detail photographs of all cultural resources. Cultural resources were recorded per the California OHP *Instructions for Recording Historical Resources* in the field using:

- Detailed note taking for entry on DPR Forms (see Appendix F)
- Hand-held Garmin Global Positioning systems for mapping purposes
- Digital photography of all cultural resources (see Appendix F)



During the field survey, BCR Consulting archaeologists updated documentation for the seven previously recorded cultural resources using DPR 523 forms (P-13-9539, 9540, 9589, 13122, 13123, 13124, and 13125) and identified one previously unrecorded cultural resource (SEP1501-P-1). Each of the eight resources was discovered within SEPV Dixieland West, and is described below (see also Appendix F). Surface collection and archaeological test excavations were also conducted to evaluate a prehistoric site (SEP1501-P-1) discovered within DWSF site for California Register eligibility.

P-13-9539. This isolate was originally recorded as one porphyritic metavolcanic debitage and one black volcanic debitage located amongst dense creosote mounds separated by rills. BCR Consulting was unable to find the isolate during intensive pedestrian field survey on March 3, 2015. The isolated artifacts were found to have limited data potential, therefore the prehistoric isolate was not considered a "historical resource" under CEQA and does not warrant further consideration.

P-13-9540. This isolate was originally recorded as one porphyritic metavolcanic debitage located amongst dense creosote mounds separated by rills. BCR Consulting was unable to find the isolate during intensive pedestrian field survey on March 3, 2015. The isolated artifacts were found to have limited data potential, therefore the prehistoric isolate was not considered a "historical resource" under CEQA and does not warrant further consideration.

P-13-9589. This isolate was originally recorded as two buffware pottery sherds situated on sandy alluvial sediment. BCR Consulting was unable to find the isolate during intensive pedestrian field survey on March 3, 2015. The isolated artifacts were found to have limited data potential, therefore the prehistoric isolate was not considered a "historical resource" under CEQA and does not warrant further consideration.

P-13-13122. This isolate was originally recorded as a weathered, porphyritic, black, metavolcanic flake. BCR Consulting was unable to find the isolate during intensive pedestrian field survey on March 3, 2015. The isolated artifacts were found to have limited data potential, therefore the prehistoric isolate was not considered a "historical resource" under CEQA and does not warrant further consideration.

P-13-13123. This isolate was originally recorded as a weathered, medium brown color buffware ceramic body sherd. BCR Consulting was unable to find the isolate during intensive pedestrian field survey on March 3, 2015. The isolated artifacts were found to have limited data potential, therefore the prehistoric isolate was not considered a "historical resource" under CEQA and does not warrant further consideration.

P-13-13124. This isolate was originally recorded as an edge modified flake, made of blue/gray porphyritic metavolcanic material. BCR Consulting was unable to find the isolate during intensive pedestrian field survey on March 3, 2015. The isolated artifacts were found to have limited data potential, therefore the prehistoric isolate was not considered a "historical resource" under CEQA and does not warrant further consideration.

P-13-13125. This site was originally recorded as a possible secondary deposit consisting of a lithic scatter. Additionally, lithics include obsidian, jasper, and petrified wood. BCR Consulting re-identified the site during intensive pedestrian field survey on March 3, 2015. BCR found the same materials mixed with modern shotgun shells and non-diagnostic rusted cans. The deposit is located atop sediments in a clearing created by an intersection of off road vehicle tracks. This appears to be a secondary deposit accumulated during unauthorized collecting. As a result P-13-13125 has limited data potential and is not considered a "historical resource" under CEQA. It does not warrant further consideration.

SEP1501-P-1. The site was originally identified on March 3, 2015. This site consists of a low-density artifact scatter containing one andesite core, an andesite core reduction flake, two reddish ceramic potsherds, two fish ribs, and a small concentration of fire-affected rock. The boundaries have been defined by the extent of the artifact scatter in addition to limits imposed by vegetation surrounding the site. The site appears to be in poor condition. It is located on a bench with an eastern aspect. Alterations to the site have resulted from sheetwashing and vegetation growth. The site is located in creosote scrub with a large screwbean mesquite located at the southern site boundary. The site was revised on April 2, 2015, to



complete the surface collection, STP excavation, and mapping. Additional fire affected rocks, ceramic potsherd, and andesite core were found, but lacked information and were not collected. The fish bones found during the original site visit could not be found during the revisit. Due to the low analytical value of the surface finds, additional STPs beyond the original research design (10 total) were excavated on this site. Each STP was intuitively placed within 20 meters of the surface scatter in order to help elicit the horizontal and vertical extent of the deposit. Excavations did not yield any buried cultural remains, relevant soil changes, or visible signs of cultural activity.

4.5.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to cultural resources, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

4.5.2.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to cultural resources are considered significant if any of the following occur:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geological feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

4.5.2.2 Methodology

This analysis evaluates the potential for the projects, as described in Chapter 3, Project Description, to interact with cultural resources in the project area. Based on the extent of these interactions, this analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

As indicated in the environmental setting, literature reviews were conducted for the project sites. This analysis is included as Appendix F of this EIR. The information obtained from these sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the significance criteria presented in this section. Impacts associated with cultural resources that could result from project construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, and duration of project construction and related activities. Conceptual site plans for the projects were also used to evaluate potential impacts. These conceptual exhibits are provided in Figures 3-5 and Figures 3-7.

4.5.2.3 Impact Analysis

IMPACT Impact to Historical Resources

The proposed projects would not cause a substantial adverse change in the significance of a historical resource.

Dixieland East Solar Farm and Dixieland West Solar Farm

To be considered historically significant, a resource must meet one of four criteria for listing outlined in the California Register of Historical Resources (CRHR) (CEQA Guidelines 15064.3 (a)(3)). In addition to



4.5-1

meeting one of the criteria outlined the CRHS, a resource must retain enough intact and undisturbed deposits to make a meaningful data contribution to regional research issues (CCR Title 14, Chapter 1.5 Section 4852 [c]). Further, based on CEQA Guidelines Section 15064.5 (b), substantial adverse change would include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired. This can occur when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR, National Register of Historic Resources, a local register, or historic resources.
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its identification in an historical resources survey meeting the requirements of PRC §5024.1(g), unless the public agency establishes by a preponderance of the evidence that the resource is not historically or culturally significant.

Data from the SCIC revealed 20 previous cultural resources studies have taken place within or adjacent to the project sites, and 47 cultural resources have been recorded with one-mile of the project sites. No cultural resources were found to be in DESF. Six prehistoric isolates (P-13-9539, 9540, 9589, 13122, 13123, and 13124) and one secondary deposit of mixed prehistoric artifacts (P-13-13125) and modern materials were previously recorded in DWSF. Additionally, one previously unrecorded cultural resource (a prehistoric artifact scatter temporarily designated SEP 1501-P-1) was identified on March 3, 2015. Based on results of initial research and additional evaluation for SEP1501-P-1, these resources were not identified as being "historical resources" under CEQA. Therefore, **no impact** would occur.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Impact to Archaeological Resources

4.5-2

The proposed projects could cause a substantial adverse change in the significance of an archaeological resource.

Pursuant to CEQA Guidelines §15064.5(c)(1) and (2), an archaeological resource includes an archaeological site that qualifies as a significant historical resource as described for Impact 4.5-1. If an archaeological site does not meet any of the criteria outlined in the provisions under Impact 4.5-1, but meets the definition of a "unique archaeological resource" in PRC 21083.2, the site shall be treated in accordance with the provisions of PRC 21083.2, unless the project applicant and public agency elect to comply with all other applicable provisions of CEQA with regards to archaeological resources. "Unique archaeological resource" means an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

CEQA Guidelines 15064.5(c)(4) confirms that if an archaeological resource is neither a unique archaeological nor an historic resource, the effects of the projects on those resources shall not be considered a significant effect on the environment.



Dixieland East Solar Farm and Dixieland West Solar Farm

The literature review of the project area indicates there are cultural resources within 1-mile of DWSF (see Table 4.5-2. No cultural resources have been found in DESF. Within DWSF, eight resources were discovered as described above. The six prehistoric isolates and one secondary deposit had limited data potential and are not considered historical resources under CEQA. Substantial research regarding the one prehistoric artifact scatter (SEP1501-P-1) that was identified to have potential for buried resources was conducted. The site lacked integrity and failed to meet any of the four criteria as prescribed in California Register of Historical Resources (CRHR) (CEQA Guidelines 15064.3 (a)(3).Therefore all items recorded during the pedestrian survey, and the prehistoric site evaluated during the testing program are not "unique archaeological resources" or "historical resources under CEQA. Therefore **no impact** would occur.

The projects include ground-disturbing activities that will extend to depths of 20 feet below the ground surface. As such, the projects have the potential to disturb previously undocumented cultural resources that could qualify as unique archaeological resources pursuant to CEQA. This is considered a **significant impact**. Implementation of proposed Mitigation Measures CR-1 and CR-2 would reduce the potential impact to a level less than significant.

Mitigation Measure(s)

The following mitigation measures are required for DESF and DWSF.

CR-1 Pursuant to CEQA Guidelines §15064.5(f), in the event that previously unidentified unique archaeological resources are encountered during construction or operational repairs, archaeological monitors will be authorized to temporarily divert construction work within 100 feet of the area of discovery until significance and the appropriate mitigation measures are determined by a qualified archaeologist familiar with the resources of the region.

Applicant shall notify the County within 24 hours. Applicant shall provide contingency funding sufficient to allow for implementation of avoidance measures or appropriate mitigation.

CR-2 In the event of the discovery of previously unidentified archaeological materials, the contractor shall immediately cease all work activities within approximately 100 feet of the discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, and scrapers) or tool making debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. After cessation of excavation, the contractor shall immediately contact the Imperial County Department of Planning and Development Services. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), the discovery of any cultural resource within the project area shall not be grounds for a "stop work" notice or otherwise interfere with the project's continuation except as set forth in this paragraph.

In the event of an unanticipated discovery of archaeological materials during construction, the applicant shall retain the services of a qualified professional archaeologist, meeting the Secretary of the Interior's Standards for a Qualified Archaeologist, to evaluate the significance of the materials prior to resuming any construction-related activities in the vicinity of the find. If the qualified archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the applicant shall implement an archaeological data recovery program.



IMPACT Impact to Paleontological Resources

4.5-3

The proposed projects would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

Many paleontological fossil sites are recorded in Imperial County and have been discovered during construction activities. Paleontological resources are typically impacted when earthwork activities such as mass excavation cut into geological deposits (formations) with buried fossils. One area in which paleontological resources appear to be concentrated in this region is the shoreline of ancient Lake Cahuilla, which would have encompassed the present-day Salton Sea. The lake covered much of the Imperial Valley and created an extensive lacustrine environment. Lake Cahuilla experienced several fill-recession episodes before it finally dried up about 300 years ago. In 1905, the Colorado River overflowed into the Salton Basin creating the present-day Salton Sea. Because lacustrine environments typically provide the appropriate conditions for fossil preservation, there is a potential for paleontological resources to be present within the project sites.

Dixieland East Solar Farm and Dixieland West Solar Farm

Based on a records search conducted for the project sites through the Natural History Museum of Los Angeles County, no vertebrate fossil localities lie directly within the proposed project boundaries; however, there are nearby localities from the same deposits that occur in the proposed project area. The soils beneath both project sites contain surface lacustrine and fluvial deposits of late Pleistocene or Holocene age known as the Lake Cahuilla beds. Several vertebrate fossil localities in these Lake Cahuilla beds occur north-northwest of the project area, and have produced significant fauna of terrestrial and freshwater vertebrates as well as diatoms, land plants, clams, snails, and crustaceans. Even relatively shallow excavations in the Lake Cahuilla beds exposed in the proposed project area may encounter significant vertebrate fossil remains.

Impacts to any surface or near-surface level paleontological resources may occur due to grading and disturbance of the area. Based upon the results of the records search, the projects have the potential to disturb paleontological resources. Even relatively shallow excavations in the Lake Cahuilla beds exposed in the proposed project area may encounter significant vertebrate fossil remains. Therefore this is considered **potentially significant impact**. Mitigation Measure CR-3 will ensure that the potential project impacts to paleontological resources do not rise to the level of significance pursuant to CEQA. With implementation of Mitigation Measure CR-1, the impact will be **less than significant**.

Mitigation Measure(s)

The following mitigation measure is required for DESF and DWSF.

CR-3 A County-approved qualified paleontological monitor shall be present during excavation activities associated with project construction. The depth of excavation that requires paleontological monitoring shall be determined by the paleontological monitor and the construction contractor based on initial observations during construction earth moving. The paleontological monitor will be equipped to salvage fossils as they are unearthed (to help avoid construction delays). Monitors are empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Recovered specimens shall be prepared to a point of identification and permanent preservation. Fossil specimens shall be curated by accessioning them into an established, accredited museum repository with permanent retrievable paleontological storage. A report of findings with an appended itemized inventory of specimens will be prepared. The report and inventory, when submitted to the Imperial County Department of Planning and Development Services, along with confirmation of the curation of recovered specimens into an established, accredited museum repository, will signify completion of the program to mitigate impacts to paleontological resources. In general, a paleontological monitor will not be required after possible fossil bearing sediments have



been excavated. The monitor is not required during the construction phase when the steel posts for the arrays are installed.

 IMPACT
 Impact to Human Remains

 4.5-4
 The proposed projects could disturb and human remains, including those interred outside of formal cemeteries.

Dixieland East Solar Farm and Dixieland West Solar Farm

During the construction and operational phases of the proposed projects, grading, excavation and trenching will be required. While no potential human remains have been identified in the project area, subsurface activities always have some potential to impact previously unknown remains. This is considered a **potentially significant impact**. Mitigation Measure CR-4 will ensure that the potential project impacts to previously unknown human remains do not rise to the level of significance pursuant to CEQA. With implementation of Mitigation Measure CR-4, the impact will be **less than significant**.

Mitigation Measure(s)

The following mitigation measure is required for the DESF and DWSF.

CR-4 Human Remains. In the event that any human remains or related resources are discovered on the project site, such resources shall be treated in accordance with federal, state, and local regulations and guidelines for disclosure, recovery, relocation, and preservation, as appropriate. All construction affecting the discovery site shall cease until, as required by CEQA Guidelines, Section 156064.5(e), the human remains are evaluated by the County Coroner for the nature of the remains and cause of death. All parties involved would ensure that any such remains are treated in a respectful manner and that all applicable federal, state, and local laws are followed.

If human remains are found to be of Native American origin, or if associated grave goods or objects of cultural patrimony are discovered, the provisions of NAGPRA would be followed, and the Native American Heritage Commission shall be asked to determine the most likely descendants who are to be notified or, if unidentifiable, to establish the procedures for burial.

4.5.3 Decommissioning/ Restoration and Residual Impacts

Decommissioning/Restoration

No impact is anticipated from restoration activities as the ground disturbance and associated impacts to cultural resources will have occurred during the construction phase of the projects.

Residual

Implementation of Mitigation Measures CR-1 and CR-2 would reduce potentially significant impacts to unknown historic or unique archaeological materials during construction of the project sites Implementation of Mitigation Measure CR-3 would ensure that the impact to paleontological resources during construction would be mitigated to a level less than significant. Implementation of Mitigation Measure CR-4 would reduce potential impacts to human remains to a level less than significant. No unmitigated impacts to cultural resources would occur with implementation of the projects.



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4.6 GEOLOGY AND SOILS

This section provides an evaluation of the projects in relation to existing geologic and soils conditions within the project area. Information contained in this section is summarized from publications made available by the California Geological Survey (CGS) and site-specific geotechnical studies prepared by Landmark Consultants, Inc. (LCI). The geotechnical reports for Dixieland East Solar Farm (DESF) and Dixieland West Solar Farm (DWSF) prepared by LCI are included in Appendix G of this Environmental Impact Report (EIR).

4.6.1 Environmental Setting

The project sites are located in the Imperial Valley portion of the Salton Trough physiographic province. The Salton Trough is a topographic and geologic structural depression resulting from large scale regional faulting. The trough is bounded on the northeast by the San Andreas Fault and Chocolate Mountains and the southwest by the Peninsular Range and faults of the San Jacinto Fault Zone. The Salton Trough represents the northward extension of the Gulf of California, containing both marine and non-marine sediments deposited since the Miocene Epoch.

Tectonic activity that formed the trough continues at a high rate as evidenced by deformed young sedimentary deposits and high levels of seismicity. Figure 4.6-1 shows the location of the project sites in relation to regional faults and physiographic features.

The geologic conditions present within the County contribute to a wide variety of hazards that can result in loss of life, bodily injury, and property damage. Fault displacement is the principal geologic hazard affecting public safety in Imperial County. The primary seismic hazard at the project sites is the potential for strong groundshaking due to potential fault movements along the Brawley, Superstition Hills, and Imperial Faults. Secondary geologic hazards that have a potential to occur include differential ground settlement, soil liquefaction, rock and mudslides, ground lurching, or ground displacement along the fault.

4.6.1.1 Regulatory Setting

This section identifies and summarizes Federal, State, and local laws, policies, and regulations that are applicable to the projects.

Federal

Earthquake Hazards Reduction Act

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program. To accomplish this goal, the act established the National Earthquake Hazards Reduction Program (NEHRP). This program was substantially amended in November 1990 by the National Earthquake Hazards Reduction Program goals, and objectives.

The mission of NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRPA designates the Federal Emergency Management Agency as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the National Institute of Standards and Technology, National Science Foundation, and United States Geological Survey (USGS).





Figure 4.6-1. Regional Faults

Source: LCI 2015



State

Alquist-Priolo Special Studies Zone Act (1972)

The Alquist-Priolo Special Studies Zone Act (AP Act) was passed into law following the destructive February 9, 1971 San Fernando earthquake. The AP Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the AP Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. The State Geologist (Chief of the California Division of Mines and Geology) is required to identify "earthquake fault zones" along known active faults in California. Counties and cities must withhold development permits for human occupancy projects within these zones unless geologic studies demonstrate that there would be no issues associated with the development of a project. Based on a review of the current Alquist-Priolo Earthquake Fault Zone Maps produced by the California Geologic Survey, no faults are mapped under the AP Act within the project area.

California Building Code

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. California Code of Regulations Title 24 (CCR Title 24) is reserved for state regulations that govern the design and construction of buildings, associated facilities and equipment, known as building standards. The California Building Code (CBC) is based on the Federal Uniform Building Code (UBC) used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The California Health and Safety Code Section 18980 Health and Safety Code Section 18902 give CCR Title 24 the name of California Building Standards Code.

The most recent building standard adopted by the legislature and used throughout the state is the 2013 version of the CBC (which became effective January 1, 2014 – except for the energy provisions that became effective July 1, 2014). The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground shaking with specified probability of occurring at a site.

The CBC defines different Seismic Design Categories based on building occupancy type and the severity of the probable earthquake ground motion at the site. There are six Seismic Design Categories and designated as Categories A through F, with Category A having the least seismic potential and Category F having the highest seismic potential. Structures are designed for prevention of collapse for the maximum level of ground shaking that could reasonably be expected to occur at a site. The project sites are located within Seismic Design Category D.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act aims to reduce the threat of seismic hazard to public health and safety by identifying and mitigating seismic hazards. Through the act, the California Department of Conservation, Division of Mines and Geology, is directed to delineate seismic hazard zones. State, County, and City agencies are directed to utilize such maps in land use and permitting processes. The act also requires geotechnical investigations particular to the site be conducted before permitting occurs on sites within seismic hazard zones. To date, a Seismic Hazards Map has not been prepared for areas encompassing the project sites.

Local

County of Imperial General Plan

The Seismic and Public Safety Element identifies goals and policies that will minimize the risks associated with natural and human-made hazards. The purpose of the Seismic and Public Safety Element is directly concerned with reducing the loss of life, injury, and property damage that might result



from disaster or accident. Additionally, known as the Imperial Irrigation District Lifelines, the Imperial Irrigation District (IID) has formal Disaster Readiness Standard Operating Procedure for the Water Department, Power Department, and the entire District staff for response to earthquakes and other emergencies. The Water Department cooperates with the Imperial County Office of Emergency Services (OES) and lowers the level in canals after a need has been determined, and only to the extent necessary.

Table 4.6-1 analyzes the consistency of the projects with specific policies contained in the County of Imperial General Plan associated with geology, soils, and seismicity.

General Plan Policies	Consistency with General Plan	Analysis
 Goal 1. Include public heath and safety considerations in land use planning. Objective 1.1. Ensure that data on geological hazards is incorporated into the land use review process, and future development process. Objective 1.3. Regulate development adjacent to or near all mineral deposits and geothermal operations. Objective 1.4. Require, where possessing the authority, that avoidable seismic risks be avoided; and that measures, commensurate with risks, be taken to reduce injury, loss of life, destruction of property, and disruption of service. Objective 1.7. Require developers to provide information related to geologic and seismic hazards when siting a proposed project. Goal 2: Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property resulting from both natural and human-related phenomena. Objective 2.2. Reduce risk and damage due to seismic hazards by appropriate regulation. Objective 2.5 Minimize injury, loss of life, and damage to property by implementing 	Consistent	Division 5 of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones. Per County regulations, construction of buildings intended for human occupancy which are located across the trace of an active fault are prohibited. An exception exists when such buildings located near the fault or within a designated Special Studies Zone are demonstrated through a geotechnical analysis and report not to expose a person to undue hazard created by the construction. Since the project area is located in a seismically active area, the projects are required to be designed in accordance with the California Building Code (CBC) for near source factors derived from a Design Basis Earthquake (DBE) based on a peak ground acceleration (PGA) of 0.50 gravity (g) (LCI, 2015). It should be noted that the projects would be remotely operated and would not require any habitable structures on site. In considering these factors in conjunction with mitigation requirements outlined in the impact analysis, the risks associated with seismic hazards would be minimized.
all state codes where applicable. Objective 2.8 Prevent and reduce death, injuries, property damage, and economic and social dislocation resulting from natural hazards including flooding, land subsidence, earthquakes, other geologic phenomena, levee or dam failure, urban and wildland fires and building collapse by appropriate planning and emergency measures.		Preliminary geotechnical reports have been prepared by LCI for the proposed projects. The preliminary geotechnical reports have been referenced in this environmental document. Additionally, design-level geotechnical investigations will be conducted to evaluate the potential for site specific hazards associated with seismic activity.

TABLE 4 6-1 PROJECT	CONSISTENCY WITH A	PPLICABLE GENERAL	I PLAN SEISMIC AN	D PUBLIC SAFETY POLICIES

Source: County of Imperial General Plan, Seismic & Public Safety Element as amended through 2008

4.6.1.2 Existing Conditions

Geology

Topography within each of the project sites is relatively flat and primarily characterized by a level elevation. The DESF site lies at an elevation of approximately 30 to 35 feet below mean sea level (MSL). The DWSF site lies at an elevation of approximately 15 to 25 feet below MSL. The surrounding properties lie on terrain which is flat (planar), part of a large agricultural valley, which was previously an ancient lake bed covered with fresh water to an elevation of 43 feet above MSL.

The project sites are directly underlain by lacustrine deposits, which consist of interbedded lenticular and tabular silt, sand, and clay. The Late Pleistocene to Holocene (present) lake deposits are probably less than 100 feet thick and derived from periodic flooding of the Colorado River which intermittently formed a fresh water lake (Lake Cahuilla). Older deposits consist of Miocene to Pleistocene non-marine and marine sediments deposited during intrusions of the Gulf of California. Basement rock consisting of Mesozoic granite and Paleozoic metamorphic rocks are estimated to exist at depths between 15,000 to 20,000 feet.

Seismicity

Earthquakes are the result of an abrupt release of energy stored in the earth. This energy is generated from the forces which cause the continents to change their relative position on the earth's surface, a process called "continental drift." The earth's outer shell is composed of a number of relatively rigid plates which move slowly over the comparatively fluid molten layer below. The boundaries between plates are where the more active geologic processes take place. Earthquakes are an incidental product of these processes. As a result, southern California is located in a considerably seismically active region as the Pacific Plate moves northward relative to the North American Plate at their boundary along the San Andreas Fault System.

The project area is located in a seismically active region, with potential for strong ground shaking associated with earthquakes. The faults/fault zones within the vicinity of (15 miles) and surrounding the project sites include (but are not limited to) the Imperial Fault Zone, Laguna Salada Fault Zone, Superstition Hills Fault, and Superstition Mountain Fault (Figure 4.6-1). According to the Preliminary Geotechnical Report, the nearest mapped earthquake fault zone is the Yuha Well fault located approximately 3.9 miles south of the DWSF. The Yuha Well fault was recently identified and zoned after the April 4, 2010 magnitude 7.2 M_w El Mayor-Cucaph earthquake.

Ground Shaking

Ground shaking is the byproduct of an earthquake and is the energy created as rocks break and slip along a fault (Christenson 1994). The amount of ground shaking that an area may be subject to during an earthquake is related to the proximity of the area to the fault, the depth of the hypocenter (focal depth), location of the epicenter and the size (magnitude) of the earthquake. Soil type also plays a role in the intensity of shaking. Bedrock or other dense or consolidated materials are less prone to intense ground shaking than soils formed from alluvial deposition.

The probability of earthquake occurrences and their associated peak ground accelerations for the project sites was estimated in the Geotechnical Report (LCI 2015). A probabilistic seismic hazard assessment is typically expressed in terms of probability of exceeding a certain ground motion. The 2013 CBC general ground motion parameters are based on the Risk-Targeted Maximum Considered Earthquake (MCE_R). The site soils have been classified as Site Class D (stiff soil profile).



Design earthquake ground motions are defined as the earthquake ground motions that are two-thirds of the corresponding MCE_R ground motions. The Maximum Considered Earthquake Geometric Mean peak ground acceleration (PGA_M) value was determined from the "U.S. Seismic Design Maps Web Application" for liquefaction and seismic settlement analysis in accordance with 2013 CBC Section 1803A.5.12 and CGS Note 48. A PGA_M value of 0.50g has been determined for the project sites.

Surface Rupture

Surface rupture occurs when movement along a fault results in actual cracking or breaking of the ground along a fault during an earthquake. However, it is important to note that not all earthquakes result in surface rupture. Surface rupture almost always follows preexisting fault traces, which are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Fault creep is the slow rupture of the earth's crust. Sudden displacements are more damaging to structures because they are accompanied by shaking. No faults mapped under the Alquist-Priolo (AP) Act traverse the project sites (LCI 2015). Therefore, the potential for surface fault rupture is considered to be low at the project sites (LCI 2015).

Liquefaction

Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as those produced by earthquakes. With strong ground shaking, an increase in pore water pressure develops as the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases and the soil behaves as a liquid (similar to quicksand). Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations.

Four conditions are generally required for liquefaction to occur: (1) the soil must be saturated (relatively shallow groundwater); (2) the soil must be loosely packed (low to medium relative density); (3) the soil must be relatively cohesionless (not clayey); and (4) groundshaking of sufficient intensity must occur to function as a trigger of mechanism.

The saturated granular soil encountered at the points of exploration at the project sites are not considered to be susceptible to liquefaction due to the dense nature of the soil deposits.

Landslides

A landslide refers to a slow to very rapid descent of rock or debris caused by natural factors such as the pull of gravity, fractured or weak bedrock, heavy rainfall, erosion and earthquakes. The project sites are located on relatively flat topography with a low range in elevation. No ancient landslides are shown on geologic maps of the region and no indications of landslides were observed during site visits conducted by LCI (LCI 2015).

Total and Differential Settlement

Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). Typically, areas underlain by artificial fills, unconsolidated alluvial sediments, and slope wash, and areas with improperly engineered construction fills are susceptible to this type of settlement. Settlement of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid compaction and settling of subsurface materials (particularly loose, non-compacted, and variable sandy sediments) due to the rearrangement of soil particles during prolonged ground shaking. Transitions between compacted and non-compacted surfaces could present implications for utility infrastructure in the project sites and is discussed further in the impact analysis.



Volcanic Hazards

The project sites are not located in proximity to any known volcanically active area and therefore the risk of volcanic hazards is considered very low (LCI 2015).

Soil Resources

Figure 4.6-2 identifies the soil resources within the project sites. As shown in Figure 4.6-2, DESF consists primarily of Meloland fine sand soils, with a small portion of the eastern edge consisting of Meloland very fine sandy loam. DWSF is dominated by Rositas sand 0-2%, with the southwest corner consisting of Rositas fine sand 0-2%, the northeastern corner and eastern edge consisting of Meloland fine sand, and the northwest corner composed of Indio-Vint complex.

All soil types within the project sites are found on 0-2% slopes. Meloland fine sand is described as well drained with very low runoff, and moderately saline to strongly saline. Meloland very fine sandy loam is also moderately saline to strongly saline, but differs from Meloland find sand, in that it is moderately well drained and has low runoff. Rositas sand 0-2% and Rositas fine sand 0-2% are both described as somewhat excessively drained and very slightly saline to slightly saline, but Rositas fine sand has very low runoff. Indio-Vint complex is composed of loamy to loamy fine sand, is well drained, has low to very low runoff, and is non-saline/very slightly saline to slightly saline.

Soil-Related Hazards

The physical properties of the soil base can greatly influence improvements constructed upon them. As an example, expansive soils are largely comprised of clays, which greatly increase in volume when water is absorbed and shrink when dried. This movement may result in the cracking of foundations for aboveground, paved roads, and concrete slabs. Subsurface soils encountered on DESF consist of silty sands and silts. The surficial five feet of soil consists of non-expansive silty sands. Subsurface soils encountered on DWSF consist of about five feet of surficial silty sand, overlying silty clay, and clay soils. The surficial five feet of soil consists of non-expansive silty sands.

The native soils on the project sites were found to have low to severe levels of chloride ion concentration. Soils containing chloride ions can be corrosive and damage underground utilities including pipelines and cables, or weaken roadway structures (LCI 2015). These hazards are discussed further in the impact analysis.

4.6.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to geologic and soil conditions, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Figure 4.6-2. Soils Map



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4.6.2.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to geologic and soil conditions are considered significant if any of the following occur:

- Expose people or structures to potential substantive adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (Refer to Division of Mines and Geology Special Publication 42)
 - Strong seismic ground shaking;
 - Seismic related ground failure, including liquefaction;
 - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in the latest UBC, creating substantial risks to life or property; or
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

4.6.2.2 Methodology

This analysis evaluates the potential for the projects, as described in Chapter 3, Project Description, to interact with local geologic and soil conditions in the project sites. Based on the extent of these interactions, this analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

As discussed above, two separate Geotechnical Reports have been prepared which covers the DESF and DWSF. These reports are included as Appendix G of this EIR. The analysis prepared for this EIR also relied on NRCS soil survey data ("Web Soil Survey"), and published geologic literature and maps. The information obtained from these sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the significance criteria presented in this section. Impacts associated with geology and soils that could result from project construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, and duration of project construction and related activities; and a field visit.

4.6.2.3 Impact Analysis

IMPACT Possible Risks to People and Structures Caused by Strong Seismic Ground Shaking.

4.6-1 The project area is located in an area of moderate to high seismic activity and, therefore, project-related structures could be subject to damage from seismic ground shaking and related secondary geologic hazards.

Dixieland East Solar Farm and Dixieland West Solar Farm

The project area is located within a seismically active area and would likely experience at least one major earthquake (greater than moment magnitude 6 on the Richter scale) within the next 30 years, which is



within the expected useful life of the projects. The closest mapped active faults to the project sites include: Shell Beds Fault (4.0 miles), Yuha Fault (5.8 miles), Vista de Anza Fault (7.0 miles), Laguna Salada Fault Zone (7.6 miles), Superstition Mountain Fault (8.2 miles), Superstition Hills Fault (9.2 miles), and Yuha Well Fault (3.9 miles) (see Figure 4.6-1)

In the event of an earthquake along one of these fault sources, seismic hazards related to ground motion could occur in susceptible areas within the project area. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking. Given the estimated PGA of 0.50 g (LCI 2015), ground motions within the project area could cause moderate to heavy structural damage. Because the proposed projects would not include any habitable structures and because no full-time staffing would be required to operate the facility, the projects do not pose a substantial risk of injury or death as a result of strong seismic ground shaking. However, given the potentially hazardous nature of the project facilities (e.g., danger from electrocution), the potential impact of ground motion during an earthquake is considered a **significant impact**, as proposed structures could be damaged. With the incorporation of applicable recommendations from the site-specific Geotechnical Reports into project design and construction, potential impacts associated with strong seismic ground shaking are considered **less than significant**.

Based on the Geotechnical Report prepared for DESF, liquefaction is unlikely to be a potential hazard at the site due to the lack of saturated granular soil (clay soils predominate). The clay soil encountered at the points of exploration at the project site is not considered to be susceptible to liquefaction due to the high fines content and cohesive nature of the soil deposits. Based on the Geotechnical Report prepared for DWSF, liquefaction is unlikely to be a potential hazard at the site due to the dense nature of the saturated granular soil. The saturated granular soil encountered at the points of exploration at the project sites is not considered to be susceptible to liquefaction at the project sites is not considered to be susceptible to liquefaction due to the dense nature of the soil deposits. Furthermore, evaluation of the DWSF site for dry seismic settlement indicates that the site is anticipated to experience less than 0.05 inch of seismic settlement of the soil above groundwater. Due to the minimal dry seismic settlement, the probability of seismically induced dry soils densification at the site is low. Therefore, the potential impact to liquefaction is considered a **less than significant impact**.

No portion of the project area is located on an active fault or within a designated AP Zone and, therefore, the potential for ground rupture to occur within the project sites is considered to be low. Similarly, in the context of the flat topography within the project area, the potential for earthquake induced landslides to occur at the site is unlikely. For these reasons, **a less than significant impact** has been identified associated with these geologic issues.

Mitigation Measure(s)

The following mitigation measure is required for the DESF and DWSF.

- GEO-1 Incorporate Site-Specific Recommendations from Geotechnical Report(s) Into Project Design. Facility design for all project components shall comply with the site-specific design recommendations as provided in the Dixieland East Solar Farm Geotechnical Investigation Report (June 2015) and Dixieland West Solar Farm Geotechnical Investigation Report (June 2015) prepared by Landmark Consultants, Inc.. The following site-specific recommendations shall be implemented by the project applicant:
 - Site preparation;
 - Foundations and settlements;
 - Drilled piers;
 - Driven steel posts;
 - Concrete mixes and corrosivity;
 - Excavations;
 - Seismic design;
 - Soil erosion factors for SWPPP Plans; and
 - Pavements.

Significance After Mitigation

4.6-2

With the implementation of the above mitigation measure, potential impacts from strong seismic groundshaking would be reduced to a **less than significant** level through the implementation of site-specific recommendations contained in the geotechnical reports prepared for the projects.

IMPACT Unstable Geologic Conditions.

The projects would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the projects.

Dixieland East Solar Farm and Dixieland West Solar Farm

Based on the Geotechnical Report prepared for DESF, liquefaction is unlikely to be a potential hazard at the site due to the lack of saturated granular soil (clay soils predominate). The clay soil encountered at the points of exploration at the project sites is not considered to be susceptible to liquefaction due to the high fines content and cohesive nature of the soil deposits. Based on the Geotechnical Report prepared for DWSF, liquefaction is unlikely to be a potential hazard at the site due to the dense nature of the saturated granular soil. The saturated granular soil encountered at the points of exploration at the project site is not considered to be susceptible to liquefaction at the project site is not considered to be susceptible to liquefaction at the project site is not considered to be susceptible to liquefaction due to the dense nature of the soil deposits. Therefore, the potential impact to unstable geologic conditions is considered a **less than significant impact**.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measure GEO-1 are required.

IMPACTConstruction-Related Erosion.4.6-3Construction activities during project implementation would involve grading and movement of earth
in soils subject to wind and water erosion as well as topsoil loss.

Dixieland East Solar Farm and Dixieland West Solar Farm

During the site grading and construction phases, large areas of unvegetated soil would be exposed to erosive forces by water for extended periods of time. Unvegetated soils are much more likely to erode from precipitation than vegetated areas because plants act to disperse, infiltrate, and retain water. Construction activities involving soil disturbance, excavation, cutting/filling, stockpiling, and grading activities could result in increased erosion and sedimentation to surface waters. Construction could produce sediment-laden stormwater runoff (nonpoint source pollution), a major contributor to the degradation of water quality. If precautions are not taken to contain contaminants, construction related erosion impacts are considered a **significant impact**.

The projects are not expected to result in substantial soil erosion or the loss of topsoil over the long-term. Ground cover will be planted between the arrays for the life-span of the solar facility is operations. Under the projects, these lands would be covered with solar arrays and a cover crop or soil stabilizer used in between the solar arrays. The ground cover would reduce the amount of soil surface exposed to erosion. A vegetation cover reduces erosion potential by: 1) shielding the soil surface from the direct erosive impact of raindrops; 2) improving the soil's water storage porosity and capacity so more water can infiltrate into the ground; 3) slowing the runoff and allowing the sediment to drop out or deposit; and 4) physically holding the soil in place with plant roots.

Further, the project applicant would be required to implement on-site erosion control measures in accordance with County standards, which require the preparation, review, and approval of a grading plan by the County Engineer. Given these considerations and the fact that the encountered soil types have a low erosion potential, the projects' long-term impact in terms of soil erosion and loss of topsoil would be **less than significant**. In addition, the implementation of Mitigation Measure HYD-1 in Chapter 4.9,



Hydrology/Water Quality, the potential **significant impact** associated with erosion from construction activities would be reduced to a **less than significant** level with the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), including Best Management Practices (BMPs) to reduce erosion from the construction site.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measure HYD-1 are required.

Significance After Mitigation

With implementation of Mitigation Measure HYD-1 in Chapter 4.9, Hydrology/Water Quality, potential impacts from erosion during construction activities would be reduced to a **less than significant** level with the preparation of a SWPPP and implementation of BMPs to reduce erosion from the construction site.

IMPACT Exposure to Potential Hazards from Problematic Soils. 4.6-4 The projects could encounter expansive or corrosive soils thereby subjecting related structures to potential risk of failure.

Dixieland East Solar Farm and Dixieland West Solar Farm

Soils containing a high percentage of clay may exhibit a moderate to high potential for shrink-swell. However, as provided in the environmental setting, the surficial five feet of the project sites consists of non-expansive silty sands. Therefore, the projects would not encounter expansive soils subjecting related structures to potential risk of failure. This would be a **less than significant impact**.

The native soils on the project sites were found to have low to severe levels of chloride ion concentration. Soils containing chloride ions can be corrosive and damage underground utilities including pipelines and cables, or weaken roadway structures. Corrosive soil materials could lead to deterioration of structural concrete footings. This impact would be a **significant impact** as structures could be damaged by these types of soils. Upon implementation of Mitigation Measure GEO-1 listed above, the impact related to corrosive soils would be reduced to a **less than significant** level, because site-specific recommendations (e.g., corrosion protection measures) contained in the geotechnical report will be incorporated into the project design.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measure GEO-1 are required.

Significance After Mitigation

With implementation of the Mitigation Measure GEO-1, soil-related hazards in terms of corrosive soils would be reduced to a **less than significant** level because site-specific recommendations (e.g., corrosion protection measures) contained in the geotechnical report will be incorporated into the project design.

 IMPACT
 On-site Wastewater Treatment and Disposal.

 4.6-5
 The projects would not have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems.

Dixieland East Solar Farm and Dixieland West Solar Farm

The proposed projects would not require an operations and maintenance building. The proposed solar facilities would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Therefore, no septic or other wastewater disposal systems would be required for the projects.



Mitigation Measure(s)

No mitigation measures are required.

4.6.3 **Decommissioning/Restoration and Residual Impacts**

Decommissioning/Restoration

Decommissioning and restoration of the sites at the end of their use as solar fields would involve the removal of structures and restoration to their prior (pre-solar project) conditions. No geologic or soil impacts associated with the restoration activities would be anticipated, and therefore, no impact is identified.

Residual

With implementation of Mitigation Measures GEO-1 and HYD-1, impacts related to strong seismic ground-shaking, construction-related erosion, and soil hazards related to corrosion, would be reduced to less than significant levels. Based on these circumstances, the projects would not result in residual significant and unmitigable impacts related to geology and soil resources.

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4.7 GREENHOUSE GAS EMISSIONS

This section provides an overview of existing Greenhouse Gas (GHG) emissions within the project area and identifies applicable federal, state, and local policies related to global climate change. The impact assessment provides an evaluation of potential adverse effects with regards to GHG emissions based on criteria derived from the California Environmental Quality Act (CEQA) Guidelines in conjunction with actions proposed in Chapter 3, Project Description. OB-1 Air Analyses prepared an Air Quality/Greenhouse Gas Report in August 2015 (revised November 2015) for the SEPV Dixieland East and West Solar Farm Projects. The report is included in Appendix D of this Environmental Impact Report (EIR).

4.7.1 Environmental Setting

Global Climate Change (GCC) refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O), which are known GHGs. These gases allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere. Gases that trap heat in the atmosphere are often called GHGs, analogous to a greenhouse. GHGs are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the Earth's temperature. Emissions from human activities, such as burning fossil fuels for electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere.

The State of California has been at the forefront of developing solutions to address GCC. GCC refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. GCC may result from natural factors, natural processes, and/or human activities that change the composition of the atmosphere and alter the surface and features of land.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The IPCC concluded that a stabilization of GHGs at 400 to 450 ppm CO₂ equivalent concentration is required to keep global mean warming below 3.6 degrees Fahrenheit (° Fahrenheit) (2° Celsius), which is assumed to be necessary to avoid dangerous climate change (Union of Concerned Scientists 2007).

State law defines GHGs as any of the following compounds CO_2 , CH_4 , N_2O , hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆) (California Health and Safety, Code Section 38505(g)).

Carbon Dioxide (CO₂) is a colorless, odorless gas consisting of molecules made up of two oxygen atoms and one carbon atom. CO₂ is produced when an organic carbon compound (such as wood) or fossilized organic matter, (such as coal, oil, or natural gas) is burned in the presence of oxygen. CO₂ is removed from the atmosphere by CO₂ "sinks", such as absorption by seawater and photosynthesis by oceandwelling plankton and land plants, including forests and grasslands. However, seawater is also a source of CO₂ to the atmosphere, along with land plants, animals, and soils, when CO₂ is released during respiration. Whereas the natural production and absorption of CO₂ is achieved through the terrestrial biosphere and the ocean, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s, each of these activities has increased in scale and distribution. Prior to the industrial revolution, concentrations CO₂ were stable at a range of 275 to 285 ppm. The National Oceanic and Atmospheric Administration (NOAA) Earth System Research Laboratory (ESRL) indicates that global concentration of CO₂ were 396.72 ppm in April 2013. In addition, the CO₂ levels at Mauna Loa averaged over 400 ppm for the first time during the week of May 26, 2013. These concentrations of CO₂ exceed by far the natural range over the last 650,000 years (180 to 300 ppm) as determined from ice cores.

Methane (CH4) is a colorless, odorless non-toxic gas consisting of molecules made up of four hydrogen atoms and one carbon atom. CH4 is combustible, and it is the main constituent of natural gas-a fossil fuel.



CH₄ is released when organic matter decomposes in low oxygen environments. Natural sources include wetlands, swamps and marshes, termites, and oceans. Human sources include the mining of fossil fuels and transportation of natural gas, digestive processes in ruminant animals such as cattle, rice paddies and the buried waste in landfills. Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH₄. Other anthropogenic sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide (N₂O) is a colorless, non-flammable gas with a sweetish odor, commonly known as "laughing gas", and sometimes used as an anesthetic. N₂O is naturally produced in the oceans and in rainforests. Man-made sources of N₂O include the use of fertilizers in agriculture, nylon and nitric acid production, cars with catalytic converters and the burning of organic matter. Concentrations of N₂O also began to rise at the beginning of the industrial revolution.

Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH₄ or ethane with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically un-reactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source but were first synthesized in 1928. It was used for refrigerants, aerosol propellants, and cleaning solvents. Because of the discovery that they are able to destroy stratospheric ozone, an ongoing global effort to halt their production was undertaken and has been extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons (HFCs) are synthesized chemicals that are used as a substitute for CFCs. Out of all of the GHGs; HFCs are one of three groups with the highest GWP. HFCs are synthesized for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur Hexafluoride (SF₆) is an extremely potent greenhouse gas. SF₆ is very persistent, with an atmospheric lifetime of more than a thousand years. Thus, a relatively small amount of SF₆ can have a significant long-term impact on global climate change. SF₆ is human-made, and the primary user of SF₆ is the electric power industry. Because of its inertness and dielectric properties, it is the industry's preferred gas for electrical insulation, current interruption, and arc quenching (to prevent fires) in the transmission and distribution of electricity. SF₆ is used extensively in high voltage circuit breakers and switchgear, and in the magnesium metal casting industry.

The State of California GHG Inventory performed by the California Air Resources Board (CARB), compiled statewide anthropogenic GHG emissions and sinks. It includes estimates for CO_2 , CH_4 , N_2O , SF_6 , HFCs, and PFCs. The current inventory covers the years 2000 to 2013, and is summarized in Table 4.7-1. Data sources used to calculate this GHG inventory include California and Federal agencies, international organizations, and industry associations. The calculation methodologies are consistent with guidance from the IPCC. The 2000 emissions level is the sum total of sources from all sectors and categories in the inventory. The inventory is divided into seven broad sectors and categories in the inventory. These sectors include: agriculture, commercial and residential, electric power, industrial, transportation, recycling and waste, and high global warming potential (GWP) gases.

When accounting for GHGs, all types of GHG emissions are expressed in terms of CO_2 equivalents (CO_2e) and are typically quantified in metric tons (MT) or millions of metric tons (MMT).



Sector	Total 2000 Emissions (MMTCO ₂ e) ¹	Total 2013 Emissions (MMTCO ₂ e)
Agriculture	32.10	36.21
Commercial and Residential	43.18	43.54
Electric Power	104.85	90.45
Industrial	97.87	92.68
Transportation	176.08	169.02
Recycling and Waste	7.45	8.87
High GWP Gases	7.24	18.50

Source: CARB 2015

Note: MMTCO₂e = million metric tons of CO₂ equivalent.

GHGs have varying GWP. The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas. The reference gas for GWP is CO_2 ; therefore, CO_2 has a GWP of 1. The other main GHGs that have been attributed to human activity include CH_4 , which has a GWP of 21, and N_2O , which has a GWP of 310.

4.7.1.1 Regulatory Setting

On a national scale, federal agencies are addressing emissions of GHGs by reductions mandated in federal laws and Executive Orders, most recently, Executive Order 13423 Strengthening Federal Environmental, Energy, and Transportation Management (January 24, 2007) was enacted. Several states have promulgated laws as a means to reduce statewide levels of GHG emissions. In particular, the California Global Warming Solutions Act of 2006 directs the State of California to reduce statewide GHG emissions to 1990 levels by the year 2020.

Federal

Recent actions by the U.S. EPA have allowed for the regulation of GHGs. On April 17, 2009, the U.S. EPA issued its proposed endangerment finding for GHG emissions. On December 7, 2009, the U.S. EPA Administrator signed and finalized two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs: CO₂, CH₄, N₂O, HFCs, PFCs, and SF6 in the atmosphere threaten the public health and welfare of current and future generations.

Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action was a prerequisite to finalizing the U.S. EPA's proposed GHG emission standards for light-duty vehicles, which were jointly proposed by U.S. EPA and the Department of Transportation's National Highway Safety Administration on September 15, 2009 and adopted on April 1, 2010. As finalized in April 2010, the emissions standards rule for vehicles will improve average fuel economy standards to 35.5 miles per gallon by 2016. In addition, the rule will require model year 2016 vehicles to meet an estimated combined average emission level of 250 grams of CO_2 per mile.

On March 10, 2009, in response to the Fiscal Year 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110–161), the U.S. EPA proposed a rule that requires mandatory reporting of GHG emissions from large sources in the United States. On September 22, 2009, the Final Mandatory Reporting of Greenhouse Gases Rule was signed, and was published in the Federal Register on October 30, 2009.



The rule became effective on December 29, 2009. The rule will collect accurate and comprehensive emissions data to inform future policy decisions.

The U.S. EPA is requiring suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 MT or more per year of GHG emissions to submit annual reports to U.S. EPA. The gases covered by the proposed rule are CO_2 , CH_4 , N_2O , HFC, PFC, SF_6 , and other fluorinated gases, including nitrogen trifluoride (NF₃) and hydrofluorinated ethers (HFE).

State

California Code of Regulations Title 24. Although not originally intended to reduce GHG emissions, California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Energy efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in GHG emissions. Therefore, increased energy efficiency results in decreased GHG emissions.

California Assembly Bill 1493. California Assembly Bill (AB) 1493 enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB will apply to 2009 and later model year vehicles. CARB estimates that the regulation will reduce climate change emissions from light duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030. The federal Corporate Average Fuel Economy (CAFE) standard determines the fuel efficiency of certain vehicle classes in the United States. In 2007, as part of the Energy and Security Act of 2007, CAFE standards were increased for new light-duty vehicles to 35 miles per gallon by 2020.

Executive Order S-01-07. Executive Order S-01-07 was enacted by the Governor on January 18, 2007. Essentially, the order mandates the following: (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that a Low Carbon Fuel Standard ("LCFS") for transportation fuels be established for California. It is assumed that the effects of the LCFS would be a 10% reduction in GHG emissions from fuel use by 2020.

Executive Order S-3-05. Executive Order S-3-05, signed by Governor Schwarzenegger on June 1, 2005, calls for a reduction in GHG emissions to 1990 levels by 2020 and for an 80 percent reduction in GHG emissions by 2050. Executive Order S-3-05 also calls for the California EPA (CalEPA) to prepare biennial science reports on the potential impact of continued GCC on certain sectors of the California economy. The first of these reports, "Our Changing Climate: Assessing Risks to California," and its supporting document "Scenarios of Climate Change in California: An Overview" were published by the California Climate Change Center in 2006.

Assembly Bill 32, the California Global Warming Solutions Act of 2006. In September 2006, Governor Schwarzenegger signed California AB 32, the global warming bill, into law. AB 32 directs CARB to do the following:

- Make publicly available a list of discrete early action GHG emission reduction measures that can be implemented prior to the adoption of the statewide GHG limit and the measures required to achieve compliance with the statewide limit.
- Make publicly available a GHG inventory for the year 1990 and determine target levels for 2020.
- On or before January 1, 2010, adopt regulations to implement the early action GHG emission reduction measures.
- On or before January 1, 2011, adopt quantifiable, verifiable, and enforceable emission reduction measures by regulation that will achieve the statewide GHG emissions limit by 2020, to become operative on January 1, 2012, at the latest. The emission reduction measures may include direct



emission reduction measures, alternative compliance mechanisms, and potential monetary and nonmonetary incentives that reduce GHG emissions from any sources or categories of sources that ARB finds necessary to achieve the statewide GHG emissions limit.

- Monitor compliance with and enforce any emission reduction measure adopted pursuant to AB 32.
- CARB approved a 1990 GHG emissions level of 427 MTCO₂e, on December 6, 2007 in its Staff Report. Therefore, in 2020, emissions in California are required to be at or below 427 MTCO₂e. It was estimated that the 2020 estimated BAU of 596 MTCO₂e would have required a 28 percent reduction to reach the 1990 level of 427 MTCO₂e.

In response to the requirements of AB 32, the CARB released a Scoping Plan in 2008. This Scoping Plan, developed by CARB in coordination with the Climate Action Team (CAT), proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health. It was adopted by CARB in December 2008. According to the Scoping Plan, the 2020 target of 427 MTCO₂e requires the reduction of 169 MTCO₂e, or approximately 28.3 percent, from the State's projected 2020 BAU emissions level of 596 MTCO₂e.

In August 2011, the Scoping Plan was re-approved by the Board and includes the Final Supplement to the Scoping Plan Functional Equivalent Document. The 2011 Scoping Plan expands the list of nine Early Action Measures into a list of 39 Recommended Actions.

Senate Bill 97. Senate Bill 97, enacted in 2007, amends the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directs Office of Planning and Research (OPR) to develop draft CEQA Guidelines "for the mitigation of GHG emissions" or the effects of GHG emissions" by July 1, 2009, and directs the Resources Agency to certify and adopt the CEQA Guidelines by January 1, 2010.

On December 30, 2009, the Natural Resources Agency adopted amendments to the CEQA Guidelines in the California Code of Regulations. The amendments went into effect on March 18, 2010, and are summarized below:

- Climate action plans and other GHG reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the GHG emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. In addition, consideration of several qualitative factors may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. The Guidelines do not set or dictate specific thresholds of significance.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of GHG emissions in Appendix G of the CEQA Guidelines.
- The Guidelines are clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- The Guidelines promote the advantages of analyzing GHG impacts on an institutional, programmatic level, and therefore approve tiering of environmental analyses and highlights some benefits of such an approach.



• Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential, pursuant to Appendix F of the CEQA Guidelines.

Senate Bill 375. Senate Bill 375 requires that regions within the State which have a metropolitan planning organization must adopt a sustainable communities strategy as part of their regional transportation plans. The strategy must be designed to achieve certain goals for the reduction of GHG emissions. The bill finds that GHG from autos and light trucks can be substantially reduced by new vehicle technology, but even so, "it will be necessary to achieve significant additional GHG reductions from changed land use patterns and improved transportation. Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 provides that new CEQA provisions be enacted to encourage developers to submit applications and local governments to make land use decisions that will help the State achieve its goals under AB 32," and that "current planning models and analytical techniques used for making transportation infrastructure decisions and for air quality planning should be able to assess the effects of policy choices, such as residential development patterns, expanded transit service and accessibility, the walkability of communities, and the use of economic incentives and disincentives."

Senate Bill 1078, Senate Bill 107, and Executive Order S-14-08. SB 1078 initially set a target of 20 percent of energy to be sold from renewable sources by the year 2017. The schedule for implementation of the Renewables Portfolio Standard (RPS) was accelerated in 2006 with the Governor's signing of SB 107, which accelerated the 20 percent RPS goal from 2017 to 2010. On November 17, 2008, the Governor signed Executive Order S-14-08, which requires all retail sellers of electricity to serve 33 percent of their load with renewable energy by 2020.

Executive Order S-21-09. Executive Order S-21-09 was enacted by the Governor on September 15, 2009. Executive Order S-21-09 requires that the CARB, under its AB 32 authority, adopt a regulation by July 31, 2010 that sets a 33 percent renewable energy target as established in Executive Order S-14-08. Under Executive Order S-21-09, the CARB will work with the Public Utilities Commission (PUC) and California Energy Commission to encourage the creation and use of renewable energy sources, and will regulate all California utilities. The CARB will also consult with the Independent System Operator and other load balancing authorities on the impacts on reliability, renewable integration requirements, and interactions with wholesale power markets in carrying out the provisions of the Executive Order. The order requires the CARB to establish highest priority for those resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health.

Senate Bill X1-2. Senate Bill X1-2 was signed by Governor Brown, in April 2011. This new RPS preempts CARB's 33 percent Renewable Electricity Standard and applies to all electricity retailers in the state including publicly owned utilities (POUs), investor-owned utilities (IOUs), electricity service providers, and community choice aggregators. All of these entities must adopt the new RPS goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and the 33 percent requirement being met by the end of 2020. Renewable energy sources include wind, geothermal, and solar.

County of Imperial

Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the State CEQA Guidelines to provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and GCC impacts. Formal CEQA thresholds for lead agencies must always be established through a public hearing process. Imperial County has not established formal quantitative or qualitative thresholds through a public rulemaking process, but CEQA permits the lead agency to establish a project-specific threshold of significance if backed by substantial evidence, until such time as a formal threshold is approved.



4.7.1.2 Existing Conditions

GHGs are gases that trap heat in the atmosphere. These emissions occur from natural processes as well as human activities. The accumulation of GHGs in the atmosphere regulates the earth's temperature. Scientific evidence indicates a trend of increasing global temperature over the past century, which a number of scientists attribute to an increase in GHG emissions from human activities. Recent observed changes due to global warming include shrinking glaciers, thawing permafrost, a lengthened growing season, and shifts in plant and animal ranges (Intergovernmental Panel on Climate Change 2007). Generally accepted predictions of long-term environmental impacts due to global warming include sea level rise, changing weather patterns with increases in the severity of storms and droughts, changes to local and regional ecosystems including the potential loss of species, and a significant reduction in winter snow pack.

Human-caused sources of CO_2 include combustion of fossil fuels (coal, oil, natural gas, gasoline and wood). Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. Concentrations of CO_2 have increased in the atmosphere since the industrial revolution. CH_4 is the main component of natural gas and also arises naturally from anaerobic decay of organic matter. Human-caused sources of N₂O include combustion of fossil fuels and industrial processes such as nylon production and production of nitric acid. Other GHGs are present in trace amounts in the atmosphere and are generated from various industrial or other uses. GHGs present in the project study areas primarily include CO_2 and N₂O from farm equipment and local traffic.

The California Climate Change Center (CCCC) used a range of emissions scenarios developed by the IPCC to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the 21st century. Three warming ranges were identified: Lower warming range (3.0 to 5.5° F); medium warming range (5.5 to 8.0° F); and higher warming range (8.0 to 10.5° F). The CCCC also presents an analysis of the future projected climate changes in California under each warming range scenario (CCCC 2006).

According to CCCC, substantial temperature increases would result in a variety of impacts to the people, economy, and environment of California. These impacts would result from a projected increase in extreme conditions, with the severity of the impacts depending upon actual future emissions of GHGs and associated warming. These impacts are described below.

Public Health. Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to O_3 formation are projected to increase by 25 to 35 percent under the lower warming range and 75 to 85 percent under the medium warming range. In addition, if global background O_3 levels increase as is predicted in some scenarios, it may become impossible to meet local air quality standards. An increase in wildfires could also occur, and the corresponding increase in the release of pollutants including $PM_{2.5}$ could further compromise air quality. The Climate Scenarios report indicates that large wildfires could become up to 55 percent more frequent of GHG emissions are not significantly reduced.

Potential health effects from global climate change may arise from temperature increases, climatesensitive diseases, extreme events, and air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and less extreme cold spells. Those living in warmer climates are likely to experience more stress and heat-related problems (e.g., heat rash and heat stroke). In addition, climate sensitive diseases (such as malaria, dengue fever, yellow fever, and encephalitis) may increase, such as those spread by mosquitoes and other disease-carrying insects.

Water Resources. A vast network of reservoirs and aqueducts capture and transport water throughout the State from Northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada mountain snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages. In addition, if temperatures continue to rise



more precipitation would fall as rain instead of snow, further reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. The State's water resources are also at risk from rising sea levels. An influx of seawater would degrade California's estuaries, wetlands, and groundwater aguifers.

Increased GHG and associated increases in temperature are expected to cause Agriculture. widespread changes to the agricultural industry, reducing the guantity and guality of agricultural products statewide. Significant reductions in available water supply to support agriculture would also impact production. Crop growth and development will change as will the intensity and frequency of pests and diseases.

Ecosystems/Habitats. Continued global warming will likely shift the ranges of existing invasive plants and weeds, thus alternating competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Continued global warming is also likely to increase the populations of and types of pests. Continued global warming would also affect natural ecosystems and biological habitats throughout the State.

Wildland Fires. Global warming is expected to increase the risk of wildfire and alter the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the State.

Rising Sea Levels. Rising sea levels, more intense coastal storms, and warmer water temperatures will increasing threaten the State's coastal regions. Under the high warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. A sea level risk of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten levees and inland water systems, and disrupt wetlands and natural habitats.

4.7.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to GHGs, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance 4.7.2.1

Based on CEQA Guidelines Appendix G, project impacts related to GHGs are considered significant if any of the following occur:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the • environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

As discussed in Section 15064.4 of the CEQA Guidelines, the determination of the significance of GHG emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

1) Use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead


agency should explain the limitations of the particular model or methodology selected for use; and/or

2) Rely on a qualitative analysis or performance based standards.

A lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

- 1) The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
- 2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
- 3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Different agencies and studies estimate different goals for reduction of emissions to achieve 1990 levels by the year 2020, as set forth in AB 32. Some agencies have estimated a reduction of 28 to 29 percent, based on the ARB's analysis that statewide 2020 business as usual GHG emissions would be 596 MMT CO_2e , with 1990 emissions of 427 MMTCO₂e, for a reduction of 28.35 percent (ARB 2010).

The Air Quality/Greenhouse Gas Report prepared by OB-1 Air Analyses (Appendix D of this EIR) proposes the use of the "Tier 3" quantitative thresholds for residential and commercial projects as recommended by the South Coast Air Quality Management District (SCAQMD). The SCAQMD proposes that if a project generates GHG emissions below 3,000 tonnes of carbon dioxide equivalents (tCO₂e), it could be concluded that the project's GHG contribution is not cumulatively considerable and is therefore considered less than significant under CEQA. If the project generates GHG emissions above the threshold, the analysis must identify mitigation measures to reduce GHG emissions.

4.7.2.2 Methodology

Projects that meet the criteria for conducting a climate change analysis are required to conduct a GHG inventory and disclose GHG emissions associated with project implementation and operation under business as usual conditions. Business as usual is defined as the emissions that would have occurred in the absence of reductions mandated under AB 32.

The main source of GHG emissions associated with the projects would be combustion of fossil fuels during construction of the projects. Emissions of GHGs were calculated using the same approach as emissions for overall construction emissions discussed in Chapter 4.3, Air Quality of this EIR. Emission calculations are provided in the Air Quality/Greenhouse Gas Report in Appendix D of this EIR. The potential effects of proposed GHG emissions are by nature global, and have cumulative impacts. As individual sources, GHG emissions are not large enough to have an appreciable effect on climate change. Therefore, the impact of proposed GHG emissions to climate change is discussed in the context of cumulative impacts.



4.7.2.3 Impact Analysis

IMPACTGenerate Greenhouse Gas Emissions, either Directly or Indirectly, that may have a4.7-1Significant Impact on the Environment.

Construction of the projects would result in a temporary increase in GHG emissions.

Dixieland East Solar Farm and Dixieland West Solar Farm

During construction, GHG emissions would be generated from operation of both on-road and off-road equipment. Using the methods developed by the SCAQMD when comparing to their adopted GHG thresholds, GHGs are quantified as the sum of annual operational GHG emissions and total construction GHG emissions amortized over 30 years. As shown in Table 4.7-2, the amortized construction emissions for the proposed projects would be 27 tCO2e. During operations, GHG emissions would be limited to vehicle trips associated with routine maintenance and monitoring activities at the project sites. As shown in Table 4.7-2, operational emissions for the proposed projects would be 18 tCO₂e per year. The amortized construction plus annual operation for the proposed projects would be 45 tCO₂e per year. The proposed projects' CO₂ emissions would not exceed SCAQMD's threshold of 3,000 tCO₂e. Therefore, a less than significant impact is identified. A similar scenario would occur during the decommissioning and site restoration stage for each of the projects. GHG emissions would be similar to or less than the emissions presented for construction. Although the proposed projects would not exceed SCAQMD's threshold, consistent with the intent of AB 32, the proposed projects should demonstrate that policies are in place that would assist in providing a statewide reduction in CO₂ emissions. Therefore, GHG offset measures are included as Mitigation Measures GHG-1 and GHG-2 to provide additional reduction strategies to further improve air guality and reduce GHG emissions.

The proposed projects would be a renewable source of energy that could displace electricity generated by fossil fuel combustion and provide low-GHG electricity to consumers. Of the potential fossil fuels typically used for power generation, natural gas is one of the cleanest. To provide a conservative estimate, the Air Quality/Greenhouse Gas Report prepared for the projects, estimated emissions that would be generated from an equivalent amount of energy by natural gas generators to estimate the reduction in GHG emissions by electricity displacement by assuming that the solar power displaces electricity generated by dispatchable natural-gas fired combined-cycle power plants and that the projects have a capacity factor of 26 percent. Approximately 5 MW generated by the proposed projects would displace 4,258 tCO₂e per year.

Phase	Source	tCO₂e per year
Construction	DESF	366.4
	DWSF	451.4
	SEPV Project Construction Total	818.0
	Amortized over 30 years	27.0
Operation	DESF	9.0
	DWSF	9.0
	SEPV Project Operational Total	18.0
Total Annual Emissions		45.0
Annually Displaced Emissions		(4,258)
Net Project GHG Emissions		(4,213)

TABLE 4.7-2. SUMMARY OF	CONSTRUCTION AND	O PERATIONAL	CO ₂ Emissions
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Source: OB-1 Air Analyses 2015.

Mitigation Measure(s)

The following mitigation measures are required for DESF and DWSF.



GHG-1 Diesel Equipment (Compression Ignition) Offset Strategies

- a. Use electricity from power poles rather than temporary diesel power generators.
- b. Construction equipment operating on-site should be equipped with two to four degree engine timing retard or precombustion chamber engines.
- c. Construction equipment used for the project should utilize EPA Tier 2 or better engine technology (requirement under Mitigation Measure AQ-1 as described in Chapter 4.3, Air Quality of this EIR).

GHG-2 Vehicular Trip (Spark Ignition) Offset Strategies

- a. Encourage commute alternatives by informing construction employees and customers about transportation options for reaching your location (i.e., post transit schedules/routes).
- b. Help construction employees "ride share" by posting commuter ride sign-up sheets, employee home, zip code, map, etc.
- c. When possible, arrange for single construction vendor who makes deliveries for several items.
- d. Plan construction delivery routes to eliminate unnecessary trips.
- e. Keep construction vehicles well maintained to prevent leaks and minimize emissions.

Significance After Mitigation

Although the proposed projects would not exceed SCAQMD's threshold, Mitigation Measures GHG-1 and GHG-2 would provide additional reduction strategies to further improve air quality and reduce GHG emissions. Implementation of Mitigation Measure GHG-1 would reduce emissions by 40-60 percent. Mitigation Measure GHG-2 would reduce emissions by 30-70 percent. A **less than significant** impact is identified. Additionally, project construction would adhere to Mitigation Measures AQ-1 and AQ-2 outlined in Chapter 4.3, Air Quality of this EIR, further reducing GHG emissions.

IMPACT Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing 4.7-2 the Emissions of Greenhouse Gases.

The projects would generate additional solar power in order to meet the state of California's goals for the Renewable Portfolio Standard, which has been identified by the state as a means of meeting the goals of AB 32 to reduce emissions to 1990 levels by the year 2020. Therefore, the projects would not conflict with applicable plans, policies, or regulations.

Dixieland East Solar Farm and Dixieland West Solar Farm

As discussed in Impact 4.7-1, the projects would generate a relatively small amount of GHG emissions. One of the critical complementary measures directed at emission sources that are included in the capand-trade program is the RPS, which places an obligation on electricity supply companies to produce 33 percent of their electricity from renewable energy sources by 2020. A key prerequisite to reaching the target would be to provide sufficient electric transmission lines to renewable resource zones and system changes to allow integration of large quantities of intermittent wind and solar generation. The projects would help the State meet this goal by generating up to 5 MW of power to California's current renewable portfolio. Therefore, the projects would help the state meet its goal under AB 32. The projects would therefore not conflict with the goals of AB 32 in reducing emissions of GHG. Neither the County of Imperial or ICAPCD have any specific plans, policies, nor regulations adopted for reducing the emissions of GHGs. However, since the long-term, operational GHG emissions are minimal and the construction emissions are short-term, the proposed projects would not conflict with any applicable plan, policy, or regulation adopted for reducing the emissions of GHGs. A **less than significant impact** is identified.



Mitigation Measure(s)

No mitigation measures are required.

4.7.3 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Similar to construction activities, decommissioning and restoration of the project sites would result in CO2e emissions below allowable thresholds. Although the proposed projects would not exceed SCAQMD's threshold, consistent with the intent of AB 32, the proposed projects should demonstrate that policies are in place that would assist in providing a statewide reduction in CO₂ emissions. Mitigation Measures GHG-1 and GHG-2 would provide additional reduction strategies to further improve air quality and reduce GHG emissions. Additionally, construction activities during decommissioning and restoration would adhere to Mitigation Measures AQ-1 and AQ-2 outlined in Chapter 4.3, Air Quality of this EIR, further reducing GHG emissions. Therefore, impacts are considered **less than significant**.

Residual

Mitigation Measures GHG-1, GHG-2, AQ-1 and AQ-2 would further the assist the proposed projects' consistency with the intent of AB 32. As described in this section, the projects do not result in significant GHG emissions impacts. Mitigation Measures GHG-1 and GHG-2 have been added to provide additional reduction strategies to further improve air quality and reduce GHG emissions, even though a significant impact was not identified. Operation of the projects, subject to the provision of a conditional use permit (CUP), would generally be consistent with AB 32. Based on these circumstances, the projects would not result in any residual significant and unavoidable impacts with regards to global climate change.



4.8 HAZARDS AND HAZARDOUS MATERIALS

Information contained in this section is summarized from the Phase I Environmental Site Assessment (Phase I ESA) Report Dixieland East Solar Project (April 2015) and Phase I Environmental Site Assessment (Phase I ESA) Report Dixieland West Solar Project (April 2015), prepared by GS Lyon Consultants, Inc. (GS Lyon). The Phase I ESAs prepared for the projects sites were used to assess the potential hazards and hazardous materials found on-site or adjacent to the project sites. These documents are included in Appendix H of this Environmental Impact Report (EIR). This section addresses potential hazards and hazardous materials for construction and operational impacts.

4.8.1 Environmental Setting

The project area is located in an agriculturally zoned area of Imperial County. However, the project sites and surrounding area (west of the canal) have not been actively cultivated as agricultural land within recent years. The potential for an accident is increased in regions near major arterial roadways or railways that transport hazardous materials and in regions with agricultural or industrial facilities that use, store, handle, or dispose of hazardous materials.

Historical Review

Environmental Data Research, Inc. (EDR) of Shelton, Connecticut was contracted by GS Lyon to complete a database search of federal, state, local, and tribal environmental records containing information regarding hazardous materials occurrences on or within a one-mile radius of the project sites. Included in the EDR report were historical topographic maps, historical aerial photographs, historical telephone, and city directories. The historical data was reviewed to evaluate potentially adverse environmental conditions resulting from previous ownership, and land uses associated with the project sites. Additionally, state and federal regulatory lists containing information regarding hazardous materials on or within a one-mile radius (buffer zone) of the project sites were reviewed. Results of the background review are presented in the Phase I ESAs prepared by GS Lyon (Appendix H).

Dixieland East Solar Farm

According to the historic aerial photographs (1949, 1953 and 1978), the project site was undeveloped desert land until 1984. The 1984 aerial photograph shows the site being utilized as an agricultural field, now out of production. It is unknown how long the site was used for agricultural purposes and no aerial photographs were found to show the site in agricultural production. From 1984 to present the site was out of agricultural production and native desert plant inhabited the site. To the west of the DESF, the Imperial Irrigation District (IID) substation can be seen from 1949 to present. The Centinela State Prison located north of the site was built in approximately 1989. No building structures within the site have been documented.

Due to the rural developed nature of the sites and vicinity, the Sanborn fire maps did not cover the project site. No additional information was obtained from the 1975 and 1976 USGS 7.5 Min. Plaster City, CA Quadrangle topographic maps.

Dixieland West Solar Farm

According to historic aerial photographs (1949, 1953, 1978, 1984, 1996, 2002, 2006 and 2010), the project site was undeveloped land. As previously described, the IID substation to east of the project has been observed since 1949.

Due to the rural developed nature of the sites and vicinity, the Sanborn fire maps did not cover the project site. No additional information was obtained from the 1975 and 1976 USGS 7.5 Min. Plaster City, CA Quadrangle topographic maps.



Site Reconnaissance

A visual site reconnaissance was conducted within the project area by GS Lyon on, April 7, 2015. The site visit consisted of visual observations of surficial conditions at the site and observation of adjoining properties to the extent that they were visible from public areas. Additionally, the reconnaissance also included site observations for the potential hazardous materials/waste and petroleum product use, storage, disposal, or accidental release, including the following: presence of tank and drum storage; mechanical or electrical equipment likely to contain liquids; evidence of soil or pavement staining or stressed vegetation; ponds, pits, lagoons, or sumps; suspicious odors; fill and depressions; or any other condition indicative of potential contamination.

4.8.1.1 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the projects.

4.8.1.1.1 Federal

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over 5 years, \$1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified.

Emergency Planning Community Right-to-Know Act of 1986 (42 USC 11001 et seq.)

The Emergency Planning Community Right-to-Know Act (EPCRA) was included under the Superfund Amendments and Reauthorization Act (SARA) law and is commonly referred to as SARA Title III. EPCRA was passed in response to concerns regarding the environmental and safety hazards posed by the storage and handling of toxic chemicals. These concerns were triggered by the disaster in Bhopal, India, in which more than 2,000 people suffered death or serious injury from the accidental release of methyl isocyanate. To reduce the likelihood of such a disaster in the U.S., Congress imposed requirements on both states and regulated facilities. EPCRA establishes requirements for federal, state, and local governments, Indian Tribes, and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. SARA Title III requires states and local emergency planning groups to develop community emergency response plans for protection from a list of Extremely Hazardous Substances (40 CFR 355). The Community Right-to-Know provisions help increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. In California, SARA Title III is implemented through the California Accidental Release Prevention (CalARP).

Federal Insecticide, Fungicide and Rodenticide Act

The objective of Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) is to provide federal control of pesticide distribution, sale, and use. All pesticides used in the United States must be registered (licensed) by EPA. Registration assures that pesticides will be properly labeled and that, if used in accordance with specifications, they will not cause unreasonable harm to the environment. Use of each registered pesticide must be consistent with use directions contained on the label or labeling.



Federal Water Pollution Control Act (Clean Water Act)

The objective of the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA), is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. The Oil Spill Prevention, Control, and Countermeasures (SPCC) Program of the CWA specifically seeks to prevent oil discharges from reaching waters of the United States or adjoining shorelines. Further, farms are subject to the SPCC rule if they:

- Store, transfer, use, or consume oil or oil products, and
- Could reasonably be expected to discharge oil to waters of the United States or adjoining shorelines. Farms that meet these criteria are subject to the SPCC rule if they meet at least one of the following capacity thresholds:
 - Aboveground oil storage capacity greater than 1,320 gallons, or
 - Completely buried oil storage capacity greater than 42,000 gallons.

However, the following are exemptions to the SPCC rule:

- Completely buried storage tanks subject to all the technical requirements of the underground storage tank regulations.
- Containers with a storage capacity less than 55 gallons of oil.
- Wastewater treatment facilities.
- Permanently closed containers.
- Motive power containers (e.g., automotive or truck fuel tanks).

Hazardous Materials Transport Act – Code of Federal Regulations

The Hazardous Materials Transportation Act was published in 1975. Its primary objective is to provide adequate protection against the risks to life and property inherent in the transportation of hazardous material in commerce by improving the regulatory and enforcement authority of the Secretary of Transportation. A hazardous material, as defined by the Secretary of Transportation is, any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property." (EPA 2011)

Occupational Safety and Health Administration

Occupational Safety and Health Administration's (OSHA) mission is to ensure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA standards are listed in 29 CFR Part 1910.

The OHSA Process Safety Management of Highly Hazardous Chemicals (29 CFR Part 110.119) is intended to prevent or minimize the consequences of a catastrophic release of toxic, reactive, flammable, or explosive highly hazardous chemicals by regulating their use, storage, manufacturing, and handling. The standard intends to accomplish its goal by requiring a comprehensive management program integrating technologies, procedures, and management practices.



Resource Conservation and Recovery Act

The goal of the Federal Resource Conservation and Recovery Act (RCRA), a federal statute passed in 1976, is the protection of human health and the environment, the reduction of waste, the conservation of energy and natural resources, and the elimination of the generation of hazardous waste as expeditiously as possible. The Hazardous and Solid Waste Amendments (HSWA) of 1984 significantly expanded the scope of RCRA by adding new corrective action requirements, land disposal restrictions, and technical requirements. The corresponding regulations in 40 CFR 260-299 provide the general framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste.

4.8.1.1.2 State

California Department of Conservation, Division of Oil, Gas, and Geothermal Resources

The Division of Oil, Gas, and Geothermal Resources (DOGGR) was formed in 1915 to address the needs of the state, local governments, and industry by regulating statewide oil and gas activities with uniform laws and regulations. The Division supervises the drilling, operation, maintenance, and plugging and abandonment of onshore and offshore oil, gas, and geothermal wells, preventing damage to: (1) life, health, property, and natural resources; (2) underground and surface waters suitable for irrigation or domestic use; and (3) oil, gas, and geothermal reservoirs. The Division's programs include: well permitting and testing; safety inspections; oversight of production and injection projects; environmental lease inspections; idle-well testing; inspecting oilfield tanks, pipelines, and sumps; hazardous and orphan well plugging and abandonment contracts; and subsidence monitoring.

California Department of Toxic Substances Control

Each year, Californians generate two million tons of hazardous waste. One hundred thousand privatelyand publicly-owned facilities generate one or more of the 800-plus wastes considered hazardous under California law. Properly handling these wastes avoids threats to public health and degradation of the environment.

The Department of Toxic Substances Control (DTSC) regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. Approximately 1,000 scientists, engineers, and specialized support staff make sure that companies and individuals handle, transport, store, treat, dispose of, and clean-up hazardous wastes appropriately. Through these measures, DTSC contributes to greater safety for all Californians, and less hazardous waste reaches the environment.

On January 1, 2003, the Registered Environmental Assessor (REA) program joined DTSC. The REA program certifies environmental experts and specialists as being qualified to perform a number of environmental assessment activities. Those activities include private site management, Phase I Environmental Site Assessments, risk assessment and more.

California Division of Occupational Safety and Health

The California Division of Occupational Safety and Health (Cal-OSHA) protects workers and the public from safety hazards through its Cal-OSHA programs and provides consultative assistance to employers. Cal-OSHA issues permits, provides employee training workshops, conducts inspections of facilities, investigates health and safety complaints, and develops and enforces employer health and safety policies and procedures.



California Environmental Protection Agency

The California Environmental Protection Agency (Cal-EPA) and the State Water Resources Control Board (SWRCB) establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable state and local laws include the following:

- Public Safety/Fire Regulations/Building Codes
- Hazardous Waste Control Law
- Hazardous Substances Information and Training Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act
- Porter-Cologne Water Quality Control Act

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law.

California Emergency Response Plan

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government and private agencies. Response to hazardous materials incidents is one part of this plan. The plan is managed by the State Office of Emergency Services, which coordinates the responses of other agencies including Cal-EPA, the California Highway Patrol, the California Department of Fish and Wildlife, the Regional Water Quality Control Board (RWQCB), Imperial County Sheriff's Department, Imperial County Fire Department (ICFD), and the City of Imperial Police Department.

4.8.1.1.3 Local

Imperial County General Plan

The Seismic and Public Safety Element identifies goals and policies that will minimize the risks associated with natural and human-made hazards, and specify the land use planning procedures that should be implemented to avoid hazardous situations. The purpose of the Seismic and Public Safety Element is directly concerned with reducing the loss of life, injury, and property damage that might result from disaster or accident. In addition, the Element specifies land use planning procedures that should be implemented to avoid hazardous situations. The policies listed in the Seismic and Public Safety Element are not applicable to the proposed project, as they address human occupancy development. The proposed project is a solar project and does not propose residential uses.

Imperial County Public Health Department

Hazardous Materials and Medical Waste Management

DTSC was appointed the Certified Unified Program Agency (CUPA) for Imperial County in January 2005. The Unified Program is the consolidation of six state environmental programs into one program under the authority of a Certified Unified Program Agency. The CUPA inspects businesses or facilities that handle or store hazardous materials; generate hazardous waste; own or operate ASTs or USTs; and comply with the CalARP Program. The CUPA Program is instrumental in accomplishing this goal through education, community and industry outreach, inspections and enforcement.



4.8.1.2 Existing Conditions

Dixieland East Solar Farm and Dixieland West Solar Farm

The project sites are composed of agriculturally zoned land encompassing approximate 53 acres total. Between 1979 and 1984, the DESF site was used as agricultural production. It is unknown when the production ceased. DWSF is desert land with no signs of past uses on-site. Additionally no buildings were observed on either site. Currently both project sites are vacant.

Residential Areas

Surrounding land uses consist of vacant desert land with rural lots, agriculture, and approximately 31 residences. The nearest sensitive receptor is located 175 feet (between the project sites) from the nearest project boundary. A total of eight residences are located approximately east of the projects across the Westside Main Canal, with the nearest located 350 feet from the nearest construction area. Two residences are located approximately 350 feet south of the project sites. A residential development (Imperial Lakes Water Ski Community) is located west of DWSF that has a SPA zoning designation which includes 20 residences (mobile homes), and is zoned recreational. The eastern boundary of the SPA is approximately 1,500 feet from the DWSF western boundary.

Drainage Features

Drainage features have been observed within the DESF site. DESF is separated to the north and south by a concrete lined irrigation ditch that runs along the elevated embankment from the Westside Main Canal to the west of the property. According to the pattern on the soil surface, evidence of past agricultural use are visible south of the ditch. At the east end of the ditch, a set of pumps and electrical transformer feed a 12 inch diameter PVC pressurized water line to the Imperial Lakes Water Ski Community, 1,500 feet from the DWSF western boundary

4.8.1.2 Existing Environmental Hazards

Underground and Aboveground Storage Tanks, Drums, or Containers

No USTs and ASTs were observed within the project sites during the site reconnaissance conducted by GS Lyon. No drums or storage containers, nor any open or damaged containers containing unidentified substances were observed at the subject site (DESF).

Surface Staining

No evidence of stained soil or pavement was noted on the properties (DESF). DESF has the potential for hydro carbon due to the machinery use associated with the land during agriculture use sometime between 1978 and 1984. In addition, hydrocarbons can migrate from on-road mobile sources and non-road mobile sources. Typical non-road mobile sources of hydrocarbon are primarily gasoline equipment or diesel equipment. Hydrocarbons are a precursor to ground-level ozone, a serious air pollutant. A key component of smog, ground-level ozone is formed by reactions involving hydrocarbons and nitrogen oxides in the presence of sunlight.

Sewer/Water

No septic systems were observed on the properties. The DESF site is separated to the north and south by a concrete lined irrigation ditch that runs along an elevated embankment from the Westside Main Canal to the west side of the property. A set of water pumps and electrical transformer is located at the east end of the concrete lined ditch. The pumps no longer supply water to the ditch, but feed a 12 inch diameter PVC pressurized water line that supplies water to the Imperial Lakes Water Ski Community, 1,500 feet from the DWSF western boundary.



Groundwater and Wells

Ground water in the site area is brackish and is estimated to be at depth of 10-15 feet below the ground surface for the DESF site. Ground water depth for DWSF is estimated to be 25-30 feet below the ground surface. Depth to the groundwater may fluctuate due to geologic and weather conditions, and construction practices in the region. Based on the regional topography, groundwater flow is assumed to be generally towards the west within the DESF and to the east within DWSF.

Electromagnetic Fields

Electric and magnetic fields (EMF) are areas of energy that surround any electrical device. Power lines, electrical wiring, computers, televisions, hair dryers, household appliances and everything else that uses electricity are sources of EMF. The magnetic field is not blocked by buildings so outdoor sources like power lines can add to the EMF inside your home. However, the field decreases rapidly with distance so that most homes are too far from high voltage lines to matter.

The nearest residences to the DESF site are east of the canal along Foxglove Street, and in a trailer located at the northwest corner of the West Evan Hewes Highway and Canal Street. Another single family residence adjacent to DESF is approximately 120 feet west of the western edge of the site, adjacent to the IID substation. Approximately 1,500 feet west of DWSF is the Imperial Lakes Water Ski Community which includes 20 residences surrounding two man-made lakes. However, less than 30% of the total area for each site will be developed. The California Department of Health Services (DHS), California Electric and Magnetic Fields Program provides information regarding known possible health effects from EMF created by the use of electricity. DHS references the National EMF Research and Public Information Dissemination Program, established by Congress as part the Energy Policy Act of 1992, which has published its findings concluding evidence of the risk of cancer from EMF around power lines is weak. The report recognizes that EMF exposure "cannot be recognized as entirely safe" but "believes that the probability that EMF exposure is truly a health hazard is currently small" with "marginal scientific support that exposure to this agent is causing any degree of harm. Furthermore, in a recent California Public Utilities Commission (CPUC) issued Decision D.06-01-042, the CPUC stated "at this time we are unable to determine whether there is a significant scientifically verifiable relationship between EMF exposure and negative health consequences." Therefore, any potential health risk associated with EMF is considered low.

Pursuant to California Environmental Quality Act (CEQA) Guideline 15145 "If, after a thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the lead agency should note its conclusion and terminate discussion of the impact." Because there are no conclusive studies on EMF impacts, it is too speculative to evaluate further in this EIR.

4.8.1.2.3 Hazardous Building Materials and Pesticides

Hazardous building materials and pesticides are associated with any older buildings due to their age and the agricultural land uses. As shown in Figure 4.3-1, there are a total of two single family residences adjacent to the DESF site, and 20 residences located within the Imperial Lakes Water Ski Community located approximately 1,500 feet from the DWSF western boundary. Within the DESF site, north of the concrete lined ditch, old barb wire and wood post fencing likely to have been used for livestock containment were observed; however no buildings associated with agricultural use have been observed on either site. Due to lack of development of the projects sites, GS Lyon found that the risk levels of asbestos and/or lead was low.

Asbestos

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals mined for their useful properties, such as thermal insulation, chemical and thermal stability, and high tensile strength. Asbestos is made up of microscopic bundles of fibers that may become airborne when asbestos-containing materials are damaged or disturbed. When these fibers get into the air they may be inhaled



into the lungs, where they can cause significant health problems. The Cal-OSHA defines asbestos containing materials as any material that contains 0.1 percent asbestos by weight. Asbestos is commonly found in old buildings built between the 1940s and the mid-1970s.

Buildings on agricultural establishments and agribusinesses may contain asbestos or ACMs. Used for insulation and as a fire retardant, asbestos and ACMs can be found in a variety of building construction materials, including pipe and furnace insulation materials, asbestos shingles, millboard, textured paint and other coating materials, and floor tiles. Asbestos may also be found in vehicle brakes. Buildings built in the 1960s are more likely to have asbestos-containing sprayed- or troweled-on friable materials than other buildings (EPA 2012). Given the absence/lack of development of the projects sties, the risk levels of asbestos are low.

Pesticides and Herbicides

Dichlorodiphenyltrichloroethane/Dichlorodiphenyldichloroethylene (DDT/DDE) and Dichlorodiphenyldichloroethane (DDD) (a degradation byproduct of DDT) was developed as the first of the modern synthetic insecticides in the 1940s. It was initially used with great effect to combat malaria, typhus, and the other insect-borne human diseases among both military and civilian populations and for insect control in crop and livestock production, institutions, homes, and gardens. DDT's quick success as a pesticide and broad use in the United States and other countries led to the development of resistance by many insect pest species (EPA 2012). Initially, DDT was regulated by the US Department of Agriculture from the late 1950s to the 1960s. The EPA was formed in 1970 and subsequent regulatory responsibility of DDT was transferred over. Although the EPA issued a cancellation order in 1972 for DDT, due to its ability to accumulate in fatty tissue and it's persistence in the environment, residues of concern from historical use still remain (EPA 2012). DDT and its byproducts bind strongly to soils and as a result, can remain in some soils for a long time, potentially hundreds of years. The length of time that DDT will last in soil depends on many factors including temperature, type of soil, and moisture content of soil. DDT persists for a much shorter time in tropical environments where chemical evaporation and microorganism degradation are accelerated. Additionally, DDT will persist for a much shorter length of time in areas where soils are routinely flooded or are moist than where soils are arid (Agency for Toxic Substances and Disease Registry 2002). Because DDT binds to soils, there's a potential for it to enter into lakes and rivers through runoff. However, although DDT or its breakdown products are still present in some air, water, and soil samples, levels in most air and water samples are presently so low that exposure is of little concern.

Based on historical information, DESF was observed to have an agricultural field for a brief period between 1978 and 1984, it is unknown how long the site was used for agricultural use and no aerial photographs could be found showing the site being in agricultural production. The predominant agriculture cultivated with DESF is also unknown. However, pesticides/herbicides typically used for farming in the Imperial Valley are likely to have been used during this time period. Although many agricultural fields are burned after crop removal (wheat stubble, asparagus, etc.) pesticide residue can still be found in soils. In addition, pesticides may be present in the soils within the project sites, the concentrations of pesticide residue levels typically found withi agricultural soils are less than 25 percent of USEPA prelimnary remdiation goals (PRGs). Historical records did not reveal development or use of the DWSF site for agriculture production.

Lead

Lead is a highly toxic metal that was used until the late 1970s in a number of products, most notably paint. Lead may cause a range of health effects, from behavioral problems and learning disabilities to seizures and death. Primary sources of lead exposure are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated soil. Lead contamination can also come from cars built prior to the early 1980s.



Lead-based paint on an agricultural establishment or agribusiness farm will typically be found on interiors and exteriors of buildings constructed before 1978. During renovation and demolition, paint removal has the potential to impact human health and the environment as fibers, dust, and paint chips are released. Paint chips and dust can cause indoor air contamination during renovation and soil contamination from demolition or improper disposal (EPA 2012). Given the absence/lack of development of the projects sties, the risk levels of lead are low.

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) were manufactured from 1932 until the manufacture of the product was banned in 1978. Because of its versatility (non-flammability, chemical stability, high boiling point, and electrical insulation properties), PCBs were used in various industrial and commercial applications: electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other industrial applications (EPA 2012). Although no longer used in the US, there is the potential for PCBs to be found electrical transformers manufactured before 1979.

Pole-mounted sealed transformers owned and maintained by the IID are located on the project sites. The IID has replaced all transformers that contained PCBs. No evidence of leakage from the transformers within the boundaries of the project sites was observed by GS Lyon.

4.8.1.2.4 Environmental Database Research

Environmental Data Research, Inc. (EDR) of Shelton, Connecticut was contracted by GS Lyon to complete a database search of federal, state, local, and tribal environmental records containing information regarding hazardous materials occurrences in or within the prescribed one-mile radius of the project sites in April 2015. Not all sites or facilities are identified in the database records can be accurately located in relation to projects due to incomplete information and are therefore referred to as "orphan sites" by EDR. EDR identified several orphan sites and based on a drive-by reconnaissance of the vicinity surrounding the project sites, none were within the specified Standard radii. One orphan site was reported. The listed site is the US Gypsum Co. located on Evan Hewes Highway approximately 4 miles west of DESF and 3.75 miles west of DWSF. Therefore, the listed orphan site does not pose a risk to either project site.

An additional records search was conducted. Local planning agencies called Certified Unified Program Agencies (CUPA) consolidates, coordinates, and ensures consistent administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. The Local department of Toxic Substances Control (DTSC) Imperial CUPA was contacted in April 2015, and found no records of hazardous substance releases on or within the projects sites.

4.8.1.2.5 Airport Land Use Compatibility Plan

As discussed in Section 4.10, Land Use and Planning, the northern boarder of the project area is located approximately 6.0 miles southwest of the Naval Air Facility El Centro. According to the County Airport Land Use Compatibility Plan (ALUCP) for the Naval Air Facility El Centro, no portion of the project area is located within the Naval Air land use compatibility zones (Imperial County ALUCP 1996).

4.8.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project-related impacts related to hazards and hazardous materials, the methodology employed for the evaluation, and mitigation requirements, if necessary.



4.8.2.1 Thresholds of Significance

Consistent with the CEQA Guidelines and the professional judgment of the County's staff and environmental consultants, the projects would result in a significant impact on the environment if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

4.8.2.2 Methodology

This analysis evaluates the potential for the projects, as described in Chapter 3, Project Description to result in significant impacts related to hazards and hazardous materials on or within the one-mile buffer zone of the project sites. This analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

As indicated in the environmental setting, two separate Phase I ESAs have been prepared for the DESF and DWSF project sites, including a one-mile buffer surrounding each site. The Phase I ESAs area included as Appendix H of this EIR. The analysis prepare for this section also relied on information contained on the EPA's website pertaining to potential hazardous materials that may be found on-site. The information obtained from these sources was reviewed and summarized to present the existing conditions, in addition to identifying potential environmental impacts, based on the significance criteria presented above. Impacts associated with hazards and hazardous materials that could result from project construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, duration of project construction, and related activities. Conceptual site plans for the projects were also used to evaluate potential impacts. These conceptual exhibits are provided in Section 3.0, Project Description (see Figures 3-5 through 3-7).

4.8.2.3 Impact Analysis

ImpactPossible Risk to the Public or Environment through Routine Transport, Use, or Disposal of
Hazardous Materials.4.8-1Hazardous Materials.

The projects would not result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.



Dixieland East Solar Farm and Dixieland West Solar Farm

Although considered minimal, it is anticipated that the projects will generate the following materials during construction, operation, and long-term maintenance: insulating oil (used for electrical equipment; lubricating oil (used for maintenance vehicles); various solvents/detergents (equipment cleaning); and gasoline (used for maintenance vehicles). These materials have the potential to be released into the environment as a result of natural hazard (i.e., earthquake) related events, or due to human error. However, all materials contained on-site will be stored in appropriate containers (not to exceed a 55-gallon drum) protected from environmental conditions, including rain, wind, and direct heat and physical hazards such as vehicle traffic and sources of heat and impact. In addition, if the on-site storage of hazardous materials necessitate, at any time during construction and/ operations and long term maintenance, quantities in excess of 55-gallons, a Hazardous Material Management Program (HMMP) or would be required. The HMMP developed for the projects will include, at a minimum, procedures for:

- Hazardous materials handling, use and storage;
- Emergency response;
- Spill control and prevention;
- Employee training; and
- Record keeping and reporting.

Additionally, hazardous material storage and management will be conducted in accordance with requirements set forth by the ICFD, Imperial County Office of Emergency Services, DTSC, and CUPA for storage and handling of hazardous materials. Further, construction activities would occur according to OSHA regulatory requirements; therefore, it is not anticipated that the construction activities for the proposed projects would release hazardous emissions or result in the handling of hazardous or acutely hazardous materials, substances, or waste. This could include the release of hazardous emissions, materials, substances, or wastes during operational activities. With the implementation of an HMMP and adherence to requirements set forth by the ICFD, Imperial County Office of Emergency Services, DTSC, OSHA regulatory requirements and CUPA would reduce the impact to a level of **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Possible Risk to the Public or Environment through Release of Hazardous Materials.

4.8-2 The project may result in an accidental release of hazardous materials into the environment from project-related activities.

Dixieland East Solar Farm and Dixieland West Solar Farm

The DESF site has previously been used in the past for agricultural purposes. Typical agricultural practices in the Imperial Valley consist of aerial and ground application of pesticides and the application of chemical fertilizers to both ground and irrigation water. According to the professional opinion of GS Lyon, although these insecticides may be present in the soil within the project study areas, the residue levels typically found within agricultural soils are less than 25 percent o USEPA preliminary remediation goals.

The FIFRA provides federal control of pesticide distribution, sale, and use. All pesticides used in the United States must be registered (licensed) by the EPA. Registration assures that pesticides will be properly labeled and that, if used in accordance with specifications, they will not cause unreasonable harm to the environment. Use of each registered pesticide must be consistent with use directions contained on the label or labeling. The construction phase, operations and long term maintenance of the facility would not result in additional application of pesticides or fertilizers. Therefore, a **less than significant** impact has been identified for this issue area.



Hazardous Materials

The Phase I ESAs for the DESF and DWSF sites did not identify and on-site RECs, ASTs, or USTs. Interviews were conducted with individuals familiar with the subject property in regard to the historical use and to identify potential RECs existing on the site. The local DTSC Imperial CUPA was contacted concerning hazardous substance releases for the project site and surrounding properties, and no records were found for the site address. Therefore, **less than significant** impact is identified for this issue area.

Lead and Asbestos

According to records research and the reconnaissance survey, no buildings were identified to have been built on either the DESF or DWSF sites. Due to the lack of development of the subject properties, the risk of lead and asbestos are low. Therefore, **less than significant** impact is identified.

Oil, Gas, and Geothermal Wells

As discussed, according to records search, no wells have been located within or adjacent to the project sites. Therefore, hazards associated with the potential exposure of wells are considered **less than significant.**

Mitigation Measure(s)

No mitigation measures are required.

IMPACTHazardous Emissions or Hazardous Materials Substances, or Waste within ¼ mile of an4.8-3Existing or Proposed School.

The projects would not pose a risk to nearby (within ¼ mile) schools or proposed school facilities.

Dixieland East Solar Farm and Dixieland West Solar Farm

The project sites are not within 1/4 mile of any existing or proposed schools. Therefore, **no significant impact** is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

IMPACTProjects Located on a Site Included on a List of Hazardous Materials Sites Compiled4.8-4Pursuant to Government Code Section 65962.5.

The projects are not located on a site included on a list of hazardous materials sites pursuant to Government Code Section 65962.5.

Dixieland East Solar Farm and Dixieland West Solar Farm

The project sites are not identified in the EDR report as a hazardous materials site pursuant to Government Code Section 65962.5 and as a result, **no significant impact** has been identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.



IMPACTPossible Safety Hazard to the Public Residing or Working Within an Airport Land Use Plan4.8-5or Within Two Miles of a Public Airport or Public Use Airport.

The projects are not located within an airport land use plan or within two miles of a public airport.

Dixieland East Solar Farm and Dixieland West Solar Farm

The closest airport to the project area is the Naval Air Facility El Centro, which is approximately 6.0 miles northeast. The nearest public airport is the Imperial County Airport located approximately 11.6 miles northeast of the project area. The project components are not anticipated to have any impacts related to weather surveillance radar, long-range radar, or military operations, and do not include proposals for the construction of transmission towers. Chapter 4.10, Land Use and Planning addresses site adjacency with the Naval Air Facility El Centro ALCUP. The sites are not physically located within any of the influence zones within the ALUCP. Therefore, this impact is considered **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

IMPACTPossible Safety Hazard to the Public Residing or Working Within Proximity to a Private4.8-6Airstrip.

The projects are not within proximity to a private airstrip would not create safety hazards.

Dixieland East Solar Farm and Dixieland West Solar Farm

There are no private airstrips located within the vicinity of the project area. Therefore the project will not interfere or conflict with commercial aerial application operations associated with farming eastside of the Westside Main Canal. **No significant impact** has been identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

IMPACTPossible Impediment to Emergency Plans.4.8-7The projects would not interfere with an adopted emergency response plan or emergency
evacuation plan.

Dixieland East Solar Farm and Dixieland West Solar Farm

The Imperial County Draft Operational Area Emergency Operations Plan (July 2007) does not identify specific emergency roadway routes as part of their emergency operations plan (EOP). The City of El Centro General Plan, Safety Element, includes a Safety Plan which identifies major access routes as I-8, SR 111, SR 86, and Evan Hewes Highway (SR 80). The projects are not expected to impair implementation of, or physically interfere with and adopted emergency response plan or emergency evacuation plan. The proposed project is located in a rural area and is relatively small in scale with less than 30 percent of the total area of both sites being developed. The impacted acreage of DESF and DWSF are significantly less due to setbacks, access roads, and spacing between array rows. Evan Hewes Highway is the main arterial that will be impacted by the project; however, the project setbacks from the highway include a 240 foot setback for DWSF and a 400 foot setback for DESF. In addition, local building codes would be followed to minimize flood, seismic, and fire hazard. Therefore, a **less than significant** impact is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.



IMPACTPossible Risk to People or Structures Caused by Wildland Fires.4.8-8The emilest effect of the emilest of the emil

The project sites are not located in an area susceptible to wildland fires.

Dixieland East Solar Farm and Dixieland West Solar Farm

According to the Draft Cal Fire Hazard Severity Zones in Imperial County Land Responsibility Area Map (California Department of Forestry and Fire Protection 2007), the project area is located within a local responsibility area, which is identified as a "moderate" risk area for wildland fires. Because the proposed projects are not located in proximity to a wildland fire hazard area, a less than significant impact is identified. The fire risk at the project site is moderate, and the potential for a major fire to occur in the area surrounding the project site is low to moderate. Therefore, a **less than significant** impact is identified.

Mitigation Measure(s)

No mitigation measures are required.

4.8.3 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

During decommissioning and restoration of the project sites, the applicant or its successor in interest would be responsible for the removal, recycling, and/or disposal of all solar arrays, inverters, transformers and other structures on each of the project sites. The project applicant anticipates using the best available recycling measures at the time of decommissioning. Any potentially hazardous materials located on the site would be disposed of, and/or remediated prior to construction of the solar facilities. The operation of the solar facilities would not generate hazardous wastes and therefore, implementation of applicable regulations and mitigation measures identified for construction and operations would ensure restoration of the project sites to agricultural uses during the decommissioning process in a manner that would be **less than significant**. Furthermore, decommissioning/restoration activities would not result in a potential impact associated with ALUCP consistency (structures would be removed and the site would remain in an undeveloped condition), wildfires (the project study areas are not susceptible to wildfires), or impediment to an emergency plan (the undeveloped condition as restored, would not not conflict with emergency plans).

Residual

With implementation of applicable mitigation measures, impacts related to the transportation of hazardous materials, abandoned wells, and impacts associated with height exceedance of the transmission towers would be reduced to levels **less than significant**. Based on these circumstances, the proposed projects would not result in residual significant and unmitigable impacts related to hazards and hazardous materials.



4.9 HYDROLOGY/WATER QUALITY

This section provides a description of existing water resources within the project area and pertinent local, state, and federal plans and policies regarding the protection, management, and use of water resources (Section 4.9.1, Environmental Setting). Potential hydrological and water quality effects of the projectrelated facilities, as described in Chapter 3.0, Project Description are considered in Section 4.9.2 and, if necessary, mitigation is proposed based on the anticipated level of significance. Section 4.9.3 concludes by describing significant residual impacts following the application of mitigation, if any. Information for this section is summarized from the Preliminary Hydrology Study for SEPV Imperial, LLC Dixieland Photovoltaic Projects prepared by Fomotor Engineering. This report is included in Appendix I of this Environmental Impact Report (EIR).

4.9.1 **Environmental Setting**

The project area lies within the Colorado River Basin Region. The Colorado River Basin Region covers approximately 13 million acres (20,000 square miles) in the southeastern portion of California. It includes all of Imperial County and portions of San Bernardino, Riverside, and San Diego Counties. The Colorado River Basin Region is divided into seven major planning areas on the basis of different economic and hydrologic characteristics.

The projects are located within the Imperial Valley Planning Area of the Colorado River Basin. The Imperial Valley Planning Area consists of the following hydrological units (HU): Imperial (723.00) comprised of 2,500 square miles in the southern portion of the Colorado River Basin Region, with the majority located in Imperial County; Davies (724.00), located to the east of the project sites, and Amos-Ogilby (726.00), located to the east of the project area. The project sites are located within the Imperial HU.

The Imperial Valley Planning Area's central feature is the flat, fertile Imperial Valley (California Regional Water Quality Control Board, 2014). All watersheds within the Imperial Valley are located within a depression (the Salton Trough), resulting in a closed basin. The highest point is located at the Colorado River Delta in Mexico and the lowest point is located below sea level near the Riverside County line, draining into the Salton Sea. Two hydrologic areas are located within the Imperial HU, the Coyote Wells Hydrological Area (HA) located to the west of the project sites and the Brawley HA, where the project sites are located, as shown in Figure 4.9-1.

The project area is characterized by a typical desert climate with dry, warm winters, and hot, dry summers. Most of the rainfall occurs in conjunction with monsoonal conditions between May and September, with an average annual rainfall of less than 3 inches for the project area. The 10-year, 24-hour estimated precipitation amount for the project sites is 1.8 inches; while the 100-year, 24-hour estimated precipitation is 3 inches (Western Regional Climate Center 2004).

4.9.1.1 **Regulatory Setting**

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the projects.

Federal

Federal plans, policies, and regulations that are applicable to the projects are presented below under the following headings.

Clean Water Act

The U.S. Environmental Protection Agency (U.S. EPA) is the lead Federal agency responsible for managing water quality. The Clean Water Act (CWA) of 1972 is the primary Federal law that governs and authorizes the U.S. EPA and the states to implement activities to control water quality. The various elements of the CWA that address water quality and that are applicable to the projects are discussed



below. Wetland protection elements administered by the U.S. Army Corps of Engineers (USACE) under Section 404 of the CWA, including permits for the discharge of dredged and/or fill material into waters of the United States, are discussed in Chapter 4.4, Biological Resources.

Under Federal law, the U.S. EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question; and (2) criteria that protect the designated uses. Section 304(a) requires the U.S. EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. The U.S. EPA is the federal agency with primary authority for implementing regulations adopted under the CWA. The U.S. EPA has delegated the State of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), described below.

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the U.S. must obtain a water quality certification from the State Water Resources Control Board (SWRCB) in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate.

CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit program to control point source discharges from industrial, municipal, and other facilities if their discharges go directly to surface waters. The 1987 amendments to the CWA created a new section of the CWA devoted to regulating storm water or nonpoint source discharges (Section 402[p]). The EPA has granted California primacy in administering and enforcing the provisions of the CWA and the NPDES program through the SWRCB. The SWRCB is responsible for issuing both general and individual permits for discharges from certain activities. At the local and regional levels, general and individual permits are administered by Regional Water Quality Control Boards (RWQCBs).

CWA Section 303(d) Impaired Waters List

CWA Section 303(d) requires states to develop lists of water bodies that will not attain water quality standards after implementation of minimum required levels of treatment by point-source dischargers. Section 303(d) requires states to develop a total maximum daily load (TMDL) for each of the listed pollutants and water bodies. A TMDL is the amount of loading that the water body can receive and still be in compliance with applicable water quality objectives and applied beneficial uses. TMDLs can also act as a planning framework for reducing loadings of a specific pollutant from various sources to achieve compliance with water quality objectives. TMDLs prepared by the state must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loadings and a margin of safety. The TMDL must also include an analysis that shows links between loading reductions and the attainment of water quality objectives.

Surface waters in the Imperial Valley Planning Area mostly drain toward the Salton Sea. The New and Alamo Rivers convey agricultural irrigation drainage water from farmlands in the Imperial Valley, surface runoff, and lesser amounts of treated municipal and industrial waste waters from the Imperial Valley. The flow in the New River also contains agricultural drainage, treated and untreated sewage, and industrial waste discharges from Mexicali, Mexico. The State Water Resources Board is in the process of updating the 2012 Section 303 (d) list. Proposed revisions for the Colorado River Basin, Attachment 4 – Proposed new listings, delistings, and modifications to the 303(d) List were reviewed. The impaired water bodies listed on the 303(d) list for the New River Basin include the Imperial Valley Drains (managed by the Imperial Irrigation District), New River, and the Salton Sea. Further discussion of specific pollutant listings is provided in Section 4.9.1.2.





Figure 4.9-1. Regional Hydrology

FJS

Antidegradation Policy

The Federal Antidegradation Policy, established in 1968, is designed to protect existing uses, water quality, and national water resources. The Federal policy directs states to adopt a statewide policy that includes the following primary provisions:

- Existing in-stream uses and the water quality necessary to protect those uses shall be maintained and protected.
- Where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development.
- Where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

The Federal Anti-Degradation Policy is applicable to the proposed on-site wastewater system and is implemented by the RWQCB and County's Public Health Department.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations that limit development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRMs) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection covered by the FIRMs is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 (0.01) annual exceedance probability [AEP]) (i.e., the 100-year flood event). The project sites are included in FIRM 06025C1675C (FEMA 2008). According to this FIRM, the project sites are contained south of Zone A and outside the limits of the 100-year flood zone (FEMA 2008). Both east and west project sites are west of the Westside Main Canal.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, also known as the California Water Code, is California's statutory authority for the protection of water quality. Under this act, the state must adopt water quality policies, plans, and objectives that protect the state's waters. The act sets forth the obligations of the SWRCB and RWQCBs pertaining to the adoption of Water Quality Control Plans and establishment of water quality objectives. Unlike the federal CWA, which regulates only surface water, the Porter-Cologne Act regulates both surface water and groundwater.

Water Quality Control Plan for the Colorado River Basin

The Water Quality Control Plan for the Colorado River Basin (or Basin Plan) prepared by the Colorado River Basin RWQCB (Region 7) identifies beneficial uses of surface waters within the Colorado River Basin region, establishes quantitative and qualitative water quality objectives for protection of beneficial uses, and establishes policies to guide the implementation of these water quality objectives (RWQCB 2014). According to the Basin Plan the beneficial uses established for the Imperial Valley Drains, which include the Westside Main Canal, New River, and the Salton Sea include: industrial service supply; freshwater replenishment; water contact recreation; non-contact water recreation; warm freshwater habitat; wildlife habitat; preservation of rare, threatened, or endangered species; and aquaculture.



California Toxics Rule

Under the California Toxics Rule (CTR), the U.S. EPA has proposed water quality criteria for priority toxic pollutants for inland surface waters, enclosed bays, and estuaries. These federally promulgated criteria create water quality standards for California waters. The CTR satisfies CWA requirements and protects public health and the environment. The U.S. EPA and the SWRCB have the authority to enforce these standards, which are incorporated into the NPDES permits that regulate the current discharges in the project area.

NPDES General Industrial and Construction Permits

The NPDES General Industrial Permit requirements apply to the discharge of stormwater associated with industrial sites. The permit requires implementation of management measures that will achieve the performance standard of the best available technology economically achievable and best conventional pollutant control technology. Under the statute, operators of new facilities must implement industrial Best Management Practices (BMPs) in the projects' Stormwater Pollution Prevention Plan (SWPPP) and perform monitoring of stormwater discharges and unauthorized non-stormwater discharges. Construction activities are regulated under the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit) which covers stormwater runoff requirements for projects where the total amount of ground disturbance during construction exceeds one acre. Coverage under a General Construction Permit requires the preparation of a SWPPP and submittal of a Notice of Intent (NOI) to comply with the General Construction Permit. The SWPPP includes a description of BMPs to minimize the discharge of pollutants from the sites during construction. Typical BMPs include temporary soil stabilization measures (e.g., mulching and seeding), storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or stormwater, and using filtering mechanisms at drop inlets to prevent contaminants from entering storm drains. Typical postconstruction management practices include street sweeping and cleaning stormwater drain inlet structures. The NOI includes site-specific information and the certification of compliance with the terms of the General Construction Permit.

Local

County of Imperial General Plan

Due to the economic, biological, and agricultural significance water plays in the Imperial County, the Water Element and the Conservation and Open Space Element of the General Plan contain policies and programs, created to ensure water resources are preserved and protected. Table 4.9-1 identifies General Plan policies and programs for water quality and flood hazards that are relevant to the projects and summarizes the projects' consistency with the General Plan. While this EIR analyzes the projects' consistency with the General Plan. While this EIR analyzes the projects' Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

County of Imperial Land Use Ordinance, Title 9

The County's Ordinance Code provides specific direction for the protection of water resources. Applicable ordinance requirements are contained in Division 10, Building, Sewer and Grading Regulations, and summarized below.

Chapter 4 - Uniform Plumbing Code. The Uniform Plumbing Code, 1997 Edition, including the appendices, as adopted by the International Association of Plumbing and Mechanical Officials, is incorporated by reference. Section 91004.01, Modification of the Uniform Plumbing Code, of the Ordinance Code includes additional requirements in terms of minimum spacing requirements and minimum septic tank sizing.



General Plan Policies	Consistency with General Plan	Analysis			
Conservation and Open Space Element					
1) Structural development normally shall be prohibited in the designated floodways. Only structures which comply with specific development standards should be permitted in the floodplain.	Consistent	The projects do not contain a residential component nor would it place housing or other structures within a 100-year flood hazard area.			
Water Element					
1) The County of Imperial shall make every reasonable effort to limit or preclude the contamination or degradation of all groundwater and surface water resources in the County.	Consistent	Mitigation measures contained in Section 4.9.2.3 will require that the project applicant prepare a site-specific drainage plan and water quality management plan to minimize adverse effects to local water resources.			
2) All development proposals brought before the County of Imperial shall be reviewed for potential adverse effects on water quality and quantity, and shall be required to implement appropriate mitigation measures for any significant impacts.	Consistent	See response for Water Element Policy 1 above.			

TABLE 4.9-1. PROJECT CONSISTENCY WITH APPLICABLE GENERAL PLAN WATER RESOURCES POLICIES

Chapter 10 - Grading Regulations. Section 91010.02 of the Ordinance Code outlines conditions required for issuance of a Grading Permit. These specific conditions include:

- 1. If the proposed grading, excavation or earthwork construction is of irrigatable land, that said grading will not cause said land to be unfit for agricultural use;
- 2. The depth of the grading, excavation or earthwork construction will not preclude the use of drain tiles in irrigated lands;
- 3. The grading, excavation or earthwork construction will not extend below the water table of the immediate area; and
- 4. Where the transition between the grading plane and adjacent ground has a slope less than the ratio of one and one-half feet on the horizontal plane to one-foot on the vertical plane, the plans and specifications will provide for adequate safety precautions.

Imperial Irrigation District

The Imperial Irrigation District (IID) is an irrigation district organized under the California Irrigation District Law, codified in Section 20500 et seq. of the California Water Code. Critical functions of IID include diversion and delivery of Colorado River water to the Imperial Valley, operation and maintenance of the drainage canals and facilities, including those in the project area, and generation and distribution of electricity. Several policy documents govern IID operations and are summarized below:

- The Law of the River and historical Colorado River decisions, agreements and contracts;
- The Quantification Settlement Agreement and Transfer Agreements;
- The Definite Plan, now referred to as the Systems Conservation Plan, which defines the rigorous agricultural water conservation practices being implemented by growers and IID to meet the Quantification Settlement Agreement commitments;
- The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights;



- Existing IID standards and guidelines for evaluation of new development and define IID's role as a responsible agency and wholesaler of water; and
- Integrated Water Resources Management Plan, November 2009.

In relation to the projects, IID maintains regulation over the drainage of water into their drains, including the design requirements of stormwater retention basins. IID requires that retention basins be sized to handle an entire rainfall event in case the IID system is at capacity. Additionally, IID requires that outlets to IID facilities be no larger than 12 inches in diameter and must contain a backflow prevention device (IID 2009).

Imperial County Engineering Guidelines Manual

Based on guidance contained in the County's Engineering Guidelines Manual, the following drainage requirements would be applicable to the projects.

III A. GENERAL REQUIREMENTS

- 1. All drainage design and requirements are recommended to be in accordance with the Imperial Irrigation District (IID) "Draft" Hydrology Manual or other recognized source with approval by the County Engineer and based on full development of upstream tributary basins. Another source is the Caltrans I-D-F curves for the Imperial Valley.
- 2. Public drainage facilities shall be designed to carry the 10-year, 6-hour storm underground, the 25-year storm between the top of curbs provided two 12-foot minimum width dry lanes exist and the 100-year frequency storm between the right-of-way lines with at least one 12-foot minimum dry lane open to traffic. All culverts shall be designed to accommodate the flow from a 100-year frequency storm.
- 3. Permanent drainage facilities and right of way, including access, shall be provided from development to point of satisfactory disposal.
- 4. Retention volume on retention or detention basins should have a total volume capacity for a three-inch minimum precipitation covering the entire site with no C reduction factors. Volume can be considered by a combination of basin size and volume considered within parking and/or landscaping areas. There is no guarantee that a detention basin outletting to an IID facility or other storm drain system will not back up should the facility be full and unable to accept the project runoff. This provides the safety factor from flooding by ensuring each development can handle a minimum 3-inch precipitation over the project sites.
- 5. Retention basins should empty within 72 hours and no sooner than 24 hours in order to provide mosquito abatement. Draining, evaporation or infiltration, or any combination thereof can accomplish this. If this is not possible then the owner should be made aware of a potential need to address mosquito abatement to the satisfaction of the Environmental Health Services (EHS) Department. Additionally, if it is not possible to empty the basin within 72 hours, the basin should be designed for 5 inches, not 3 inches as mentioned in Item #4 above. This would allow for a saturation condition of the soil due to a 5" storm track. EHS must review and approve all retention basin designs prior to County Public Works approval. Nuisance water must not be allowed to accumulate in retention basins. EHS may require a nuisance water abatement plan if this occurs.
- 6. The minimum finish floor elevation shall be 12 inches above top of fronting street curb unless property is below street level and/or 6 inches above the 100-year frequency storm event or storm track. A local engineering practice is to use a 5-inch precipitation event as a storm track in the absence of detailed flood information. The 100-year frequency storm would be required for detention calculations.
- 7. Finish pad elevations should be indicated on the plans, which are at or above the 100-year frequency flood elevation identified by the engineer for the parcel. Finish floor elevations should be set at least 6 inches above the 100-year flood elevation.



- 8. The developer shall submit a drainage study and specifications for improvements of all drainage easements, culverts, drainage structures, and drainage channels to the Department of Public Works for approval. Unless specifically waived herein, required plans and specifications shall provide a drainage system capable of handling and disposing of all surface waters originating within the subdivision and all surface waters that may flow onto the subdivision from adjacent lands. Said drainage system shall include any easements and structures required by the Department of Public Works or the affected Utility Agency to properly handle the drainage on-site and off-site. The report should detail any vegetation and trash/debris removal, as well as address any standing water.
- 9. Hydrology and hydraulic calculations for determining the storm system design shall be provided to the satisfaction of the Director, Department of Public Works. When appropriate, water surface profiles and adequate field survey cross-section data may also be required.
- 10. An airtight or screened oil/water separator or equivalent is required prior to permitting on-site lot drainage from entering any street right of way or public storm drain system for all industrial/commercial or multi residential uses. A maximum 6-inch drain lateral can be used to tie into existing adjacent street curb inlets with some exceptions. Approval from the Director of Public Works is required.
- 11. The County is implementing a storm water quality program as required by the State Water Resources Control Board, which may modify or add to the requirements and guidelines presented elsewhere in this document. This can include ongoing monitoring of water quality of storm drain runoff, implementation of BMPs to reduce storm water quality impacts downstream or along adjacent properties. Attention is directed to the need to reduce any potential of vectors, mosquitoes or standing water.
- 12. A Drainage Report is required for all developments in the County. It shall include a project description, project setting including discussions of existing and proposed conditions, any drainage issues related to the site, summary of the findings or conclusions, off-site hydrology, on-site hydrology, hydraulic calculations and a hydrology map.

4.9.1.2 Existing Conditions

The project sites are located within the Brawley HA, an enclosed basin. Natural surface water features located in the local watershed include the New River, located to the east of the project sites and an existing elevated concrete irrigation channel that connects to the Westside Main Canal, located east of the project sites. Localized drainage conditions within the project sites are further described below.

Localized Drainage Conditions

Dixieland East Solar Farm

The portion of the DESF site located east of Brown Road is presently vacant, with an existing elevated concrete irrigation channel running west to east, where it connects with the elevated Westside Main Canal, just east of the site. The location where the west to east irrigation channel meets the Westside Main Canal, causes existing runoff to split and change directions to flow north approximately 2,000-feet towards the outlet of Coyote Wash (FEMA Zone "A"), and south over West Evan Hewes Highway approximately 3,500-feet to the outlet of another FEMA Zone "A" wash, as shown in Figure 4.9-2. The portion of the DESF site located east of Brown Road is covered with a layer of silty sand that is four to six feet deep with clay below the sand layer.

The area north of the concrete channel has an elevation drop of approximately 4 feet from west to east, with an average slope of 0.8 percent over approximately 470 feet, and terminates at a low flat area. The area south of the concrete channel drops about 4 feet from west to slightly northeast, at an average slope of 0.9 percent, and terminates at a small low area in the northeast corner of the sub-area.





Figure 4.9-2. Direction of Water Flow on DESF

The portion of the DESF site located west of Brown Road is presently mostly vacant, with an existing elevated concrete irrigation channel running east to west on the far northern portion of the site; however, the proposed development does not cross on to this area. This portion of the DESF project site has an existing elevation drop of approximately 2.5 feet from west to east, with an average slope of 0.4 percent over about 600 feet.

Dixieland West Solar Farm

DWSF is presently vacant, with an elevation drop of 1 percent from west to east. Silty sand soils cover the project site to a depth of 50 feet. A 4-foot thick silty clay layer was encountered at a depth of 4 feet on the south side of the site and at a depth of 8 feet in the northeast corner. Runoff currently is directed across the proposed site location from west to east, and exits the site toward the DESF project site (Figure 4.9-3).

Flooding

According to the Flood Insurance Rate Map (FIRM) (Map Number 06025C1675C, September 26, 2008), the project sites are contained within Zone X and outside the limits of the 100-year flood zone (FEMA 2008). Zone X delineates areas of 2 percent annual chance flood; areas of 1 percent chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood. The nearest flood zones (Zone A) are the Coyote Wash located north of DESF and a wash located south of the project sites, as shown in Figure 4.9-4, FEMA Flood Map.

Surface Water Quality

The surface waters of the Imperial Valley depend primarily on the inflow of irrigation water from the Colorado River via the All American Canal. Excessive salinity concentrations have long been one of the major water quality problems of the Colorado River, a municipal and industrial water source to millions of people, and a source of irrigation water for agriculture. The heavy salt load in the Colorado River results from both natural and human activities. Land use and water resources are unequivocally linked. A variety of natural and human factors can affect the quality and use of streams, lakes, and rivers. Surface waters may be impacted from a variety of point and non-point discharges. Examples of point sources may include wastewater treatment plants, industrial discharges, or any other type of discharge from a specific location (commonly a large-diameter pipe) into a stream or water body. In contrast, non-point source pollutant sources are generally more diffuse in nature and connected to a cumulative contribution of multiple smaller sources. There are no comprehensive water quality monitoring stations located within in the project sites, and water quality data are limited.

Common non-point source contaminants within the project area may include, but are not limited to: sediment, nutrients (phosphorous and nitrogen), trace metals (e.g., lead, zinc, copper, nickel, iron, cadmium, and mercury), oil and grease, bacteria (e.g., coliform), viruses, pesticides and herbicides, organic matter, and solid debris/litter. Vehicles account for most of the heavy metals, fuel and fuel additives (e.g., benzene), motor oil, lubricants, coolants, rubber, battery acid, and other substances. Nutrient loading in a result from excessive fertilizing of agricultural areas; however, pesticides and herbicides are widely used on roadway shoulders to keep right-of-way areas clear of vegetation and pests. Additionally, the use of on-site septic systems for wastewater disposal can degrade shallow groundwater by contributing nitrate. All these substances are entrained by runoff during wet weather and discharged into local drain facilities operated by IID and eventually terminate into the Salton Sea.



Figure 4.9-3. Direction of Water Flow on DWSF







Figure 4.9-4. FEMA Flood Zone Map

Based on the Final 2010 Integrated Report (CWA Section 303(d) List/305(b) Report), prepared by the Colorado River Basin RWQCB, the following water features within the Brawley HA includes the Imperial Valley Drains, New River, and the Salton Sea. Specific impairments listed for each of these water bodies (or Category 5) is identified below (RWRCB 2011):

- Imperial Valley Drains: Impaired for chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, endosulfan, polychlorinated biphenyls (PCBs), sediment/siltation, selenium, and toxaphene;
- New River: Impaired for, chlordane, chlorpyrifos, copper, DDT, diazinon, dieldrin, hexachlorobenzene/HCB, mercury, nutrients, organic enrichment/low dissolved oxygen, PCBs, pathogens, sediment, selenium, toxaphene, toxicity, trash; and zinc and
- Salton Sea: Impaired for arsenic, chlorpyrifos, DDT, enterococcus, nutrients, salinity, and selenium.

Groundwater Hydrology

The project area overlies the western portion of the Imperial Valley Groundwater Basin (Department of Water Resources (DWR) Basin Number: 7-30), which covers approximately 1,870 surface square miles. The physical groundwater basin extends in the southeastern portion of California at the boarder with Mexico. The basin lies within the southern part of the Colorado Desert Hydrologic Region, south of the Salton Sea. The basin has two major aquifers, separated at depth by a semi-permeable aquitard¹ that averages 60 feet thick and reaches a maximum thickness of 280 feet. The average thickness of the upper aquifer is 200 feet with a maximum thickness of 450 feet. The data regarding faults controlling groundwater movement is uncertain; however, as much as 80 feet of fine-grained, low permeability prehistoric lake deposits have accumulated on the valley floor, which result in locally confined aquifer conditions (Department of Water Resources 2004).

Groundwater recharge within the basin is primarily from irrigation return. Other recharge sources are deep percolation of rainfall and surface runoff, underflow into the basin, and seepage from unlined canals which traverse the valley. Groundwater levels within a majority of the basin have remained stable from 1970 to 1990 because of relatively constant recharge and an extensive network of subsurface drains (Department of Water Resources 2004).

Groundwater quality varies extensively throughout the base; however, is generally unusable for domestic and irrigation purposes without treatment (Department of Water Resources 2004).

4.9.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to hydrology and water quality, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

4.9.2.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to hydrology/water quality are considered significant if any of the following occur:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater water quality;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would decline to a level which would not support existing land uses or planned uses for which permits have been granted);

¹ An aquitard is a zone within the earth that restricts the flow of groundwater from one aquifer to another.



- Alter the existing surface hydrology;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation, or flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Place within a 100-year (0.01 AEP) flood hazard area structures that would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Result in inundation by seiche, tsunami, or mudflow.

4.9.2.2 Methodology

This analysis considers the potential for the projects to impact local and regional surface hydrology and water quality based on the components described in Chapter 3, Project Description. The impact analysis focuses on foreseeable changes to existing hydrologic and water quality conditions in the context of the significance criteria listed above. The impact analysis provides a discussion for each of the major project components in the context of proposed construction activities and post-construction operations. The *Preliminary Hydrology Study for SEPV Imperial, LLC Dixieland Photovoltaic Projects*, prepared by Fomotor Engineering (Appendix I) utilized criteria set forth in the County of Imperial Department of Public Works Engineering Design Guidelines Manual for the Preparation and Checking of Street Improvement, Drainage, and Grading Plans within Imperial County, Section III Drainage Improvements (prepared: September 9, 2004 and revised: September 15, 2008).

4.9.2.3 Impact Analysis

IMPACT Violation of Water Quality Standards During Construction.

4.9-1 Construction of the projects could generate discharges to surface water resources that could potentially violate water quality standards or waste discharge requirements.

Dixieland East Solar Farm and Dixieland West Solar Farm

Construction of the project facilities would involve excavation, soil stockpiling, grading, and the installation of solar arrays and access roads. There are multiple construction related activities that could have potential direct or indirect impacts on the water quality of local surface water features and shallow groundwater resources including; sedimentation, erosion, handling hazardous materials, and dewatering. Disturbing the geomorphic characteristics and stability of the channel bed and banks may initiate chronic erosion in natural and engineered channels thereby resulting in increased turbidity. A similar circumstance could occur upon decommissioning of the projects prior to site restoration. In both cases, such impacts could be exacerbated if surface vegetation is not reestablished and stabilized prior to the next high-flow or precipitation event and could result in significant direct impacts within the immediate vicinity of construction and indirect impacts to water quality further downstream. This is considered a **significant impact**. Implementation of Mitigation Measures HWQ-1 and HWQ-2 would reduce these impacts to a level **less than significant**.

Hazardous materials associated with construction would be limited to substances associated with mechanized equipment, such as gasoline and diesel fuels, engine oil, and hydraulic fluids. If precautions are not taken to contain contaminants, accidental spills of these substances during construction could produce contaminated stormwater runoff (nonpoint source pollution), a major contributor to the degradation of water quality in surface waters. Without proper containment and incident response measures in place, the operation of construction equipment could result in significant direct and indirect



impacts to water quality. This is considered a **significant impact**. Implementation of Mitigation Measures HWQ-1 and HWQ-2 would reduce these impacts to a level **less than significant**.

Construction of the projects could, at times, also require dewatering of shallow, perched groundwater in the immediate vicinity of excavations and installation of underground features at a limited number of areas where groundwater depths are shallow. As stated in the Section 4.9.1.2, Existing Conditions, Groundwater Hydrology, the groundwater in the Imperial Valley Groundwater Basin is unusable for domestic and irrigation purposes without treatment due to poor water quality. Groundwater withdrawn from the construction areas could be subsequently discharged to local drainage ditches or via land application. These discharges may contain sediments, dissolved solids, salts, and other water quality constituents found in the shallow groundwater, which could degrade the quality of receiving waters. Degradation of local receiving waters from the introduction of shallow groundwater during construction dewatering could result in a significant impact to receiving waters. This is considered a **significant impact**. Implementation of Mitigation Measures HWQ-1 and HWQ-2 would reduce these impacts to a level **less than significant**.

Prior to construction and grading activities, the project applicant is required to file an Notice of Intent with the SWRCB to comply with the General NPDES Construction Permit and prepare a SWPPP, which addresses the measures that would be included during project construction to minimize and control construction and post-construction runoff to the "maximum extent practicable." In addition, NPDES permits require the implementation of BMP's that achieve a level of pollution control to the maximum extent practical, which may not necessarily be completely protective of aquatic life or address water quality impairments for local waterways. This represents a **significant**, **direct and indirect impact**. For these reasons, the implementation of the prescribed mitigation would be required to ensure that the project SWPPPs and Grading Plan(s) include measures necessary to minimize water quality impacts as a result of project construction and post-construction runoff. Implementation of Mitigation Measures HWQ-1 and HWQ-2 would reduce impacts to a level **less than significant**. In addition, given that site decommissioning would result in similar activities as identified for construction, these impacts could also occur in the future during site restoration activities.

Mitigation Measure(s)

The following mitigation measures are required for the DESF and DWSF.

- **HWQ-1 Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration**. The project applicant or its contractor shall prepare a SWPPP specific to the projects and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the project applicant prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the projects. The SWPPP(s) shall incorporate control measures in the following categories:
 - Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching);
 - Dewatering and/or flow diversion practices, if required (see Mitigation Measure HWQ-2);
 - Sediment control practices (temporary sediment basins, fiber rolls);
 - Temporary and post-construction on- and off-site runoff controls;
 - Special considerations and BMPs for water crossings, wetlands, and drainages;



- Monitoring protocols for discharge(s) and receiving waters, with emphasis placed on the following water quality objectives: dissolved oxygen, floating material, oil and grease, pH, and turbidity;
- Waste management, handling, and disposal control practices;
- Corrective action and spill contingency measures;
- Agency and responsible party contact information, and
- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP.

The SWPPP shall be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.

HWQ-2 Properly Dispose of Construction Dewatering in Accordance with the Colorado River Basin Regional Water Quality Control Board. If required, all construction dewatering shall be discharged to an approved land disposal area or drainage facility in accordance with Colorado River Basin RWQCB requirements. The project applicant or its construction contractor shall provide the Colorado River Basin RWQCB with the location, type of discharge, and methods of treatment and monitoring for all groundwater dewatering discharges. Emphasis shall be placed on those discharges that would occur directly or in proximity to surface water bodies and drainage facilities.

Significance After Mitigation

With the implementation of the above mitigation measures, impacts to surface water quality as attributable to the projects would be reduced to a **less than significant** level through the inclusion of focused BMPs for the protection of surface water resources. Monitoring and contingency response measures would be included to verify compliance with water quality objectives for all surface waters crossed during construction. Particular emphasis would be placed on dissolved oxygen, floating material, oil and grease, and turbidity (or sediment) as these are generally the water quality constituents of most concern during construction-related activities.

IMPACT Violation of Water Quality Standards During Operation.

4.9-2

Operation of the projects' solar arrays, electrical equipment and components, and access roads could involve the use of materials or substances that could be entrained in surface runoff and discharged to surface waterways or groundwater.

Dixieland East Solar Farm and Dixieland West Solar Farm

Post-construction runoff from the constructed facilities would carry two main water quality impacts that could impact surface water drainages and drains. The first is caused by an increase in the type and quantity of pollutants in storm water runoff. As runoff flows over developed surfaces, water can entrain a variety of potential pollutants including, but not limited to, oil and grease, pesticides, trace metals, and nutrients. These pollutants can become suspended in runoff and carried to receiving waters. These effects are commonly referred to as non-point source water quality impacts.



Long-term operation of the solar facilities poses a limited threat to surface water quality after the completion of construction. The projects would be subject to the County's Grading Regulations as specified in Section 91010.02 of the Ordinance Code. However, since the project sites are located in unincorporated Imperial County and not subject to a Municipal Separate Storm Sewer System (MS4) or NPDES General Industrial Permit, there is no regulatory mechanism in place to address post-construction water quality concerns. Based on this consideration, the projects have the potential to result in both direct and indirect water quality impacts that could be significant. This is considered a **significant impact**. Implementation of Mitigation Measure HWQ-3 would reduce impacts to a level **less than significant**.

Long-term point discharges from the projects would be minimal; however, reductions in water quality could occur where the water released is of lower quality than ambient conditions. These discharges would be infrequent, but could include landscape irrigation, uncontaminated pumped ground water, and discharges of potable water during water tank cleaning [as defined in 40 CFR 35.2005(21)]. In this context, long-term water quality impacts from point sources would be **less than significant**.

The second potential impact from post-construction runoff is a potential increase in the quantity of water delivered to adjacent or nearby water bodies during storms, referred to as Hydromodification. Increased impervious surfaces from surfaces such as asphalt, concrete, and other compacted surfaces can interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, large volumes of water runoff collects and is routed to drainage systems where it is discharged to the nearest receiving water. This process can contribute to stream bank scouring and downstream flooding, resulting in impacts to aquatic life and damage property. For these reasons, the projects could result in on- and off-site discharges that could indirectly impact downstream surface waters by increasing drain scour and/or sedimentation. Therefore, this **indirect impact is considered significant**. Implementation of Mitigation Measure HWQ-3 would reduce impacts to a level **less than significant**.

Mitigation Measure(s)

The following mitigation measure is required for DESF and DWSF.

HWQ-3 Incorporate Post-Construction Runoff BMPs into Project Drainage Plan and Maximize Opportunities for Low Impact Development. The project Drainage Plan shall adhere to County and IID guidelines to treat, control, and manage the on- and off-site discharge of stormwater to existing drainage systems. Low Impact Development opportunities, including but not limited to infiltration trenches or bioswales, will be investigated and integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and treatment of runoff generated from project impervious surfaces prior to off-site discharge.

The project applicant shall ensure the provision of sufficient outlet protection through the use of energy dissipaters, vegetated rip-rap, soil protection, and/or other appropriate BMPs to slow runoff velocities and prevent erosion at discharge locations, access roads, electrical distribution, and solar array locations. A long-term maintenance plan shall be developed and implemented to support the functionality of drainage control devices. The facility layout(s) shall also include sufficient container storage and on-site containment and pollution-control devices for drainage facilities to avoid the off-site release of water quality pollutants, including, but not limited to oil and grease, fertilizers, treatment chemicals, and sediment.

Significance After Mitigation

With the implementation of Mitigation Measure HWQ-3, potential water quality impacts resulting from post-construction discharges during project operations would be reduced to a **less than significant** level. With the proposed mitigation, any stormwater runoff generated from the project sites would be subject to on-site treatment and retention and, therefore, would not pose a significant threat to local surface water features or shallow groundwater resources. Potable water discharges generated during operations would be of limited quantity and sufficient quality that they would pose a **less than significant** threat to the environment.



IMPACT Impacts to Groundwater Recharge, Supply, and Adjacent Wells.

4.9-3 The projects would not involve the use of groundwater, which could otherwise carry the potential for interference with current groundwater recharge, possible depletion of groundwater supplies, or interference with adjacent wells.

Dixieland East Solar Farm and Dixieland West Solar Farm

As described in Chapter 3.0, Project Description the projects would utilize existing water service contracts with IID and would not involve the use of groundwater and no construction of new well facilities is proposed. For this reason, the projects would not carry the potential to create drawdown effects that could otherwise adversely affect adjacent wells. Although groundwater dewatering may be necessary during construction, these activities would only result in temporarily reductions in groundwater levels within and directly adjacent to construction areas. Any localized lowering of the groundwater table would recover quickly following pumping and would not cause a net deficit in aquifer volume or a lowering of the groundwater table in the Imperial Valley Groundwater Basin. As a result, **no significant impacts** to groundwater levels are expected.

Mitigation Measure(s)

4.9-4

No mitigation measures are required.

IMPACT Alternation of Drainage Patterns and Off-site Flooding.

The projects could result in the alteration of existing drainage patterns thereby increasing the rate or amount of surface runoff in a manner that could result in on or off-site flooding and downstream erosion and sedimentation.

Dixieland East Solar Farm and Dixieland West Solar Farm

Based on guidance contained in the County's Engineering Guidelines Manual, each proposed development is required to create retention storage equal to three inches of rainfall over the disturbed area of each project site. The retention storage must infiltrate or drain within 72-hours. This can be achieved through infiltration, or controlled discharge, as long as the proposed discharge rate off the site is at or less than existing conditions. If the basin does not empty within 72 hours, then the retention storage requirement would increase to five inches over the disturbed area of each respective project site, as per County of Imperial Department of Public Works Engineering Design Guidelines Manual. The three-inch depth was initially used as an estimate of proposed storage runoff for all sites, and appears to continue to apply in this case, based upon the results of the percolation tests.

Dixieland East Solar Farm – Portion West of Brown Road

The portion of the DESF site located west of Brown Road is 204,561 square feet (sq-ft) (4.7 acres), with a limit of construction disturbance of 162,285 sq-ft within the project site area. The worst case soil infiltration rate is 1.13-min per inch, and would allow the retention storage to empty within 72-hours with a Factor of Safety of 318 (See Appendix I, Reference Materials, Basin Storage with Infiltration Data, and Percolation Tests). The infiltration test results allow storage of three inches of runoff over the area of construction disturbance. Grading would be used to level the site, while maintaining the direction of flow for existing conditions. Onsite retention storage would be created with the proposed perimeter roads along the north, south, and east sides of the project area to be elevated 1.0-feet to contain the proposed basin storage area within the project site (Figure 4.9-2). The west perimeter road would be constructed at existing grade to allow existing runoff to continue along the current flow path, and enter the site. Weir flow over the elevated east perimeter road would allow runoff to continue as sheet flow in the existing condition west to east direction across Brown Road, and toward the portion of the DESF site located East of Brown Road, while providing more than the required storage runoff capacity in conjunction with the north and south


elevated perimeter roads. As shown in Table 4.9-2, the project's proposed basin storage volume (56,855 cubic feet [cu-ft]) would provide more than the required runoff storage volume of 40,571 cu-ft.

Basin ID	Total Area to be Disturbed by Construction (sq-ft)	Required Runoff Storage Volume (cu-ft)	Basin Surface Area (sq-ft)	Proposed Basin Storage Volume (cu-ft)	Duration Until Storage is Empty (Hours)
3			93,503	56,855	UNDER 72
Total	162,285	40,571	93,503	56,855	UNDER 72

TABLE 4.9-2. DESF – PORTION WEST OF BROWN ROAD BASIN STORAGE VOLUME

Source: Fomotor Engineering, 2015

Dixieland East Solar Farm – Portion East of Brown Road

The portion of the DESF site located east of Brown Road is 898,544 sq-ft (20.6 acres), with the limit of construction disturbance of 807,546 sq-ft within the project site area. The worst case soil infiltration rate is 17.82-min per inch, and would allow the retention storage to empty within 72-hours with a Factor of Safety of 34 (See Appendix I, Reference Materials, Basin Storage with Infiltration Data, and Percolation Tests). The infiltration test results allow storage of three inches of runoff over the area of construction disturbance. Grading would be used to level the site, while maintaining the direction of flow for existing conditions. Proposed retention storage would be created with outer perimeter roads along the north, south and east sides of the project area to be elevated 0.6-feet (Figure 4.9-2).

The west perimeter road would be constructed at existing grade to allow existing runoff to continue along the current flow path, and enter the site. Weir flow over the east perimeter road would allow runoff from the site to continue as sheet flow in the direction of existing conditions from west to east toward the Westside Main Canal, while providing more than the required storage runoff capacity. As shown in Table 4.9-3, the project's proposed basin storage volume (207,405 cu-ft) would provide more than the required runoff storage volume of 201,887 cu-ft.

Runoff north of the demolished east to west irrigation canal would exit the site as weir flow over the elevated east perimeter road, and then be directed to the north along the existing flow path toward the outlet of Coyote Wash (FEMA Zone A) about 2,000 feet away. Runoff south of the demolished east to west irrigation canal would exit the site as weir flow over the elevated east perimeter road, and then be directed to the south along the existing flow path over West Evan Hewes Highway toward the outlet of the existing FEMA Zone A Wash, about 3,500 feet away. Existing offsite drainage along the east project boundary would be improved to eliminate ponding and nuisance water from accumulating at the existing low area near the intersection of the elevated existing east to west concrete irrigation channel across the project site, and Westside Main Canal.

Basin ID	Total Area to be Disturbed by Construction (Sq-ft)	Required Runoff Storage Volume (Cu-Ft)	Basin Surface Area (Sq-ft)	Proposed Basin Storage Volume (Cu-Ft)	Duration Until Storage is Empty (Hours)
2			413,386	207,405	Under 72
Total	807,546	201,887	413,386	207,405	Under 72

TABLE 4.9-3. DESF – PORTION EAST OF BROWN ROAD BASIN STORAGE VOLUME

Source: Fomotor Engineering 2015

Dixieland West Solar Farm

DWSF is 1,740,259 sq-ft (40.0 acres), with an area of construction disturbance of 1,151,186 sq-ft within the project site area. The worst case soil infiltration rate is 1.70-min per inch, and would allow the



retention storage to empty within 72-hours with a Factor of Safety of 141 (See Appendix I, Reference Materials, Basin Storage with Infiltration Data, and Percolation Tests). The infiltration test results allow storage of three inches of runoff over the area of construction disturbance. Grading would be used to level the site, while maintaining the direction of runoff for existing conditions. Onsite retention storage would be created by elevating two of the north to south access roads that would run perpendicular to the existing flow path. The western north to south perimeter road would be constructed at existing grade to allow existing run-on to the site to continue along the existing flow path, and enter the site. The eastern north to south perimeter road would be elevated 1.5-feet to act as weirs, to direct runoff along the existing flow path, and help create two proposed basin storage areas within the project site (Figure 4.9-3). In addition, the west to east outer perimeter roads also would be elevated 1.5-feet to help contain runoff storage in the proposed basin areas. The runoff weir flow exiting the site over the top of the eastern north to south perimeter road would sheet flow off the site to the east along the existing flow path toward DESF. As shown in Table 4.9-4, the project's proposed basin storage volume (414,232 cu-ft) would provide more than the required runoff storage volume of 287,797 cu-ft.

Basin ID	Total Area to be Disturbed by Construction (sq-ft)	Required Runoff Storage Volume (cu-ft)	Basin Surface Area (sq-ft)	Proposed Basin Storage Volume (cu-ft)	Duration Until Storage is Empty (Hours)
1A			232,134	223,209	Under 72
1B			254,697	191,023	
Total	1,151,186	287,797	486,831	414,232	Under 72

Source: Fomotor Engineering 2015

The proposed site grading, and specific elevated onsite roads have been designed to create the required onsite retention storage, while maintaining the direction of existing condition runoff without increasing the discharge rate to adjacent properties, and meeting the requirements established in the County of Imperial Department of Public Works Engineering Design Guidelines Manual. Based on these considerations, the proposed projects would not result in the alteration of existing drainage patterns thereby increasing the rate or amount of surface runoff in a manner that could result in on or off-site flooding and downstream erosion and sedimentation. This is considered a less than significant impact.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Placement of Housing within a 100-Year Floodplain. 4.9-5

The projects would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.

Dixieland East Solar Farm and Dixieland West Solar Farm

The projects would not involve the construction of residential housing and, therefore, would not place housing within a 100-year flood hazard area as mapped on the most recent FIRMs for the project sites. There are no flood protection facilities including dam impoundments upstream of the project sites. Although levees provide flood protection from the New River for the project area, no residential structures would be constructed that could otherwise be subject to hazards from a levee failure. Additionally, no modifications or crossings at levee structures are proposed, which could otherwise indirectly impact existing residents. Therefore, **no impact** is identified for this issue area.



Mitigation Measure(s)

No mitigation measures are required.

IMPACTImpede or Redirect Flood Flows.4.9-6The projects would not require the placement of structures within a 100-year flood hazard area, which
would impede or redirect flood flows.

Dixieland East Solar Farm and Dixieland West Solar Farm

The project sites are contained within Zone X and outside the limits of the 100-year flood zone. The projects' facilities would not be constructed within a delineated 100-year flood hazard area or floodway. As a result, the construction and operation of the projects would not place structures within a 100-year flood hazard area as mapped on the most recent federal FIRM. Therefore, **no impact** is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Inundation from Flooding or Mudflows.

4.9-7 _{Th}

The projects would not expose people or structures to a significant risk of loss, injury or death involving inundation by flooding, including flooding as a result of the failure of a levee or dam, seiche, or tsunami or inundation by mudflows.

Dixieland East Solar Farm and Dixieland West Solar Farm

In recognition of the project areas' inland location, the threat of tsunamis or seiche originating from the Salton Sea is considered negligible. As described in Chapter 4.6, Geology and Soils, the topography within the vicinity of project areas is generally level and, therefore, the hazard of mudflows adversely affecting the project facilities is very low. For this reason, **no significant impact** would occur.

Mitigation Measure(s)

No mitigation measures are required.

4.9.3 Decommissioning/ Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning and restoration activities would result in similar impacts to hydrology and water quality as would occur during construction of the proposed projects. The primary water quality issue associated with decommissioning/restoration would be potential impacts to surface water quality, as the decommissioning activities would be similar to construction activities, and would be considered a **significant impact**. However, with implementation of Mitigation Measures HWQ-1 and HWQ-2, impacts to surface water quality would be reduced to a level **less than significant** through the inclusion of focused BMPs for the protection of surface water resources. Impacts to other water resource issues, including alteration of drainage patterns, contributing to off-site flooding, impacts to groundwater recharge and supply, would be **less than significant**. There would be **no impact** associated with placement of housing within a 100-year floodplain, impeding or redirecting flows, or inundation from flooding or mudflows.



Residual

With implementation of the mitigation measures listed above, implementation of the projects would not result in any residual significant impacts related to increased risk of flooding from stormwater runoff, from water quality effects from long-term urban runoff, or from short-term alteration of drainages and associated surface water quality and sedimentation. With the implementation of the required mitigation measures during construction and decommissioning of the projects, water quality impacts would be minimized to a less than significant level. Based on these circumstances, the projects would not result in any residential significant and unmitigable adverse impacts to surface water hydrology and water quality.



4.10 LAND USE/PLANNING

This section provides information regarding current land use, land use designations, and land use policies within and in the vicinity of the project sites. Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines states that "[t]he EIR shall discuss any inconsistencies between the projects and applicable general plans and regional plans." This section fulfills this requirement for the projects. In this context, this section reviews the land use assumptions, designations, and policies of the Imperial County (County) General Plan and other applicable federal, state, and local requirements, which governs land use within the project area and evaluates the projects' potential to conflict with policies adopted for the purpose of avoiding or mitigating significant environmental effects. Where appropriate, mitigation is applied and the resulting level of impact identified.

4.10.1 Environmental Setting

As discussed in Chapter 2.0, Environmental Setting of this Environmental Impact Report (EIR), the project is comprised of two individual site locations, Dixieland East Solar Farm (DESF) and Dixieland West Solar Farm (DWSF). DESF consists of three parcels and DWSF consists of one parcel; both sites encompassing approximately 53 acres. The proposed projects are located on privately owned, undeveloped, but partially disturbed land. The project area is located in the Dixieland area in unincorporated Imperial County (see Figure 3-1). The southern-most boundary of the projects borders West Evan Hewes Highway. The eastern-most boundary of the project sites (DESF) borders the Westside Main Canal, and is approximately 10 miles west of El Centro, California. The project sites are designated as Agriculture under the County's General Plan (as amended through 2008). The project sites are located within the General Agriculture (A-2) zoning designation (see Figure 4.10-1, General Plan Land Use and Zoning Designations). Surrounding uses consists of vacant desert land with rural lots and a few remaining residences. The Centinela State Prison is located approximately two miles northwest.

As discussed in Chapter 3.0, the project sites are located within a proposed Renewable Energy/Geothermal overlay zone (see Figure 3-3) based on an update to the existing Geothermal/Alternative Energy and Transmission Element of its General Plan, called the Renewable Energy and Transmission Element. This Element is discussed in detail under Section 4.10.1.1.

4.10.1.1 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the projects.

State

State Planning and Zoning Laws

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period or more. Finally, although the general plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific zone district, are required to be consistent with the general plan and any applicable specific plans.





Figure 4.10-1. General Plan Land Use and Zoning Designations



Local

Regional Comprehensive Plan and Regional Transportation Plan

The Southern California Association of Governments' (SCAG) Intergovernmental Review (IGR) section, part of the Environmental Planning Division of Planning and Policy, is responsible for performing consistency review of regionally significant local plans, projects, and programs. Regionally significant projects are required to be consistent with SCAG's adopted regional plans and policies such as the Regional Comprehensive Plan (RCP) and the Regional Transportation Plan (RTP). The criteria for projects of regional significance are outlined in State CEQA Guidelines Sections 15125 and 15206. According to the SCAG Intergovernmental Review Procedures Handbook, "new or expanded electrical generating facilities and transmission lines" qualify as regionally significant projects. For this reason, Table 4.10-1 provides a consistency evaluation for the projects with applicable SCAG IGR policies.

County of Imperial General Plan

The purpose of the County's General Plan (as amended through 2008) is to direct growth, particularly urban development, to areas where public infrastructure exists or can be provided, where public health and safety hazards are limited, and where impacts to the County's abundant natural, cultural, and economic resources can be avoided. The following ten elements comprise the County's General Plan: Land Use; Housing; Circulation and Scenic Highways; Noise; Seismic and Public Safety; Conservation and Open Space; Agricultural; Geothermal/Alternative Energy and Transmission; Water; and Parks and Recreation. Together, these elements satisfy the seven mandatory general plan elements as established in the California Government Code. Goals, objectives, and implementing policies and actions programs have been established for each of the elements.

Imperial County has received funding from the California Energy Commission's (CEC) Renewable Energy and Conservation Planning Grant to amend and update the County's General Plan in order to facilitate future development of renewable energy projects. The Geothermal/Alternative Energy and Transmission Element was last updated in 2006. Since then, there have been numerous renewable projects proposed, approved and constructed within Imperial County as a result of California's move to reduce greenhouse gas emissions, develop alternative fuel resources and implement its RPS. The County has recently prepared an update to the existing Geothermal/Alternative Energy and Transmission Element of its General Plan, called the Renewable Energy and Transmission Element. <u>The County approved the Renewable Energy and Transmission Element in October 2015</u>. This Element is still in draft form and pending adoption. This General Plan element uses the Desert Renewable Energy Conservation Plan (DRECP) as an initial planning and policy framework, then applies further constraints analysis to the proposed renewable energy zones based on the County's goals and priorities, including protection of agricultural land.

As part of the Geothermal/Alternative Energy and Transmission Element, the County developed a draft Renewable Energy (RE) Overlay Zone Map, which identifies locations within the County authorized for development and operation of renewable energy projects with an approved Renewable Energy Conditional Use Permit (RECUP). The proposed RE Overlay Zone is concentrated in areas that were determined to be the most suitable for the development of renewable energy facilities while minimizing the impact to other established uses. The RE Overlay Zone covers approximately 61,627.10 acres of land and surface water within the Salton Sea. The Overlay Zone Map contains three categories: 1) Geothermal, 2) Renewable Energy, and 3) Renewable Energy/Geothermal. As shown in Figure 3-3 (see Chapter 3.0 Project Description), the project sites are located within a proposed Renewable Energy/Geothermal overlay zone. The Renewable Energy/Geothermal overlay zone category was developed to identify areas that could be developed with any form of renewable energy technology, including geothermal production. This Renewable Energy overlay zone category provides the greatest range of opportunities for future development of renewable energy, while preserving and protecting agricultural, natural, and cultural resources.



The CEC grant also includes an update to the 1993 Conservation/Open Space Element to facilitate future development of renewable energy projects. The update of the 1993 Conservation/Open Space Element will assist in identifying areas that will conserve habitat areas on federal, state, military, tribal and private lands in the County. This is in order to implement the conservation goals of the Desert Renewable Energy Conservation Plan in a manner consistent with Government Code Section 65041.1(b).

As previously indicated, the County's General Plan designates the project area as "Agriculture." The County identifies agricultural land as a form of open space. According to the Conservation and Open Space Element of the General Plan, open space is "any parcel or area of land or water, which is essentially unimproved and devoted to one of the following categories of uses: Preservation of Natural Resources; Managed Production of Resources; Outdoor Recreation; and, Protection of the Public Health and Safety." As such, outdoor recreational activities including hunting, bike riding, walking, and bird watching can take place in agricultural areas.

An analysis of the projects' consistency with the General Plan goals and objectives relevant to the projects is provided in Table 4.10-1, Project Consistency with Applicable Plan Policies. A detailed analysis of the project's consistency with the General Plan goals, objectives and policies regarding Agriculture is provided in Section 4.2 Agriculture and Forestry Resources of this EIR. While this EIR analyzes the project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Planning Commission and Board of Supervisors retain authority for the determination of the project's consistency with the General Plan.

Applicable Policies	Consistency Determination	Analysis				
Imperial County General Plan, Land Use Element						
Public Facilities, Objective 8.7. Ensure the development, improvement, timing, and location of community sewer, water, and drainage facilities will meet the needs of existing communities and new developing areas.	Consistent	The projects include the necessary supporting infrastructure and would not require new community-based infrastructure. The projects would be required to construct supporting drainage consistent with County requirements and mitigation measures prescribed in Section 4.9 Hydrology/Water Quality of the EIR. Water would be required for solar panel washing and fire protection and would be provided by the Imperial Irrigation District (IID). The project will obtain metered Temporary Water Service from the Westside Main Canal to fill water trucks on an as needed basis. This service would likely shift to metered General Industrial Water Service once the facility is operational to allow for periodic washing of the PV modules. The proposed projects would not require an operations and maintenance building. Therefore, no septic or other wastewater disposal systems would be required for the projects.				
Public Facilities, Objective 8.8. Ensure that the siting of future facilities for the transmission of electricity, gas, and telecommunications is compatible with the environment and County regulation.	Consistent	With the approval of a CUP and associated conditions, the projects would be a permitted use within the agricultural land use designation and associated zoning designation. Furthermore, the project sites are located within a proposed Renewable Energy/Geothermal overlay zone. This Renewable Energy overlay zone category provides the greatest range of opportunities for future development of renewable energy, while preserving and protecting agricultural, natural, and cultural resources.				
Public Facilities, Objective 8.9. Require necessary public utility rights-of-way when appropriate.	Consistent	The projects will not require the dedication of necessary right- of-way (ROW) to facilitate the placement of electrical distribution and transmission infrastructure. However, the DESF site will require several road abandonments and lot merger to create a single lot/parcel. The roadway abandonments will not affect access or impact traffic. The relinquishment of these easements and lot merger are necessary to create one contiguous site.				

TABLE 4.10-1. Project Consistency with Applicable Plan Policies



	Consistency	
Applicable Policies	Determination	Analysis
Protection of Environmental	Consistent	Due to the minimal grading of the site during construction and
Resources, Objective 9.6.		limited travel over the site during operations, local vegetation is
the Imperial County Air Quality		suppression. Furthermore, dust suppression will be
Attainment Plan (AQAP) in land		implemented including the use of water and soil binders during
use planning decisions and as		construction. Chapter 4.3. Air Quality, discusses the projects'
amended.		consistency with the AQAP in more detail.
Imperial County General Plan,	Circulation and Sc	enic Highways Element
Safe, Convenient, and Efficient Transportation System, Objective 1.1. Maintain and improve the existing road and highway network, while providing for future expansion and improvement based on travel demand and the development of alternative travel modes.	Consistent	The projects would include limited operational vehicle trips once constructed and would not be expected to reduce the current level of service (LOS) at affected intersections, roadway segments, and highways. The projects do not propose any forms of residential or commercial development and therefore would not require new forms of alternative transportation to minimize impacts to existing roadways.
Safe, Convenient, and Efficient Transportation System, Objective 1.2. Require a traffic analysis for any new development which may have a significant impact on County roads.	Consistent	Both projects are located in remote areas that do not have congested roadways. The only time that projects would generate any noticeable traffic is during the 36-week construction period. Once the projects are completed, they would only intermittently generate a few trips per day. Since the construction phase of the project is forecast to generate less than 100 peak hour trips (PCEs) and 148 daily trips (PCEs), no detailed traffic study is required based on Imperial County guidelines .However, as discussed in Chapter 4.13, Transportation and Traffic, a traffic study was prepared for the projects and demonstrate that no capacity-related traffic impacts are anticipated as a result of the projects.
Imperial County General Plan,	Noise Element	
Noise Environment. Objective 1.3. Control noise levels at the source where feasible.	Consistent	The proposed location of the projects' solar facilities generally avoids the placement of new structures in proximity to noise- sensitive uses. In instances where construction-related and operational noise would occur in closer proximity to noise sensitive land uses (e.g. less than 500 feet), the County would condition the projects to maintain conformance with County noise standards.
Project/Land Use Planning. Goal 2: Review Proposed Actions for noise impacts and require design which will provide acceptable indoor and outdoor noise environments.	Consistent	As discussed in Section 4.11, Noise and Vibration, the projects would be required to comply with the County's noise standards during both construction and operation.
Long Range Planning. Goal 3: Provide for environmental noise analysis inclusion in long range planning activities which affect the County.	Consistent	The EIR contains a noise analysis that considers and evaluates long-term noise impacts related to project operations. As discussed in Section 4.11, Noise and Vibration, the projects would result in less than significant noise impacts.
Imperial County General Plan,	Conservation and	Open Space Element
Conservation of Environmental Resources for Future Generations Objective 1.5 Provide for the most beneficial use of land based upon recognition of natural constraints.		The solar field site parcels would be converted from underutilized vacant land to a solar energy facility. The proposed projects would provide a beneficial use of the land by creating local jobs during construction and to a lesser degree during operation. Section I(C) of the Imperial County General Plan Geothermal/Alternative Energy and Transmission Element explains that the County adopted the element after determining that the benefits of alternative energy development in the County include: 1) Fiscal benefit of expanded property tax



Applicable Policies	Consistency Determination	Analysis
		revenues; 2) Fiscal benefit of sales tax revenues from purchase of goods and services; 3) Royalty and lease benefits to local landowners and County; 4) Social and fiscal benefits from increased economic activity and employment opportunities; 5) Improvements in technology to reduce costs of electrical generation; 6) Potential air quality improvement by displacement of fossil-fueled generated electricity with geothermal/alternative energy power which does not add to the Greenhouse effect; 7) Contributes toward meeting the State of California's Renewables Portfolio Standard (RPS). In addition, the generation of 5 MWac of renewable electrical energy is a benefit that would otherwise be generated by non- renewable fossil fuels. Therefore, the proposed projects are consistent with this objective. See Appendix M, Economic Impact Analysis of this EIR for a further evaluation of the
Duran wating of Distantiant	Ormaintent	economic impacts of the projects.
Preservation of Biological Resources. Goal 2: The County will preserve the integrity, function, productivity, and long- term viability of environmentally sensitive habitats, and plant and animal species.	Consistent	A biological resources survey was conducted for the project area. As discussed in Section 4.4, Biological Resources, there are potentially significant biological resources located within the project sites. However, with the implementation of mitigation in Section 4.4, Biological Resources, these impacts are reduced to a level less than significant.
Preservation of Cultural Resources. Objective 3.1 Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	A cultural resources records search and survey was conducted for the project area. As discussed in Section 4.5, Cultural Resources, there are previously recorded cultural resources found within DWSF. However, with the implementation of mitigation in Section 4.5, Cultural Resources, these impacts are reduced to a level less than significant. No cultural resources were discovered within DESF.
Preservation of Agricultural Lands. Goal 4: The County will actively conserve and maintain contiguous farmlands and prime soil areas to maintain economic vitality and the unique lifestyle of the Imperial Valley.	Consistent	The project sites do not contain prime farmland or farmland of statewide importance. As discussed in Section 4.2, Agricultural Resources, the LESA scores for the projects are below 39 points. Therefore, the project sites are not considered to have significant agricultural resources. Therefore, development of the DESF and DWSF sites would result in no impact to important farmlands. Please refer to Section 4.2, Agricultural Resources, which provides a more detailed analysis of the projects' consistency with applicable agricultural goals and objectives.
Conservation of Energy Sources. Goal 6: The County shall seek to achieve maximum conservation practices and maximum development of renewable alternative sources of energy.	Consistent	The projects entail the construction and operation of a solar energy facility, which is considered an alternative source of energy.
Conservation of Energy Sources. Objective 6.2 Encourage the utilization of alternative passive and renewable energy resources.	Consistent	The projects consist of the construction and operation of a solar energy facility, which is considered an alternative source of energy. With implementation of the projects, a new source of solar energy would be identified.
Conservation of Energy Sources. Objective 6.6 Encourage compatibility with National and State energy goals and city and community general plans.	Consistent	The projects are consistent with California Public Utilities Code § 399.11 et seq., "Increasing the Diversity, Reliability, Public Health and Environmental Benefits of the Energy Mix." California's electric utility companies are required to use renewable energy to produce 20 percent of their power by 2010 and 33 percent by 2020. The projects would contribute toward this goal.

	Consistency	
Applicable Policies	Determination	Analysis
Imperial County General Plan,	Geothermal/Altern	ative Energy and Transmission Element
Imperial County General Plan, Agricultural Lands and Biological Resources. Objective 2.3. Utilize existing easements or right-of-way and follow field boundaries for electric and liquid transmission lines.	Geothermal/Altern Consistent	ative Energy and Transmission Element Electricity generated by DESF would be interconnected to the IID electrical distribution system at an existing IID 12kV distribution line (Pole Number T18700) that runs north-south along Broadway Avenue by way of a gen-tie line that would cross Brown Avenue and run east-west along the southern boundary of the DESF site. Electricity generated by DWSF would be interconnected to the IID electrical distribution system at an existing IID 12kV distribution line (Pole Number T-51071) that runs north-south along the eastern edge of the project site along Carriso Avenue and within the existing 140-foot wide IID transmission easement on the DWSF site. The electricity generated by the projects would be transferred to IID's Dixieland Substation. Please refer to Section 4.2, Agricultural Resources, for a description of existing agricultural resources within the project area and a discussion of potential impacts attributable to the projects. A biological resources report has been prepared for these projects, which is summarized in Section 4.4, Biological Resources, along with potential impacts attributable to the projects. With incorporation of mitigation identified in Sections
		projects. With incorporation of mitigation identified in Sections 4.2, Agricultural Resources and 4.4, Biological Resources, less than significant impacts would result.
Development of Geothermal/ Alternative Energy Resources. Geal 1. The County of Imperial supports and encourages the full, orderly, and efficient development of geothermal/alternative energy resources while at the same time preserving and enhancing where possible agricultural, biological, human, and recreational resources.	Consistent	With the approval of all CUPs and discretionary permits, the proposed projects would be an allowable use within the existing land use and zoning designations. In addition, the projects would promote Imperial County's renewable energy policies and would be consistent with the County's goal, as stated in its April 20, 2010 proclamation.
Development of Geothermal/Alternative Energy Resources. Objective 1.1. Design for the co-location of energy facilities through the designation of "energy park" zones to increase certainty and facilitate power generation development and to provide for efficient use of land resources.	Consistent	See response above.
Imperial County General Plan,	Renewable Energy	and Transmission Element
Objective 1.5: Require appropriate mitigation and monitoring for environmental issues associated with developing renewable energy facilities	Consistent	Please refer to Section 4.2, Agricultural Resources, for a description of existing agricultural resources within the project area and a discussion of potential impacts attributable to the projects. A biological resources report has been prepared for these projects, which is summarized in Section 4.4, Biological Resources, along with potential impacts attributable to the projects. With incorporation of mitigation identified in Sections 4.2, Agricultural Resources and 4.4, Biological Resources, less than significant impacts would result. A biological resources report has been prepared for these projects, which is summarized in Section 4.4, Biological Resources, less than significant impacts would result. A biological resources report has been prepared for these projects, which is summarized in Section 4.4, Biological Resources, along with potential impacts attributable to the projects. With incorporation of mitigation identified in Sections 4.4, Biological Resources, along with potential impacts attributable to the projects. With incorporation of mitigation identified in Sections 4.4, Biological Resources, along with potential impacts attributable to the projects. With incorporation of mitigation identified in Sections 4.4, Biological Resources, less than significant impacts would result.



Applicable Policies	Consistency Determination	Analysis
Objective 1.7 Assure that development of renewable energy facilities and transmission lines comply with Imperial County Air Pollution Control District's regulations and mitigation measures.	Consistent	Due to the minimal grading of the site during construction and limited travel over the site during operations, local vegetation is anticipated to remain largely intact which will assist in dust suppression. Furthermore, dust suppression will be implemented including the use of water and soil binders during construction. Chapter 4.3, Air Quality, discusses the projects' consistency with the ICAPCD in more detail.
Objective 2.1: To the extent practicable, maximize utilization of IID's transmission capacity in existing easements or rights-of- way. Encourage the location of all major transmission lines within designated corridors easements, and rights-of-way.	Consistent	The projects involve the construction and operation of new renewable energy infrastructure that would interconnect with other transmission infrastructure thereby maximizing the use of existing facilities. The project sites will be interconnected to IID's electrical distribution systems at existing IID12kV distribution lines (Pole No. T-51071 and T-18700).
Goal 8: Develop overlay zones that will facilitate the development of renewable energy resources while preserving and protecting agricultural, natural, and cultural resources. Development of overlay zones shall include coordination with Federal, State, County, Tribal governments, educational entities, the public and local industries.	Consistent	As shown in Figure 3-3, the project sites are located within a proposed Renewable Energy/Geothermal overlay zone. Benefits associated with the development of renewable energy as identified by the Renewable Energy and Transmission Element is the minimization of impacts to the local community, agricultural and sensitive environmental resources; including the reduction of greenhouse gases. Review and approval of the projects and associated discretionary permits will require coordination among Federal, State, County, Tribal governments, educational entities, the pubic and local industries.
Imperial County Land Use Con	npatibility Plan	
Safety Objective 2.1. The intent of land use safety compatibility criteria is to minimize the risks associated with an off-airport accident or emergency landing.	Consistent	The project sites are not located within a designated ALUCP area.
Southern California Area of Go	overnments Region	al Comprehensive Plan and Regional Transportation Plan
Objective 3.05: Encourage patterns of urban development and land use which reduce costs on infrastructure construction and make better use of existing facilities.	Consistent	The projects involve the construction and operation of new renewable energy infrastructure that would interconnect with existing IID electrical transmission infrastructure thereby maximizing the use of existing facilities. The projects would not involve new forms of urban development that could other increase demands for existing infrastructure.
Objective 3.14: Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.	Consistent	The projects do not propose an increase in urban densities along regional commuter rail, transit systems, and activity centers and is not in proximity to these areas.
Objective 3.16: Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.	Consistent	The projects are located in an agriculturally designated portion of unincorporated Imperial County and would not discourage new development in and around existing activity centers, transportation corridors, underutilized infrastructure systems, or areas in need of recycling and redevelopment.
Objective 3.17: Support and encourage settlement patterns which contain a range of urban densities.	Consistent	The project would not increase urban densities because the projects consist of new renewable energy infrastructure and not residential or commercial development.



Applicable Policies	Consistency Determination	Analysis
Objective 3.18: Encourage planned development in locations least likely to cause adverse environmental impact.	Consistent	The projects are not characterized as "Planned Development" and are appropriately located to minimize adverse impacts to sensitive lands uses and take advantage of anticipated utility infrastructure needs.
RTP G6: Encourage land use and growth patterns that complement our transportation investments and improve the cost-effectiveness of expenditures.	Consistent	See discussion under Policy 3.16 above.
GV P1.1: Encourage transportation investments and land use decisions that are mutually supportive.	Consistent	See discussion under Policy 3.16 above.
GV P4.2: Focus development in urban centers and existing cities.	Consistent	The projects consist of new renewable energy infrastructure and do not include residential or commercial forms of development that should otherwise be directed toward urban centers or existing cities.
GV P4.3: Develop strategies to accommodate growth that uses resources efficiently, eliminate pollution and significantly reduce waste.	Consistent	See discussion under Policy 3.16 above.

Source: Imperial County General Plan 2008, as amended, SCAG Regional Comprehensive Plan and Regional Transportation Plan 2008.

County of Imperial Land Use Ordinance

The County's Land Use Ordinance provides the physical land use planning criteria for development within the jurisdiction of the County. As depicted in Figure 4.10-1, the project sites are zoned General Agriculture (A-2). The purpose of the A-2 zoning designation is to "designate areas that are suitable and intended primarily for agricultural uses (limited) and agricultural related compatible uses" (County of Imperial 1998). Uses in the A-2 zoning designation are limited primarily to agricultural-related uses and agricultural activities that are compatible with agricultural uses.

Sections 90508.02 and of the Land Use Ordinance identify the permitted and conditional uses within the A-2 zoning designation. Uses identified as conditionally permitted require a Conditional Use Permit (CUP), which is subject to the discretionary approval of the County Board of Supervisors (Board) per a recommendation by the County Planning Commission. The projects include several uses identified as conditionally permitted within the A-2 zone. These uses include facilities for the transmission of electrical energy (100-200 kV); solar energy plants; and solar energy electrical generators. Sections 90508.07 of the Land Use Ordinance limits the height of all non-residential structures within the A-2 zone to 120 feet. Specifically, Sections 90508.07 (C) states, "Non-Residential structures and commercial communication towers shall not exceed one hundred twenty (120) feet in height, and shall meet ALUC Plan requirements."

County of Imperial Right to Farm Ordinance No. 1031

The County of Imperial Right to Farm Ordinance (No. 1031) was approved by the County Board of Supervisors on August 7, 1990. The purpose and intent of the Ordinance is to reduce the loss to the County of its agricultural resources by clarifying the circumstances under which agricultural operations may be considered a nuisance. The Ordinance permits operation of properly conducted agricultural operations within the County. The Ordinance promotes a good neighbor policy by disclosing to purchasers and users of adjacent properties the potential problems and inconveniences associated with agricultural operations.



Imperial County Airport Land Use Compatibility Plan

The eastern border of the project area is located approximately 6.0 miles southwest of the Naval Air Facility El Centro. According to the Imperial County Airport Land Use Compatibility Plan (ALUCP) for Naval Air Facility El Centro, no portion of the project area is located within the Naval Air Facility El Centro land use capability zones (County of Imperial ALUCP 1996). The Navel Air Facility El Centro Compatibility Zones are derived from the Air Installation Compatible Use Zones (AICUZ) developed by the Navy for the air base. The Suggested Land Use Compatibility criteria in the AICUZ are consistent with ALUCP. Criteria of the ALUCP will take precedence over the AICUZ if any discrepancies are to occur.

4.10.1.2 Existing Conditions

DESF consists of three parcels totaling 21 acres. The DESF project site is generally located between the Westside Main Canal to the east and the Dixieland Substation to the west with W. Evan Hewes Highway to the south. Primary and secondary access to DESF is via W. Evan Hewes Highway to Brown Road. The DESF project consists of the following APNs: 051-047-001, 051-035-001, and 051-035-002. DESF is generally level and is currently vacant desert land. As shown in Figure 4.10-1, the on-site zoning designation is A-2.

DWSF consists of one parcel totaling 29 acres. DWSF is generally bounded by W. Evan Hewes Highway to the south, vacant land to the west and north, and the Dixieland Substation on the east. The Imperial Lakes Water Ski Community is located approximately 1,500 west of the DWSF project site. Primary and secondary access to the DWSF is via W. Evan Hewes Highway to Carriso Avenue. Carriso Avenue extends north of W. Evan Hewes Highway along the eastern perimeter of the site. The Imperial Irrigation District's (IID) existing electrical distribution line runs north-south along the eastern edge of the project site along Carriso Avenue and within the existing 140-foot wide IID transmission easement. The DWSF project consists of the following APN: 034-390-026. As shown in Figure 4.10-1, the on-site zoning designation is A-2. DWSF is generally level and is currently vacant desert land.

Electricity generated by DESF would be interconnected to the IID electrical distribution system at an existing IID 12kV distribution line (Pole Number T-18700) that runs north-south along Broadway Avenue by way of a gen-tie line that would cross Brown Avenue and run east-west along the southern boundary of the DESF site. Electricity generated by DWSF would be interconnected to the IID electrical distribution system at an existing IID 12kV distribution line (Pole Number T-51071) that runs north-south along the eastern edge of the project site along Carriso Avenue and within the existing 140-foot wide IID transmission easement on the DWSF site. The electricity generated by the projects would be transferred to IID's Dixieland Substation. The point of interconnection(s) is depicted on Figure 3-4.

4.10.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to land use and planning, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

4.10.2.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to land use and planning are considered significant if any of the following occur:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating a significant environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.



4.10.2.2 Methodology

This analysis evaluates the projects' consistency with applicable federal, state, and local land uses plans and policies. In order to analyze land-use consistency and land-use impacts, the following approach was employed:

- The projects were reviewed relative to the land-use assumptions, policies, and designations of the Imperial County General Plan and applicable land-use plans, policies, and regulations; and
- The projects were reviewed to identify any potential conflicts between the proposed land uses and existing or proposed land uses in the vicinity.

In some instances, the land use for the project poses potential physical environmental consequences, such as traffic. In these cases, the consequences are discussed in the specific section of this EIR that focuses on that issue. Conceptual site plans for the projects were also used to evaluate potential impacts. These conceptual exhibits are provided in Figures 3-5 and 3-7.

Given that the projects involve the potential construction and operation of solar energy facilities and supporting infrastructure that would be able to take advantage of regional transmission infrastructure and favorable market demands, the projects would not include a residential or commercial component that could be subject to future blight conditions. For this reason, this analysis would not provide further consideration of issues relating to future urban decay or urban blight.

4.10.2.3 Impact Analysis

IMPACTPhysically Divide an Established Community.4.10-1The projects would not physically divide an established community.

Dixieland East Solar Farm and Dixieland West Solar Farm

The projects are located in a sparsely populated, agriculturally zoned portion of Imperial County. On and off-site uses are comprised of irrigated agriculture with isolated residential structures scattered sparsely throughout the project area. The nearest residences to the DESF site are east of the canal along Foxglove Street, and in a trailer located at the northwest corner of the West Evan Hewes Highway and Canal Street. Another single family residence adjacent to DESF is approximately 120 feet west of the western edge of the site, adjacent to the IID substation. Approximately 1,500 feet west of DWSF is the Imperial Lakes Water Ski Community which includes 20 residences surrounding two man-made lakes. The land to the west of the canal, including the projects sites, is zoned for agricultural uses; however, a majority of the land is underutilized, vacant land. The nearest area of actively cultivated agricultural croplands is situated on the east side of Westside Main Canal, approximately 0.3 miles from the eastern boundary of DESF. As a result, the implementation of the projects would not divide an established community. The nearest residentially designated land uses are located over four miles east in the community of Seeley. For these reasons, no significant impact would result

Mitigation Measure(s)

No mitigation measures are required.



IMPACT Conflict with Applicable Land Use Plan, Policies, or Regulations.

4.10-2 The projects could conflict with an applicable land-use plan, policy, or regulation of an agency with jurisdiction over the projects (including, but not limited to the general plan, airport land use plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Dixieland East Solar Farm and Dixieland West Solar Farm

The County's General Plan applies to the solar energy facility and supporting infrastructure portions associated with the projects. These components are located within the jurisdiction of the County of Imperial. Solar energy facilities are not specifically referenced in the Land Use Element of the General Plan, other than a statement in the Imperial County Land Use Element that "Electrical and other energy generating facilities are heavy industrial uses, except geothermal, hydroelectric, wind, solar facilities may be regulated differently than other types of power plants by implementing zoning." However, the Land Use Element recognizes that geothermal plants, a similar use to the extent that it represents a renewable energy resource, are permitted uses within the "Agriculture" land use category, subject to approval of a Conditional Use Permit (CUP) and environmental review. In this context, with the approval of a CUP and completion of a supporting environmental analysis, as provided in this EIR, the projects' solar facilities are allowed under as a conditionally permitted use.

As discussed previously in this section, Imperial County has received funding from the CEC Renewable Energy and Conservation Planning Grant to amend and update the County's General Plan in order to facilitate future development of renewable energy projects. As part of the CEC grant, the 2006 Geothermal/Alternative Energy and Transmission Element and 1993 Conservation/Open Space Element will be updated. The County has recently prepared an update to the existing Geothermal/Alternative Energy and Transmission Element of its General Plan, called the Renewable Energy and Transmission Element. <u>The County approved the Renewable Energy and Transmission Element in October 2015. This Element is still in draft form and pending adoption. Although CEQA does not require an analysis of draft plans, a A consistency analysis of the project with the Renewable Energy and Transmission Element is provided in Table 4.10-1. As shown in Table 4.10-1, if adopted, the proposed projects would be generally consistent with the goals and objectives of the Renewable Energy and Transmission Element.</u>

Development of the solar facility is subject to the County's zoning ordinance. Pursuant to Title 9, Division 5, Chapter 8, "Solar energy electrical generator," "Electrical power generating plant," "Major facilities relating to the generation and transmission of electrical energy," and "Resource extraction and energy development," are uses that are permitted in the A-2 zone subject to approval of a CUP from the County.

The Land Use Compatibility Matrix (see Table 4.10-1 of the Land Use Element) identifies land designated as "Agriculture" as compatible with lands zoned A-2. As described above, the project facilities are a conditionally permitted use under the A-2 zone, and, therefore, are considered consistent with the Agriculture General Plan land use designation. As a result, no General Plan land use amendment would be required for construction and operation of the solar facility. In this context and based on the findings in Table 4.10-1, which presents a summary determination of the consistency of the projects with the relevant plans and polices, the projects are generally consistent with the County's General Plan, Land Use Element, and **no significant impact** would occur.

Compatibility with Adjacent Uses

The solar energy facility portions of the projects are not in proximity to urban areas and are generally surrounded by vacant desert land. However, as shown in Figure 4.3-1, Sensitive Receptors, the nearest residence (a mobile home) is adjacent to the DESF site to the east, 175 feet from the project boundary where construction equipment would be used. Eight more residences (four houses and four mobile homes) are located east of the project across the Westside Main Canal with the closest construction noise approximately 350 feet from the nearest residence. South of the DWSF site are two rural residences, with the nearest located approximately 350 feet from the project. The Imperial Lakes Water Ski Community) is located west of DWSF. This development includes 20 residences (mobile homes). The



eastern boundary of the Imperial Lakes Water Ski Community is approximately 1,500 feet from the DWSF western boundary. No residences are located immediately to the north. As shown, sensitive uses that are generally located at distances of greater than 1,000 feet from proposed facilities and, therefore, unlikely to result in nuisance-related impacts, such as noise, glare, or access disruptions that could otherwise conflict with adjacent uses (see Sections 4.1, Aesthetics, 4.3, Air Quality, 4.8, Hazards and Hazardous Materials, and 4.11, Noise and Vibration). Noise associated with solar panel operation (e.g., tracking) would also meet the County's noise ordinance requirements at the projects' property lines. Based on these considerations and the fact that the projects are an allowable use within the applicable agricultural zoning designation, the projects would result in **less than significant** land use conflicts with adjacent uses.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Conflict with an Adopted Habitat Conservation Plan or Natural Communities Conservation 4.10-3 *Plan.*

The projects would not conflict with any applicable habitat conservation plan or natural community conservation plan.

Dixieland East Solar Farm and Dixieland West Solar Farm

The project sites are not within the boundaries of any adopted habitat conservation plan (HCP) (16 USC §1539) or natural community conservation plan (NCCP) (Cal. Fish & Game Code §2800 et seq.). The County is not within the boundary of any adopted HCP or NCCP. Based on these considerations, the project solar energy facilities and supporting infrastructure would not conflict with any HCP or NCCP and would result in **no significant impact**.

Mitigation Measure

No mitigation measures are required.

4.10.3 Decommissioning/ Restoration and Residual Impacts

Decommissioning/Restoration

No impacts to land use and planning are anticipated to occur during decommissioning and restoration of the project sites after their 20 year life. Decommissioning and restoration would not physically divide an established community or conflict with any applicable land use or habitat conservation plan. Through each projects decommissioning and subsequent restoration to pre-project conditions, the uses of the project sites (agricultural) would remain consistent with the General Plan and zoning designations of the sites, which allow agricultural uses. Therefore, **no impact** is identified and no mitigation is required.

Residual

With the approval of a CUP and reclamation plan to address post-project decommissioning, the projects would generally be consistent with applicable federal, state, regional, and local plans and policies. Likewise, the projects would not conflict with the provisions of an adopted HCP or NCCP. Based on these circumstances, the projects would not result in any residual significant and unmitigable land use impacts.



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4.11 NOISE AND VIBRATION

This section provides a description of the existing ambient noise environment for the project area and describes applicable federal, state, and local regulations (Section 4.11.1). Potential noise or vibration impacts associated with the project-related facilities, as described in Chapter 3.0, Project Description, are considered in Section 4.11.2 and, if necessary, mitigation is proposed based on the anticipated level of significance. Section 4.11.3 concludes by describing significant residential impacts following the application of mitigation, if any. The noise and vibration impact assessment in Section 4.11.2 provides an evaluation of potential adverse effects based on criteria derived from the California Environmental Quality Act (CEQA) Guidelines and an analysis completed in the Construction Noise Memo, prepared by HDR Engineering (HDR 2015), included in Appendix J.

4.11.1 Environmental Setting

Noise is defined as unwanted sound. Pressure waves traveling through air exert a force registered by the human ear as sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level), which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. Consequently, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 hertz (Hz) and above 5,000 Hz to imitate the human ear's decreased sensitivity to low and extremely high frequencies. This emulation of the human ear's frequency sensitivity is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A weighting follows an international standard method of frequency de-emphasis and is typically applied to community noise measurements. In practice, the specific sound level from a source is measured using a meter incorporating an electrical filter corresponding to the A-weighting curve. All noise levels reported are A-weighted unless otherwise stated.

Noise Exposure and Community Noise

Community noise varies continuously over a period of time with respect to the sound sources contributing to the community noise environment. Community noise is primarily the product of many distant noise sources that constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. Community noise is constantly changing throughout the day due to short duration single event noise sources, such as aircraft flyovers, vehicle passbys, and sirens. These successive additions of sound to the community noise environment vary the community noise level from instant to instant. This requires the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below (Caltrans 1998):

- L_{eq}: the equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
- L_{max}: the instantaneous maximum noise level for a specified period of time.
- L_{dn}: 24-hour day and night A-weighed noise exposure level which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dB to take into account the greater annoyance of nighttime noises. Similar to L_{dn}, Community Noise Equivalent Level (CNEL) adds a 5 dBA "penalty" for the evening hours between 7 p.m. and 10 p.m. in addition to a 10 dBA penalty between the hours of 10 p.m. and 7 a.m.



Effects of Noise on People

The effects of noise on people can be placed in three categories:

- 1. Subjective effects of annoyance, nuisance, dissatisfaction;
- 2. Interference with activities such as speech, sleep, learning; and
- 3. Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial settings can experience noise in the last category. A satisfactory method for measuring the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction does not exist. However, a wide variation in individual thresholds of annoyance does exist, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted; i.e., the "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise would be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur (Caltrans 1998):

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a nonlinear fashion hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather they combine logarithmically. For example, if two identical noise sources produce noise levels of 50 dB, the combined sound level would be 53 dB, not 100 dB. Because of this sound characteristic, if there are two noise emission sources, one producing a noise level greater than 9 dB than the other, the contribution of the quieter noise source is negligible and the sum of the noise sources is that of the louder noise source.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dBA for hard sites and 7.5 dBA for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement (Caltrans 1998).

The project area is characterized as a desert landscape and, therefore, soft surfaces are generally present throughout.



4.11.1.1 Regulatory Setting

This section presents federal, state, and local laws, plans, and regulations governing noise levels and allowable limits applicable to the projects.

Federal

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 Code of Federal Regulations (CFR), Part 205, Subpart B. The federal truck passby noise standard is 80 dB at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers. In addition to noise standards for individual vehicles, under regulations established by the U.S. Department of Transportation's Federal Highway Administration (FHWA), noise abatement must be considered for certain federal or federally-funded projects. Abatement is an issue for new highways or significant modification of an existing freeway. The agency must determine if the project would create a substantial increase in noise or if the predicted noise levels approach or exceed the Noise Abatement Criteria.

State

The state has also established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (California Code of Regulations, Title 24). The noise insulation standards set forth an interior standard of L_{dn} 45 dB for any habitable room. They also require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than L_{dn} 60 dB. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

The State of California General Plan Guidelines, published by the Governor's Office of Planning and Research (OPR) in 1998, also provides guidance for the acceptability of projects within specific $CNEL/L_{dn}$ contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution. The County of Imperial has utilized the adjustment factors provided and has modified the state's Land Use Compatibility standards for the purpose of implementing the Noise Element of its General Plan. Table 4.11-1 summarizes the acceptable and unacceptable community noise exposure limits for various land use categories as currently defined by the State of California. These community noise exposure limits are also incorporated into the County of Imperial General Plan Noise Element.

Local

County of Imperial General Plan

The County of Imperial General Plan Noise Element identifies and defines existing and future environmental noise levels from sources of noise within or adjacent to the County of Imperial; establishes goals and objectives to address noise impacts, and provides Implementation Programs to implement adopted goals and objectives. Table 4.11-2 summarizes the projects' consistency with the applicable General Plan noise policies. While this Environmental Impact Report (EIR) analyzes the projects' consistency with the General Plan pursuant to State California Environmental Quality Act (CEQA) Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Noise Impact Zones. A Noise Impact Zone is an area that is likely to be exposed to significant noise. The County of Imperial defines a Noise Impact Zone as an area which may be exposed to noise greater than 60 dB CNEL or 75 dB $L_{eq}(1)$.



Land L	Jse	Community Noise Exposure – Ldn or CNEL (dBA)							
Catego	ory	50	55	60	65	70	75	80	
Residential									
Transient Lod Motel, Hotel	lging –								
Schools, Libra Churches, Ho Nursing Home	aries, ospitals, es								
Auditorium, C Hall, Amphith	oncert eaters								
Sports Arena, Spectator Spo	Outdoor orts								
Playgrounds, Neighborhood	l Parks								
Golf Courses, Stables, Wate Recreation, Cemeteries	Riding er								
Office Building Business, Col and Professio	gs, mmercial Inal								
Industrial, Manufacturing Utilities, Agric	g, ulture								
	Normally Acceptable		Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.						
	Condi Acce	Conditionally Acceptable Incl		New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design.					
	Nor Unacc	mally ceptable	New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.						
Clearly Unacceptable New construction or development generally should not be undertaken.			ertaken.						

TABLE 4.11-1. LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS

Source: OPR 1998; Imperial County General Plan 2008, as amended.

General Plan Policies	Consistency with General Plan	Analysis
1. Acoustical Analysis of proposed projects. The County shall require the analysis of proposed discretionary projects, which may generate excessive noise, or which may be impacted by existing excessive noise levels.	Consistent	Under existing conditions, the ambient noise environment is characterized as relatively quiet with peak noise levels influenced by vehicular traffic and off-site agricultural operations. Given that the projects are not characterized as a sensitive land use, project facilities would be unaffected by existing noise levels. The project facilities would be constructed within areas zoned for agricultural use with noise levels up to 70 dBA identified as normally acceptable. Project operations are expected to produce noise levels that would not exceed County standards and, hence impacts are expected to be less than significant. This EIR provides an analysis of the potential short- and long-term noise impacts of the projects. As discussed, short-term and long-term noise levels were found to be less than significant.
2. Noise/Land Use Compatibility. Where acoustical analysis of a proposed project is required, the County shall identify and evaluate potential noise/land use conflicts that could result from the implementation of the project. Projects which may result in noise levels that exceed the "Normally Acceptable" criteria of the Noise/Land Use Compatibility Guidelines shall include mitigation measures to eliminate or reduce the adverse noise impacts to an acceptable level.	Consistent	Noise levels associated with project operations are unlikely to exceed noise limits for the A-2 zone. See Section 4.11.1.2 for additional discussion.
4. Interior Noise Environment. Where acoustical analysis of a proposed project is required, the County shall identify and evaluate projects to ensure compliance to the California (Title 24) interior noise standards and the additional requirements of this Element.	Consistent	As described under General Plan Noise Policy 1, short-term and long-term noise impacts would be minimized through the implementation of the prescribed mitigation. Noise levels associated with project operations would be unlikely to exceed noise limits for the A-2 zone.
5. New Noise Generating projects. The County shall identify and evaluate projects which have the potential to generate noise in excess of the Property Line Noise Limits. An acoustical analysis must be submitted which demonstrates the project's compliance.	Consistent	As described under General Plan Noise Policy 1, short-term and long-term noise impacts would be minimized through the implementation of the prescribed mitigation. Noise levels associated with project operations would be unlikely to exceed noise limits for the A-2 zone.
6. Projects Which Generate Off-site Traffic Noise. The acoustical analysis shall identify and evaluate projects which will generate traffic and increase noise levels on off-site roadways. If the project site has the potential to cause a significant noise impact to sensitive receptors along those roadways, the acoustical analysis report shall consider noise reduction measures to reduce the impact to a level less than significant.	Consistent	As described in Chapter 3, the projects would involve a minimal number of operational related vehicle trips and therefore, is unlikely to produce any increase in traffic noise levels on local roadways.

Source: Imperial County General Plan Noise Element.



The County of Imperial has established the following interior noise standards to be considered in acoustical analyses:

- The interior noise standard for detached single family dwellings shall be 45 dB CNEL; and
- The interior noise standard for schools, libraries, offices and other noise-sensitive areas where the occupancy is normally only in the day time, shall be 50 dB averaged over a one-hour period (L_{eq}(1)).

Construction Noise Standards

Construction noise, from a single piece of equipment or a combination of equipment, shall not exceed 75 dB L_{eq} when averaged over an eight (8) hour period, and measured at the nearest sensitive receptor. This standard assumes a construction period, relative to an individual receptor of days or weeks.

Construction equipment operation shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No construction operations are permitted on Sundays or holidays.

County of Imperial Noise Ordinance

Noise generating sources in Imperial County are regulated under the County of Imperial Codified Ordinances, Title 9, Division 7 (Noise Abatement and Control). Noise limits are established in Chapter 2 of this ordinance. Under Section 90702.00 of this rule, 70 dB is the normally acceptable limit for the Industrial, Manufacturing, Utilities, and Agricultural category of land use (Table 4.11-3).

Land Use Zone	Time Period	Noise Level, Leq 1-hour
R-1 Residential	Night (10 p.m. to 7 a.m.) Day (7 a.m. to 10 p.m.)	45 dBA 50 dBA
R-2 Residential	Night (10 p.m. to 7 a.m.) Day (7 a.m. to 10 p.m.)	50 dBA 55 dBA
R-3, R-4, & all other residential	Night (10 p.m. to 7 a.m.) Day (7 a.m. to 10 p.m.)	50 dBA 55 dBA
Commercial Night (10 p.m. to 7 a.m.) Day (7 a.m. to 10 p.m.)		55 dBA 60 dBA
Manufacturing, other industrial, agricultural, and extraction industry	Anytime	70 dBA
Industrial	Anytime	75 dBA

 TABLE 4-.11-3. IMPERIAL COUNTY EXTERIOR NOISE STANDARDS

Source: Imperial County Municipal Code Section 90702.00.

Imperial County Right-to-Farm Ordinance

In recognition of the role of agriculture in the county, the County of Imperial has adopted a "right-to-farm" ordinance (County of Imperial Codified Ordinances, Division 2, Title 6: Right to Farm). A "right-to-farm" ordinance creates a legal presumption that ongoing standard farming practices are not a nuisance to adjoining residences and requires a disclosure to land owners near agricultural land operations or areas zoned for agricultural purposes. The disclosure advises persons regarding potential discomfort and inconvenience that may occur from operating machinery as a result of conforming and accepted agricultural operations.

4.11.1.2 Existing Conditions

The project sites are designated as Agriculture under the County's General Plan (as amended through 2008). The project sites are located within the General Agriculture (A-2) zoning designation (as shown in



Figure 4.10-1, General Plan Land Use and Zoning Designations). Additional surrounding zoning designations include; Heavy Agriculture (A-3), General Agriculture Rural Zone (A-2), General Agricultural Rural Zone (A-2-R), Government/Special Public (GS), Specific Plan Area (SPA), which includes a Recreational Zone (F), Medium Commercial Pre-Existing (C2-PE), and Medium Industrial (M-2).

Surrounding land uses consist of vacant desert land, as well as scattered rural lots, agriculture, and approximately 31 residences. The nearest sensitive receptor is located 175 feet (between the project sites) from the nearest project boundary. A total of eight residences are located east of the projects across the Westside Main Canal, with the nearest sensitive receptor located 350 feet from the nearest construction area. Two residences are located approximately 350 feet south of the project sites. The Imperial Lakes Water Ski Community is located west of DWSF. This development includes 20 residences (mobile homes). The eastern boundary of the Imperial Lakes Water Ski Community is approximately 1,500 feet from the DWSF western boundary. The Centinela State Prison is located approximately two miles northwest.

All of these residences are located on tax lots (i.e., parcels) Agricultural (A-2) except for the Imperial Lakes Water Ski Community which is zoned SPA. The SPA is zoned Recreational, which does not require specific noise requirements (Imperial Lakes Specific Plan 1995). For the purposes of assigning noise level limits based on zoning, A-2 is limited to 70 dBA Leq 1-hour day and evening hours and SPA is limited to 55 dBA Leq 1-hour during the daytime and 50 dBA Leq 1-hour at night. These noise limits refer to noise and land use characteristics and do not apply to construction noise.

The predominant source of noise in the project area includes vehicular traffic on local roads and highways, and off-site agricultural operations. The use of heavy-duty equipment such as front-end loaders, tractors, forklifts, and diesel-powered trucks are common noise sources typically associated with agricultural uses. Agricultural operational equipment can reach maximum levels of approximately 84 dBA at 50 feet (Caltrans 2013). With the soft surfaces characterizing the agricultural landscape, these noise levels attenuate to approximately 60 dBA at distances over 800 feet. Based on field observations of the project sites, the existing noise environment is generally influenced by the noise produced from the following sources:

- Vehicle traffic along West Evan Hewes Highway, and
- Agricultural operations occurring east of the project sites.

Based on the availability of a previously prepared noise study in conjunction with a recently approved Imperial Solar Energy Center West Project (Imperial County 2011), which is approximately 0.55 miles south of the project area, the proximity of the measurements, and timing in which the data was collected (2010), the previously-acquired noise measurements are considered to be representative of existing conditions and appropriate for use in this EIR. Based on this circumstance, these measures were used to characterize ambient noise conditions for the project sites.

The ambient noise levels within the project area are generally representative of an extremely rural agricultural setting with quiet ambient noise levels of 40.3 dBA L_{eq} and periodic peak noise levels of 58.0 L_{max} from far-field agricultural operations (Imperial County 2011). In addition to site-specific ambient noise sampling, the EIR prepared for the Imperial Solar Energy Center West Project included traffic modeling of the local roadway network. The existing (2010) traffic noise levels in the Imperial Energy Center Solar West study area were established in terms of the CNEL metric by modeling the roadway for the current traffic and speed characteristics. In general, the 60 CNEL contour for all roadways within the project study areas, which includes Evan Hewes Highway, extends 42 feet or less from the roadway centerline (see Imperial Solar Energy Center West Final Environmental Impact Report/Environmental Assessment (EIR/EA), Section 3.8, page 3.8-11).



Sensitive Receptors

Although noise pollution can affect all segments of the population, certain groups and land uses are considered more sensitive to ambient noise levels than others, sensitivity being a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. Children, the elderly, and the chronically or acutely ill are the most sensitive population groups..

Residential land uses are also generally more sensitive to noise than commercial and industrial land uses. Sensitive residential uses adjacent to the project area (within approximately 1,500 feet) are shown on Figure 4.3-1 (see Section 4.3, Air Quality), and include the following:

- **Dixieland East Solar Farm** The nearest residence (a mobile home) is adjacent to the DESF site to the east, 175 feet from the project boundary where construction equipment would be used. Eight more residences (four houses and four mobile homes) are located east of the project across the Westside Main Canal with the closest construction noise approximately 350 feet from the nearest residence.
- Dixieland West Solar Farm South of the project are two rural residences, with the nearest located approximately 350 feet from the project. The Imperial Lakes Water Ski Community is located west of DWSF. This development includes 20 residences (mobile homes). The eastern boundary of the Imperial Lakes Water Ski Community is approximately 1,500 feet from the DWSF western boundary. No residences are located immediately to the north.

Groundborne Vibration

Groundborne vibration consists of rapidly fluctuating motions or waves, which are also measured in decibels. Construction activities, train operations, and street traffic are some of the most common external sources of vibration that can be perceptible inside structures. Differences in subsurface geologic conditions and distance from the source of vibration will result in different vibration levels characterized by different frequencies and intensities. In all cases, vibration amplitudes will decrease with increasing distance. High frequency vibrations reduce much more rapidly than low frequencies, so that low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances.

Human response to vibration is difficult to quantify. Vibration can be felt or heard well below the levels that produce any damage to structures. The duration of the event has an effect on human response, as does frequency. Generally, as the duration and vibration frequency increase, the potential for adverse human response increases. While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings may be perceived as motion of building surfaces or rattling of windows, items on shelves, and pictures hanging on walls. Vibration of building components can also take the form of an audible low-frequency rumbling noise, which is referred to as groundborne noise.

Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when the structure and the source of vibration are connected by foundations or utilities, such as sewer and water pipes. To assess a project's vibration impacts, the Caltrans 2004 vibration impact assessment, entitled the "Transportation and Construction-Induced Vibration Guidance Manual," was utilized. The guidance manual uses peak particle velocity (PPV) to quantify vibration amplitude. PPV is defined as the maximum instantaneous peak of the vibratory motion (Caltrans 2004). As a point of reference, a strongly perceived transient source is 0.90 PPV at 25 feet, and 0.10 PPV at 25 feet for an intermittent source. Table 4.11-4 identifies acceptable vibration limits for transportation and construction projects based on guidelines prepared by Caltrans.



Structure and Condition	Transient Sources PPV at 25 feet (in/sec)	Continuous/Frequent Intermittent Sources PPV at 25 feet (in/sec)
Extremely fragile historic buildings, ruins, and ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures with gypsum board walls/ceilings	1.00	0.50
Modern Industrial/commercial buildings	2.00	0.50
Strongly perceptible	0.90	0.10

TABLE 4.11-4. TYPICAL GROUNDBORNE VIBRATION THRESHOLDS

Source: Caltrans 2004.

Notes: PPV = Peak particle velocity In/sec = Inches per second

4.11.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to noise and vibration, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

4.11.2.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to noise and vibration would be considered significant if any of the following occurs:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels;
- Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

4.11.2.2 Methodology

The significance of project-related noise impacts was determined by comparing estimated project-related noise levels, based on published literature (Imperial Solar Energy Center West EIR/EA, Imperial County 2011), and noise analysis completed by HDR Engineering for construction related noise (Appendix J of this EIR). For the purposes of analysis, an increase of at least 3 dBA is usually required before most people will perceive a change in noise levels, and an increase of 5 dBA is required before the change will be clearly noticeable. Based on the County's criteria, exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance would occur if:



- 1. Post-project noise levels will be greater than the "conditionally acceptable," "normally acceptable," or "clearly acceptable" noise levels as shown in Table 4.11-4 for Industrial, Manufacturing, Utilities and Agriculture Uses (or generally greater than 70 dB); or
- 2. Construction noise will be greater than 75 dB L_{eq} over an eight-hour period from the nearest sensitive receptor (see Figure 4.3-1, Sensitive Receptors).

The conceptual site plans (Figures 3-5 and 3-7) for the projects were used in considering distances from sensitive receptor locations. The project area is characterized as a desert landscape and, therefore, soft surfaces are generally present throughout. Given the soft surfaces present on the project sites, noise attenuation was assumed to be 7.5 dBA for stationary sources and 4 dBA for line sources (e.g., vehicles). As provided in Chapter 3, Project Description, the projects would generate a low volume of daily vehicle trips under project operations and these trips would be distributed throughout the project sites. Based on this circumstance and experience with projects of similar land use and development intensity, project-related increases traffic noise levels on off-site roadways were assumed to be less than 3.0 dBA as measured from residential receptor locations illustrated in Figure 4.3-1.

4.11.2.3 Impact Analysis

IMPACT Temporary, Short-Term Exposure of Sensitive Receptors to Increased Equipment Noise 4.11-1 *from Project Construction.*

The projects could expose persons to or generate noise levels in excess of applicable County standards.

Dixieland East Solar Farm and Dixieland West Solar Farm

Construction of the projects would occur in rural portions of southwestern Imperial County. Over the entire span of the combined 53-acre area, which comprises the two project sites, there is only one residence that would be located within 200 feet of project construction and five residences are located between 300 to 500 feet from the project boundary. The remaining 20 residences (mobile homes) that are part of the Imperial Lakes Water Ski Community are located over 1,500 feet west of DWSF. Construction activities would generally involve grading, earth movement, stockpiling, steel work, and truck hauling. Similar activities would occur upon site decommissioning. These activities would generate temporary and intermittent noise at and near the project sites. Noise levels would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. In addition, construction-related material haul trips would raise ambient noise levels along haul routes depending on the number of haul trips and the types of vehicles used. Table 4.11-5 shows typical noise levels produced by various types of construction equipment at a distance of 50 feet.

Equipment	Noise Level, L _{max} at 50 feet	Composite Noise Level (L _{eq 1-hour}) at 50 feet
Vibratory Post driver	85	
Crawler/Tractor/Dozer	82	
Dump, Concrete, Tender Truck	79	
Forklift/aerial lift/boom	81	
Generator/Compressor	81	
Grader/Scraper	85	87
Roller/Compactor	80	
Tractor/Loader/Backhoe	79	
Vibratory Plate (handheld)	83	
Flatbed Truck	74	
Water Truck	79	

TABLE 4.11-5. TYPICAL NOISE LEVELS FOR CONSTRUCTION EQUIPMENT

Source: Federal Highway Administration Roadway Construction Noise Model, FHWA 2006.



In addition to actual solar array grid installation, staging areas located at various points within the project sites and directed out of a more centralized location. These areas would be used to store PV solar panels, equipment, and other construction related material. In some cases, staging areas would be used for the duration of project construction. In other cases, the area would be moved to another location within the project sites to minimize the hauling distances and avoid disrupting any one area for an extended period of time. Staging areas could be noticeable sources of noise, particularly if equipment is accessed and moved during evening hours when individuals are more sensitive to intrusive noise.

Construction sound will attenuate with increased distance from the sound sources. Composite Leq _{1-hour} sound levels at distances out to a distance of 1,000 feet were calculated assuming spherical free-field spreading, see Table 4.11-6. Other factors, such as vegetation, ground effects, terrain and obstacles, such as buildings, will act to limit the impact of construction noise levels, but were not considered in the evaluation. Actual received sound levels will fluctuate, depending on the construction activity, equipment type, and separation distances between source and receiver. As a general construction practice, functional mufflers will be maintained on all equipment to maintain noise levels as low as reasonably achievable.

Construction noise from the proposed projects was analyzed at the nearest sensitive receptors. Although the County's noise limits do not apply to construction noise, they do provide some context against which conclusions can be drawn. For the nearest sensitive receptors, the highest construction noise levels would be experienced when construction is nearest, identified as the mobile home residence located 175 feet east of the DESF site. At this distance, the received sound level would be 73 dBA Leq _{1-hour}; however, this sound level would only be experienced for a day or two at most since the construction is not stationary and will move throughout the project area. The sound level calculated at the project centroid would be considered an average for the duration of construction and would be approximately 1,300 feet from the nearest residential area. At this distance the received sound level would be 49 dBA Leq _{1-hour}. Because construction would be restricted to daytime hours over a period of 36 weeks for the entire project, the use of muffled equipment shall be kept in good working order, and would not exceed applicable regulatory limits. The associated construction noise impacts would be considered less than significant. Although no significant noise impact has been identified, Mitigation Measures NOI-1 through NOI-4 would ensure that noise would not rise to a level of significance.

Distance from Project Construction (feet)	Noise Level, L _{eq 1-hour} at 50 feet
175*	73
200	71
300**	66
400	63
500	60
600	58
700	57
800	55
900	54
1000	52

FABLE 4.11-6. CONSTRUCTION NOISE LEVELS AT DISTAL	NCE
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Source: HDR, 2015 (Appendix J)

Notes: * Distance to nearest sensitive receptor. **Distance to second closest sensitive receptor.

Mitigation Measure(s)

The following mitigation measures are required for DESF and DWSF.

NOI-1 Limit Construction Hours. Construction and decommissioning activities shall be limited to daylight hours between 7 a.m. and 7 p.m. Monday through Friday, and 9 a.m. and



5 p.m. on Saturday for those construction areas that are located within 2,500 feet of noise-sensitive receptors. No construction shall be allowed on Sundays or holidays.

- **NOI-2 Minimize Noise from Construction Equipment and Staging.** Construction equipment noise shall be minimized during project construction and decommissioning by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools, where used. The project applicant's construction specifications shall also require that the contractor select staging areas as far as feasibly possible from sensitive receptors. All contractor specifications shall include a requirement that equipment located within 2,500 feet of noise-sensitive receptors shall be equipped with noise reducing engine housings or other noise reducing technology such that noise levels are no more 85 dBA at 50 feet. If necessary the line of sight between the equipment and nearby sensitive receptors shall be blocked by portable acoustic barriers and/or shields to reduce noise levels.
- NOI-3 Prohibit Non-Essential Noise Sources During Construction. No amplified sources (e.g., stereo "boom boxes") shall be used in the vicinity of residences during project construction or decommissioning.
- **NOI-4 Provide a Mechanism for Filing Noise Complaints.** The project applicant shall provide a mechanism for residents, businesses, and agencies to register complaints with the County if construction noise levels are overly intrusive or construction occurs outside the required hours.

Significance After Mitigation

Although no significant noise impact has been identified, Mitigation Measures NOI-1 through NOI-4 would ensure that noise would not rise to a level of significance. Implementation of the above mitigation measures would reduce construction noise, so that construction and decommissioning-related noise levels would not exceed the Imperial County standards regarding construction noise.

IMPACTExposure to and/or Generation of Groundborne Vibration.4.11-2The projects would not expose persons to or generate excessive groundborne vibration or
aroundborne noise levels.

Dixieland East Solar Farm and Dixieland West Solar Farm

Construction and site decommissioning activities associated with the projects would result in groundborne vibration, with the primary sources including solar array installation, grading activities, and other construction vehicle movements. In addressing the range of potential issues associated with ground vibration, there are generally two forms of impacts that should be addressed: (1) annoyance to individuals or the community; and (2) damage to buildings. Vibration from typical construction activities is typically below the threshold of perception when the activity is more than about 50 feet from the receiver. However, given that construction activities would not encroach within 100 feet of existing residential structures, the level of vibration impact at these receptors would be **less than significant**.

In relation to the potential for structural damage at adjacent residential and agricultural structures, PPV is the maximum instantaneous positive or negative peak of the vibration signal, measured as a distance per time (such as millimeters or inches per second). The PPV measurement has been used historically to evaluate shock-wave type vibrations from actions like blasting, pile driving, and mining activities, and their relationship to building damage.

As provided in Table 4.11-4, the level of potential impact resulting from project construction is generally contingent on the structural composition of the buildings potentially affected. As shown in Table 4.11-4, new residential structures with gypsum board walls/ceilings have a PPV threshold of 1.0 inches per



second (in/sec), respectively and would be the types of structures most likely to be impacted by project construction activities. No historical structures are presented within or adjacent to the project sites. Given that construction activities would employ the use of equipment similar to those identified in Table 4.11-7, would not involve the use of blasting, and would be situated 100 feet or more from existing structures, project construction is unlikely to generate vibration levels in excess of the thresholds identified in Table 4.11-4. For this reason, groundborne vibration-related impacts during construction and site decommissioning are expected to be **less than significant**.

Equipment PPV at 25 feet (in/sec)	Equipment PPV at 25 feet (in/sec)
Blasting	1.13
Vibratory roller	0.210
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003

 TABLE 4.11-7. CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.

Mitigation Measure(s)

4.11-3

No mitigation measures are required.

IMPACT Permanent Increase in Ambient Noise Levels.

The projects could create a substantial permanent increase in ambient noise levels in the vicinity of new O&M and substation facilities.

Dixieland East Solar Farm and Dixieland West Solar Farm

As described in Section 4.11.1.2, the ambient noise levels within the project area are generally representative of an extremely rural agricultural setting with quiet ambient noise levels of 40.3 dBA L_{eq} and periodic peak noise levels of 58.0 L_{max} from far-field agricultural operations (Imperial County 2011).

The principle long-term, operational noise impacts resulting from the projects would include light duty vehicle traffic for maintenance operations, including solar panel washing, and low level of noise from high voltage transmission lines and transformers.

Operation of the solar facility would result in a minor increase in the use of motor vehicles, primarily associated with employees traveling to and from the facilities for routine maintenance and inspection activities. It is expected that no more than three part-time staff personnel would be on site at any one time for typical operation and maintenance of these facilities, most during typical working hours, 7 a.m.to 5 p.m. Assuming an average of one trip per day per employee, operation of the proposed facilities would result in a maximum of six round-trip employee trips per day. Due to the low volume of project-generated traffic, operation of the proposed facilities would not result in noticeable changes in the traffic noise along area roadways in relation to existing and projected roadway traffic volumes. As a result, long-term increases in traffic noise levels would be **less than significant**.

The projects would be required to comply with the County of Imperial Codified Ordinances Division 7 Noise Abatement and Control. This ordinance governs fixed operational noise within the project sites. Noise levels up to 70 dBA L_{dn} are identified as normally acceptable for the A-2 zone (see Table 4.11-1). The noise associated with operational facilities does not represent a significant noise source, and would involve less intensive activities and operation of equipment as compared to existing agricultural operations in the area. Furthermore, the noise generated during these collective operations would be



required to comply with the noise standards contained in the County's Noise Ordinance. This impact would be **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT	Airport Noise.
4.11-4	The projects would not result in the exposure of people residing or working in the project area to excessive noise levels from public and private airport operations.

Dixieland East Solar Farm and Dixieland West Solar Farm

The projects would not involve the construction of sensitive land uses. No O&M facilities are proposed that would expose people to excessive airport noise levels. The nearest airport or airstrip is located over six miles from the project sites; therefore, **no impact** is identified.

Mitigation Measure(s)

No mitigation measures are required.

4.11.3 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning activities would result in similar activities that are involved during construction such as grading, earth movement, stockpiling, steel work, and truck hauling. These activities would generate temporary and intermittent noise. Noise levels would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. Although no significant noise impact has been identified during construction, Mitigation Measures NOI-1 through NOI-4 would ensure that noise would not rise to a level of significance. Implementation of these mitigation measures would reduce construction noise, so that construction and decommissioning-related noise levels would not exceed the Imperial County standards regarding construction noise. Therefore, impacts are considered **less than significant**.

Given that decommissioning activities would employ the use of equipment similar to those identified in Table 4.11-7, would not involve the use of blasting, and would be situated 100 feet or more from existing structures, decommissioning is unlikely to generate vibration levels in excess of the thresholds identified in Table 4.11-4. For this reason, groundborne vibration-related impacts during site decommissioning are expected to be **less than significant**.

Residual

As described in this section, the projects do not result in significant noise impacts during construction. However, Mitigation Measures NOI-1 through NOI-4 have been added to ensure that noise would not rise to a level of significance. Construction and decommissioning noise impacts would be **less than significant.** The noise associated with operational facilities does not represent a significant noise source, and would involve less intensive activities and operation of equipment as compared to existing agricultural operations in the area. Furthermore, the noise generated during these collective operations would be required to comply with the noise standards contained in the County's Noise Ordinance. The projects are situated at a sufficient distance where the effects of construction related vibration would **not impact** adjacent receptors.



4.12 PUBLIC SERVICES

This section includes an evaluation of potential impacts for identified public services that could result from implementation of the proposed projects. Public services typically include fire protection, law enforcement, schools, and other public facilities such as parks, libraries, post offices. Each subsection includes descriptions of existing facilities, service standards, and potential environmental impacts resulting from implementation of the proposed projects, and mitigation measures where appropriate. Section 4.14, Utilities/Service Systems, of this environmental impact report (EIR) evaluates impacts related to water supply, wastewater, and other utilities. The impact assessment provides an evaluation of potential adverse effects to public services based on criteria derived form the California Environmental Quality Act (CEQA) Guidelines in conjunction with actions proposed in Chapter 3, Project Description.

The Initial Study/Notice of Preparation prepared for this EIR determined that the projects would not result in impacts to schools, parks and other public facilities (libraries and post offices). Therefore, these issue areas will not be discussed further. The Initial Study/Notice of Preparation (IS/NOP) is included in Appendix A of this EIR.

4.12.1 **Environmental Setting**

The project area is located in unincorporated Imperial County, east of the City of El Centro and just north of Interstate 8 (I-8). The project sites are located within the Imperial County Fire Department and Office of Emergency Services (ICFD/OES) and the Imperial County Sheriff Department's areas of service.

State

Fire Codes and Guidelines

The California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California (CBSC 2010). The Fire Code includes regulations regarding fireresistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

Local

Imperial County General Plan

The Imperial County General Plan Seismic and Public Safety Element contains goals and objectives that relate to fire protection and law enforcement pertinent to the proposed projects.

	Consistency with	
General Plan Policies	General Plan	Analysis
Goal 1: Include public health and safety considerations in land use planning.	Consistent	The project Conditional Use Permit (CUP) applications and site plans will be reviewed by the Imperial County Fire Department to ensure that all site facilities comply with state
Objective 1.8 Reduce fire hazards by the design of new developments.		Additionally, the project applicant has included site design measures into each of the projects to reduce the potential for fire hazards including on-site water tanks for the operations and maintenance, and sufficient turnaround areas to allow clearance for fire trucks per fire department standards (70 feet by 70 feet, and 20-foot-wide access road).



General Plan Policies	Consistency with General Plan	Analysis
Goal 2: Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property resulting from both natural and human-related phenomena.	Consistent	See response above for a discussion on how the projects would implement all state and local fire codes and provide site design measures to reduce the potential for fire hazards. With regards to public safety and security, the projects would include perimeter security fencing with cameras, and controlled access gates.
Objective 2.5 Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.		

Imperial County Office of Emergency Services – Multi-Hazard Mitigation Plan 2013

The Imperial County Fire Department (ICFD) is the local Office of Emergency services in Imperial County. The OES Coordinator is the County Fire Chief, who is assisted by an Assistant OES Coordinator who coordinates emergency operations activities, develops guidelines for emergency preparedness, response, recovery and mitigation to natural/man-made disasters, and technological disasters among all the jurisdictions. The jurisdictions include the cities of Brawley, Calexico, Calipatria, el Centro, Holtville, Imperial, and Westmoreland, the Imperial Irrigation District (IID) and the Imperial County Office of Education (ICEO). The Fire Department acts as the lead agency for the Imperial County Operational Area (OA) and provides leadership in all phases of developing the emergency management organization, including public education, training, EOC operations, interagency coordination, and plan development.

The 2013 Multi-Hazard Mitigation Plan (MHMP) is a comprehensive update of the 2009 MHMP. Partners included the IID and ICEO. The goal of the MHMP is to create a safer community by significantly reducing deaths, injuries, and other disaster losses cause by natural and human-caused hazards (Office of Environmental Services 2013). The MHMP complies with all federal, state and local laws guiding disaster management

County Evacuation Plans

As mentioned above, the Imperial County EOP provides guidance and procedures for the County to prepare for and respond to emergencies. The EOP designates the Sheriff's Department as having jurisdiction in an emergency involving evacuation within the unincorporated areas of the county and within contract cities.

4.12.1.2 Existing Conditions

Fire Protection Services

The project sites are located within the ICFD/OES area of service. ICFD/OES currently has seven fire stations serving the entire 4,500 square miles of unincorporated Imperial County. The stations are located in the following areas: Station 1, Imperial; Station 2, Heber; Station 3, Seeley; Station 4, Imperial (under contract with the City of Imperial); and Station 5, Palo Verde, Station 6 (Ocotillo), and Station 7 (Niland). The ICFD/OES currently has a total staff of 78 personnel with 8 staff personnel, 3 full-time suppression personnel, and 28 reserved personnel. All county stations are staffed 24 hours a day and 7 days a week with at least three fire fighters, except for Station 5, which has two persons 24/7 and now Station 7, which has two persons 24/7 and a supervisor from 8 a.m. to 5 p.m. (Imperial County Planning and Development 2015). The ICFD Emergency Units strive to respond immediately after receiving the initial tone for service. The actual response time would be determined by the area of response throughout the vast response area covered.



The closest fire station to the project sties is Station 3 at 1828 West Park in Seeley, California. This station is approximately 5 miles east of the project area.

Police Protection Services

Imperial County's sheriff's Department is responsible for police protection services in the unincorporated areas of Imperial County and the City of Holtville. The patrol function is divided between North County Patrol, South County Patrol, Palo Verde Patrol and Winterhaven Patrol. Deputies assigned to the Patrol Divisions are the "first responders" to a call for law enforcement service. The main patrol station is located in El Centro on Applestill Road. Sheriff substations are located in the communities of Brawley, Niland, Salton City, and Winterhaven with resident deputies located in the unincorporated community of Palo Verde. Under an existing mutual aid agreement, additional law enforcement services would be provided if and when required by all of the cities within the county as well as with Border Patrol and the California Highway Patrol (CHP). The Imperial County Sheriff's office has approximately 300 sworn, non-sworn, and civilian employees (Imperial County Planning and Development 2011) The CHP provides traffic regulation enforcement, emergency accident management, and service and assistance on state roadways and other major roadways in the unincorporated portions of Imperial County.

4.12.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to public services, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

4.12.2.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to public services are considered significant if the projects would result in the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Fire protection;
- Police protection;
- Schools;
- Parks; and
- Other public facilities.

As mentioned previously, it was determined through the preparation of an Initial Study that the projects would not result in impacts to schools, parks or other public facilities. Therefore, those issue areas will not be discussed further.

4.12.2.2 Methodology

Evaluation of potential fire and police service impacts of the proposed projects was based on consultation with the ICFD, Sheriff's Department and review of other development projects in the area.

4.12.2.3 Impact Analysis

IMPACT Increased Demand on the ICFD.

Implementation of the projects would not result in the need for additional fire protection services during construction and operational activities.



4.12-1

Dixieland East Solar Farm and Dixieland West Solar Farm

The projects would result in a minor increase in demand for fire protection services over existing levels. No operations and maintenance (O&M) buildings are being proposed. Additional auxiliary facilities would include lighting, grounding, backup uninterruptable power supply (UPS) systems and diesel power generators, fire and hazardous materials safety systems, security systems, chemical safety systems, and emergency response facilities. The facilities will maintain the required volume of water required for fire fighting, based on the number and sizes of structures located on the sites. As discussed in Chapter 3.0 Description, two (2) 10,000 gallon water tanks on each project site (total of four) will be provided on-site. The water tanks would be located near the primary entrance of each project site. Portable fire extinguishers will also be provided at various locations throughout DESF and DWSF. Both the access and service roads (along the perimeter of the project facilities) would have turnaround areas to allow clearance for fire trucks per fire department standards (70 feet by 70 feet, and 20-foot-wide perimeter access road). Additionally, fire protection for the projects will be provided by vegetation management programs as part of project design measures. As such, the projects would not result in a need for fire facility expansion. Decommissioning of the projects at the end of their 25 to 30-year life would occur through implementation of a required Reclamation Plan. These activities would not be anticipated to result in an increased need for fire protection services.

Imperial County requires payment of impact fees for new development projects. Fire Impact Fees are imposed pursuant to Ordinance 1418 §2 (2006), which was drafted in accordance with the County's TischlerBise Impact Fee Study. The ordinance has provisions for non-residential industrial projects based on square footage. The project applicant will be required to pay the fire protection services' impact fees. These fees would be included in the Conditions of Approval for the CUPs. No new fire stations or facilities would be required to serve the projects. Impacts would therefore be **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Increased Demand on the Imperial County Sheriff Department.

4.12-2

Implementation of the projects would not result in the need for additional police protection services during construction and operational activities.

Dixieland East Solar Farm and Dixieland West Solar Farm

The projects would result in a minor increase in demand for law enforcement protection services over existing levels. Emergency response times can vary due to the large patrol area of the County. Depending on the location of the deputy, response times can range from approximately five minutes to one hour; however, emergency calls involving public safety would take priority.

The projects do not include a residential component; therefore, it would not result in a substantial addition of residents to the Sheriff Department's service area. The combine projects would be staffed with up to three (3) part-time employees (for each site) to maintain the facilities as needed during normal daylight hours. The perimeter of the project facilities would be secured with low voltage security fencing (i.e., for security cameras and sensors), with barbed wire, and no less than six feet high along each public road. Access to each of the site locations would be provided using a 20-foot minimum swinging or sliding gate. Additionally, controlled access gates would be maintained at entrances into the each of the project site locations. Emergency response personnel would be provided with manual override capability in order to access the site facilities. A remotely monitored security system will be installed to discourage and record any incidents of vandalism or trespassing. With these features installed on-site, the security on the solar facilities would be adequate and would not require the addition of staff to the Sheriff's Department. As such, the projects would not result in a need for police facility expansion. Decommissioning of the projects at the end of their 25 to 30-year life would occur through implementation of a required


Reclamation Plan. These activities would not be anticipated to result in an increased need for police services.

Imperial County requires payment of impact fees for new development projects. Police services Impact Fees are imposed pursuant to Ordinance 1418 §2 (2006), which was drafted in accordance with the County's TischlerBise Impact Fee Study. The ordinance has provisions for non-residential industrial projects based on square footage. The project applicant will be required to pay the police protection services' impact fees. These fees would be included in the Conditions of Approval for the CUPs. Impacts would therefore be **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

4.12.3 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning and restoration of the project sites at the end of their 25 to 30-year life would occur and would not result in an increased need for fire and police protection services. These activities would be in the form of disassembling project components, and then restoring the sites to agricultural uses, both of which would not create an increase in demand for police or fire service beyond the level required for the proposed solar operations. Therefore, **no impact** is identified and no mitigation is required for this phase.

Residual

With payment of the development impact fees for fire and police protection services, project impacts would be **less than significant**. No mitigation is required, and no residual significant and unmitigated impacts would result.



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4.13 TRANSPORTATION/TRAFFIC

This section addresses the projects' impacts on traffic and the surrounding roadway network associated with construction and operation of the projects. The following discussion describes the existing environmental setting in the surrounding area, the existing federal, state, and local regulations regarding traffic, and an analysis of the potential impacts of the proposed projects. The *Traffic Assessment for: Project No. 1 SEPV Dixieland East 2MW Solar Photovoltaic Electricity Generating Facility, Project No. 2 – SEPV Dixieland West 3MW Solar Photovoltaic Electricity Generating Facility (October 19, 2015April 2015), completed by George Dunn Engineering, was used for this assessment and is included in Appendix K.*

4.13.1 Environmental Setting

The project area is located within the County of Imperial on privately owned, undeveloped agricultural land collectively encompassing 53 acres approximately 10 miles west of El Centro, California.

4.13.1.1 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the projects.

State

California Department of Transportation

The California Department of Transportation (Caltrans) manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Specifically, Caltrans is responsible for the design, construction, maintenance, and operation of the California State Highway System. Within the project area, Caltrans is responsible for maintaining and managing Interstate 8 (I-8). Specific thresholds for assessing project-related impacts on State highways are further discussed in Section 4.3.2.1.2 of this Chapter.

Regional Plans

2012-2035 Regional Transportation Plan/Sustainable Communities Strategy: Towards a Sustainable Future

On April 4, 2012, the Southern California Association of Governments (SCAG) adopted the 2012-2035 *Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future*. The RTP emphasizes the importance of system management, goods movement, and innovative transportation financing and identifies a regional investment framework to address the region's transportation and related challenges. The RTP also looks to strategies that preserve and enhance the existing transportation system and integrate land use into transportation planning.

SCAG is committed to integrated transportation and land use by creating a SCS as part of the RTP. The SCS integrates transportation, land use, housing, and environmental planning with the goal of reducing regional greenhouse gas (GHG) emissions, specifically to address Senate Bill (SB) 375. The RTP/SCS is a long-range regional transportation plan that provides a blueprint to coordinate the regional transportation and land use strategies to address mobility needs. Consistency with the RTP/SCS is addressed in Section 4.10, Land Use and Planning.



Local

County of Imperial Circulation and Scenic Highways Element

The Circulation and Scenic Highways Element identifies the location and extent of transportation routes and facilities. It is intended to meet the transportation needs of local residents and businesses, and as a source for regional coordination. The inclusion of Scenic Highways provides a means of protecting and enhancing scenic resources within highway corridors in Imperial County. The purpose of the Circulation and Scenic Highways Element is to provide a comprehensive document which contains the latest knowledge about the transportation needs of the County and the various modes available to meet these needs. Additionally, the purpose of this Element is to provide a means of protecting and enhancing scenic resources within both rural and urban scenic highway corridors.

Coordination across jurisdictional standards for road classification and design standards was identified as a crucial component to the 2008 update of the Circulation and Scenic Highways Element. The intent of this element is to provide a system of roads and streets that operate at a level of service "C" (LOS C) or better (Imperial County Planning and Development 2008).

Level of Service (LOS) is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured. LOS ranges from A through F, where LOS A represents the best operating conditions and LOS F represents the worst operating conditions. LOS A facilities are characterized as having free flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS F facilities are characterized as having forced flow with many stoppages and low operating needs. Additionally, with the growth of Imperial County, transportation management and systems management will be necessary to preserve and increase roadway "capacity." LOS standards are used to assess the performance of a street or highway system and the capacity of a roadway.

County of Imperial Bicycle Master Plan Update: Final Plan

In 2012, the County of Imperial adopted an updated Bicycle Master Plan to serve as the guiding document for the development of an integrated network of bicycle facilities and supporting programs designed to link the unincorporated areas and attractive land uses throughout the County. This document is an update to the previously adopted Countywide Bicycle Master Plan; and was prepared to accomplish the following goals:

- 1. To promote bicycling as a viable travel choice for users of all abilities in the County,
- 2. To provide a safe and comprehensive regional connected bikeway network,
- 3. To enhance environmental quality, public health, recreation and mobility benefits for the County through increased bicycling

The County of Imperial's General Plan, Circulation Element and Open Space Element, provide a solid planning basis for the Bicycle Master Plan. In spite of the fact that there are a limited number of bicycle facilities in Imperial County and no comprehensive bicycle system, there is a growing interest in cycling and numerous cyclists bike on a regular basis for both recreation and commuting to work and school.

4.13.1.2 Existing Conditions

This section presents the significance criteria used for considering project-related impacts, the methodology employed for the evaluation, and mitigation requirements, if necessary.

Existing Circulation Network

The following roadway classifications are derived from the County of Imperial General Plan Circulation and Scenic Highways Element:



Expressway. The main function of this classification is to provide regional and intra-county travel services. Features include high design standards with six travel lanes; wide landscaped medians; highly restricted access; provisions for public transit lands, including but not limited to, bus lanes, train lanes, or other mass transit type means; and no parking. Minimum right-of-way (ROW) is 210 feet consisting of three travel lanes per direction, a 56-foot median, and shoulders along both sides of the travel way. The ROW width is exclusive of necessary adjacent easements such as for the Imperial Irrigation District (IID) facilities as these vary. The minimum intersection spacing is one (1) mile. (Note: ROWs may be greater if the road segment also serves as a corridor for public utilities).

Prime Arterial. The main function of this classification is to provide regional, sub regional, and intracounty travel services. Features include high design standards with four to six travel lanes, raised and landscaped medians, highly restricted access, which in most cases will be a one (1) mile minimum, provisions for public transit lanes, including but not limited to bus lanes, train lanes, or other mass transit type means and no parking. The absolute minimum ROW without public transit lanes is 136 feet. ROW dimensions are specified in the standards for specific road segments. Please refer to the appropriate standards section (ROWs may be greater if the road segment also serves as a corridor for public utilities).

Minor Arterial. These roadways provide intra-county and sub regional service. Access and parking may be allowed, but closely restricted in such a manner as to ensure proper function of this roadway. Typical standards include the provision for four and six travel lanes with raised landscaped medians for added safety and efficiency by providing protected left turn lanes at selected locations. Some may also contain provisions for public transit lanes or other mass transit type means. Minimum ROW is 102 feet for four lanes and 126 feet for six lanes.

Major Collector (Collector). These roadways are designed to provide intra-county travel as a link between the long haul facilities and the collector/local facilities. Although it frequently provides direct access to abutting properties, that is not its primary purpose. Typical design features include provision for four travel lanes without a raised median and some may also contain provisions for public transit lanes or other mass transit type means. Minimum ROW is 84 feet. Parking is generally not permitted.

Minor Local Collector (Local Collector). This is designed to connect local streets with adjacent Collectors or the arterial street system. Design standards include provision for two travel lanes and parking, except in specific locations where parking is removed to provide a turn lane at intersections. Local Collector streets frequently provide direct access to abutting properties, although that should be avoided where feasible. Minimum ROW is 70 feet.

Residential Street. This street type includes residential cul-de-sac and loop streets and is designed to provide direct access to abutting properties and to give access from neighborhoods to the Local Street and Collector Street system. This classification should be discontinuous in alignment, such that through trips are discouraged. Typical design standards include provision for two travel lanes, parking on both sides, and direct driveway access. Minimum ROW is 60 feet.

Following is a brief description of the street segments within the vicinity of the project sites.

Brown Road is a two-lane north-south roadway that has a southern terminus at West Evan Hewes Highway to the south and Centinela State Prison to the north. Brown Road bisects the SEPV Dixieland East Project Site, which has two (2) primary access driveways and two (2) secondary access driveways along Brown Road. The Brown Road/West Evan Hewes Highway intersection is controlled by stop signs on the intersection approaches. Brown Road is classified as a local roadway.

Evan Hewes Highway (County Route S-80) is designated as a Prime Arterial in the Imperial County General Plan Circulation Element and Scenic Highway from Imperial Highway to El Centro. Within the project area, Evan Hewes Highway is constructed as a two-lane undivided east-west corridor, providing one lane of travel per direction. Based on Imperial County guidelines, this roadway has a LOS C capacity of 7,100 vehicles per day. 2010 average daily trips (ADT) for the highway were taken from the *Final EIR/EA for the proposed Imperial Solar Energy Center West project, July 2011*. The 2010 traffic volume



for Evan Hewes Highway was 865 ADT. No bike lanes or bus stops are provided, and parking is not permitted along either side of the road. The posted speed limit is 65 mph. Interstate 8 (I-8) runs parallel south of Evan Hewes Highway.

Dunaway Road is designated as a Major Collector in the Imperial County Circulation and Scenic Highway Element Plant. It is a two—lane undivided roadway that serves as the nearest I-8 Freeway Interchange to the project area. Based on Imperial County guidelines, this roadway has LOS C capacity of 7.100 vehicles per day. The 2010 traffic volume for Dunaway Road Evan was estimated at 751 ADT. No bike lanes or bus stops are provided, and parking is not permitted along either side of the road. The posted speed limit is 55 mph.

I-8 Freeway provides a primary east-west connection through Imperial County. It is a four-lane divided interstate highway, providing two lanes of travel per direction. A four-lane highway has a LOS C capacity of about 60,000 vehicles per day. 2010 traffic volumes for the freeway ranged from 12,300 to 14,200 ADT between Dunaway Road and Forrester Road.

Alternative/Public Transportation

Fixed Route Transportation

Imperial Valley Transit (IVT) is an inter-city fixed route bus system, subsidized by the Imperial Valley Association of Governments (IVAG), administered by the County Department of Public Works and operated by a public transit bus service. The service is wheelchair accessible and Americans with Disabilities Act (ADA) compliant. Existing ridership averages approximately 23,000 passengers a month.

Service is provided from 6:00 a.m. until 11:00 p.m. weekdays, and 6:00 a.m. to 6:00 p.m. on Saturdays, within the areas classified as the Primary Zone; a north-south axis throughout Brawley, Imperial Valley College (IVC), Imperial, El Centro, Heber and Calexico, and from 6:00am until 6:45pm in the Secondary Zones; outlying cities and communities of Niland, Calipatria, Westmorland, Seeley, and Holtville. The outlying Remote Zone communities east and west of the Salton Sea, including Desert Shores, Salton City, Salton Sea Beach, and the far eastern portion of the County, including Winterhaven, are served once a week, via Lifeline. The project sites are not within the Fixed Route Transportation system and therefore, would not receive regular bus service to the project sites or within the vicinity of the project sites.

Bicycle Facilities

The Highway Design Manual classifies bikeways into three types:

- Class I Bike Path Provides for bicycle travel on a right-of-way completely separated from the street
- Class II Bike Lane Provides a striped lane for one-way travel within the street
- Class III Bike Routes Provides routes that are signed but not striped

Although none of the roadway segments within proximity of the project sites are designated a bikeway classification, the County of Imperial Bicycle Master Plan Update lays out a framework for creating and expanding programs and improvements designed to increase bicycling activity in the County of Imperial. One Class II bicycle lane is proposed to traverse adjacent to the project area along Evan Hewes Highway.

Class II Bicycle Lane – Evan Hewes Highway. An 18.8 mile Class II bike lane beginning at Drew Road, where a Class II Bike Lane already exists, and ending at Imperial Highway is recommended as a future extension of bicycle infrastructure by the Imperial County Bicycle Master Plan. At Drew Road the bicycle lane would proceed west towards Huff Road, and continue into Ocotillo, splitting north and south at the Imperial Highway intersection.



Daily Street segment Levels of Service

As previously described, the project sites are located in rural settings with many of these being compacted dirt roads with no congestion. As prescribed in the Circulation and Scenic Highway Element, the intent of the County is to provide a system of roads and streets that operate at a LOS C or better (Imperial County Planning and Development, 2008).

4.13.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to transportation and traffic, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

4.13.2.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to transportation and traffic are considered significant if any of the following occur:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

4.13.2.1.1 County of Imperial

The County of Imperial does not have published significance criteria. However, the County General Plan does state that the LOS goal for intersections and roadway segments is to operate at LOS C or better. Therefore, if an intersection or segment degrades from LOS C or better to LOS D or worse with the addition of project traffic, the impact is considered significant. If the location operates at LOS D or worse with and without project traffic, the impact is considered significant if the project causes the intersection delta to increase by more than two (2) seconds, or the volume to capacity (V/C) ratio to increase by more than 0.02. V/C ratios provide a quantitative description of traffic conditions for signalized intersections. These amounts are consistent with those used in the County of Imperial in numerous traffic studies.

4.13.2.1.2 Caltrans

A project is considered to have a significant impact on Caltrans facilities if the new project traffic has decreased the operations of surrounding roadways by a defined threshold. If the project exceeds the thresholds addressed in the table below, then the project may be considered to have a significant project impact. A feasible mitigation measure will need to be identified to return the impact within the thresholds (pre-project + allowable increase) or the impact will be considered significant and unmitigated when



affecting any state highway facilities (Caltrans 2002). Within the project area, Caltrans is responsible for maintain and managing Interstate 8 (I-8), which is located approximately 1.3 miles south.

4.13.2.2 Methodology

Dixieland East Solar Farm and Dixieland West Solar Farm

The assessment evaluates the potential for the projects, as described in Chapter 3, Project Description, to assess the project trip generation created during and after construction. Quantitative analysis for the projects shows negligible trip generation upon completion of the construction phase of the projects. The projects will generate the most traffic during construction.

As indicated previously, a Traffic Assessment was prepared by George Dunn Engineering. The information obtained from the *Traffic Assessment for: Project No. 1 SEPV Dixieland East 2MW Solar Photovoltaic Electricity Generating Facility, Project No. 2 – SEPV Dixieland West 3MW Solar Photovoltaic Electricity Generating Facility (April 2015) was reviewed and summarized to identify potential environmental impacts to existing conditions. Since these projects are in close to proximity to one another and overall construction schedules, the traffic assessment for both project will be combined. Impacts associated with transportation/circulation that could result from project construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, and duration of project construction and related activities. It is estimated that the maximum number of employees working on the two solar projects are one time will be 40 employees during peak construction. Conceptual site plans for the projects were also used to evaluate potential impacts. These conceptual exhibits are provided in Figures 3-5 and 3-7.*

Project Trip Generation

With both DESF and DWSF under concurrent construction, as previously stated it is estimated that the maximum number of employees working both sites at one time will be 40 employees during peak construction. Construction is expected to commence mid 2016, with opening year planned for early 2017. Traffic assessments for both projects were combined due to proximity and overlap of construction schedules. To assess the construction year impacts to the projects, information was used from the *Final EIR/EA for the proposed Imperial Solar Energy Center West* project, July 2011. The project construction is ongoing and will be completed in 2016. 2015 traffic volumes were developed using 2010 traffic volumes and increasing for five years by a growth rate of 2.8 percent per year. The major roadways assessed were Evan Hewes Highway, Dunaway Road, and I-8. 2015 ADT estimates concluded that traffic for both Evan Hewes Highway and Dunaway Road were less than 1000 vehicles per day (VPD) and less than 3,100 VPD for I-8.

Since no specific land used in the ITE Trip Generation Manual, trip generation for the construction and operational phases of the project were developed by assessing: construction phasing and duration, construction workforce estimates, construction truck trip estimates, peak hour trip generation forecast, employee trips, truck trips and additional work related trips. These construction and operational phases of the project were developed as outlined below:

Construction Phasing and Duration. Project construction is anticipated to start mid-2016 for the proposed projects. For DESF, the entire process is estimated to take up to 22 weeks. For DWSF, the process will take up to 26 weeks. The projects will be constructed on a serial basis, meaning the time from construction start to finish will be 36 weeks. These peak construction times are not anticipated to occur at the same time.

Construction Workforce Estimates. The projects will be construction on a serial basis, meaning the time from construction start to finish will be 36 weeks. The SEPV Dixieland East Project will take 22 weeks to construct and the SEPV Dixieland West Project will take 26 weeks to complete. Peak construction times for each individual project will not occur at the same time.



The maximum number of employees working on the two solar projects at one time will be 40 employees. For purposes of the trip generation calculations, it is assumed that 28 employees will drive alone and 12 employees will arrive in two-person carpools.

Construction Truck Trip Estimates. DESF will require 120 truck trips over the course of the project with a maximum of 8 trucks per day. DWSF will require 180 truck trips over the course of the project, with a maximum of 12 trucks per day. The total number of truck over the 36-week construction overlap will be 300. As a works case scenario, the maximum daily truck trips generated by construction will be 20, assuming each project generated its maximum number of truck trips on a specific day; however this is not expected to occur.

The truck trip calculations below account for the heavier vehicles types such as trucks by converting truck trips to "passenger car equivalents". A rate of 2.2 passenger car equivalents (PCEs) per truck trip was used in this analysis. This conversation rate falls within the guidelines set for in the Highway Capacity Manual.

Construction of the project will require the periodic use and installation of heavy equipment and associated systems at various times within each construction phase. Heavy equipment will not be hauled to/from the project sites daily; it will be hauled in at the beginning of construction and hauled out upon completion of construction.

Peak Hour Trip Generation Forecast. For purposes of forecasting future peak hour trip generation, it is assumed that the majority of the daily project trips will occur during daylight hours.

It is assumed that each employee arrives prior to the start of the work shift and departs just after the work shift. It is also assumed that truck trips will occur randomly during daylight hours, Monday through Saturday. Based on these assumptions, daily and peak hour trip generation calculations are provided below.

Employee Trips. It is estimated that the maximum number of employees working on the SEPV Dixieland East and West projects at one time will be 40 employees.

• 28 employees will drive alone and 12 employees will carpool (2 to vehicle) = 34 inbound trips in the AM and 34 outbound trips in the PM

Due to the remote project location, employees would be expected to stay on-site during the lunch period.

• Total trips = 34 * 2 = 68 daily employee trips

Truck Trips. The maximum number of daily truck trips generated by construction will be 20, assuming each project generated its maximum number of truck trips on a specific day. These trips will likely occur randomly during the work day.

- 20 daily two-way truck trips = 40 one-way truck trips at a PCE of 2.2 = 88 PCE one-way truck trips per day.
- 88 PCE truck trips / 8-hour days = 11 PCE one-way truck trips during the AM peak hour and 11 PCE one-way truck trips during the PM peak hour.

Additional Work Related Trips. It is assumed that other trips associated with the activities of supervisors, inspectors and vendors would be equal to 20% of the employee trips and would occur randomly over the work day.

• 68 daily employee trips x 0.20 = 14 ancillary trips (PCEs) daily trips

Table 4.13-1 shows the forecast traffic generation expected from the project based on the information provided by the project proponent.



		AM Peak Hour			PM Peak Hour		
Land Use	Daily	Total	In	Out	Total	In	Out
Employee Trips*	68	34	34	0	34	0	34
Truck Trips (PCEs)	88	11	6	5	11	5	6
Ancillary Trips	14	2	1	1	2	1	1
NET Project Trips (PCEs)	148 <u>17</u> 0	47	41	6	47	6	41

TABLE 4.13-1- PROJECT TRAFFIC GENERATION

During the peak of projects construction, the projects will generate a total of 148 project trips daily (PCEs), including 47 trips (PCEs) during the traditional AM peak hours and 47 trips (PCEs) during the traditional PM peak hours on the adjacent roadways.

4.13.2.3 Impact Analysis

IMPACT Possible Conflict with Applicable Plan, Ordinance, or Policy.

The development of the project sites with the proposed projects would not cause a substantial increase in traffic affecting the efficiency of the circulation system; this includes all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, such as highways and freeways, pedestrian and bicycle paths, and mass transit.

Dixieland East Solar Farm and Dixieland West Solar Farm

Currently, there is no regular bus service to the general area and project related construction and operations and maintenance phases would not impact mass transit. During the construction phase of the projects, less than 100 peak hour trips (PCEs) and 148 daily trips (PCEs) are forecasted; therefore circulation specifically on Evan Hewes Highway may be minimally affected. However, the impacts would not increase traffic substantially and would only occur upon duration of construction. Future operations and maintenance of the projects could potentially impact proposed Class II Bike Lanes designated routes along Evan Hewes Highway. The projects, however, do not propose modifications be made to existing roadways serving future designated bikeway routes. Instead, the perimeter of the projects will be fenced-in along the project boundaries and would not interfere with potential future designated bike routes. Therefore, the DESF and DWSF projects would not impact potential future designated bike routes traversing through the project area and impacts to this issue area are identified as **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Possible Conflict with Applicable Congestion Management Program.

4.13-2

4.13-1

The construction and/or operation of the proposed projects within the project area would not exceed a level of service standard established by the County Congestion Management Agency for designated roads or highways.

Imperial County currently does not have a Congestion Management Agency (CMA) or an applicable Congestion Management Program (CMP). Therefore, traffic impact assessment criteria and information provided by the project proponent were used to conduct quantitative analysis to forecast traffic generation from the proposed projects. Additionally, information regarding current traffic volumes was taken from the Final EIR/EA for the proposed Imperial Solar Energy Center West project, July 2011. Imperial Solar energy Center is located approximately 1.5 miles southwest of the project area.



Dixieland East Solar Farm and Dixieland West Solar Farm

Since the ADTs on Evan Hewes Highway and Dunaway Road are considerably low, there remains the possibility that one of these two roadway segments could see an increase in daily trips by more than 8 percent, depending on the distribution of trip paths to and from the project area, scheduling, and staffing. As discussed in 4.13-1, during construction the project will generate less than 100 peak hour trips (PCEs) and 148 daily trips (PCEs); however this is considered worst case scenario. Therefore, the proposed project's impact would not degrade existing LOS since both roadways are lightly used and traffic volumes, even during construction of DESF and DWSF, would be well below the capacities of the roadways. Additionally, during operation, each facility will employ up to three individuals on a part-time basis to provide maintenance, repair, and other services required to ensure the facility continues generating energy over its lifetime. These workers will not be on-site on a daily basis, but only as-needed for panel washing and maintenance and repair activities. No capacity-related traffic impacts are anticipated as a result of this project. Therefore, the DESF and DWSF projects will not exceed the County's intent of providing a system of roads and streets which operate at a LOS C or better, during construction and/or operation. A **less than significant** impact is identified and no mitigation is required.

Mitigation Measure(s)

No mitigation measures are required.

IMPACTPossible Modification in Air Traffic Patterns or Traffic Levels.4.13-3Development of the proposed projects within the project area would not result in changes to air
traffic patterns or roadway traffic resulting in safety issues.

Dixieland East Solar Farm and Dixieland West Solar Farm

At their highest point of solar tracking during the day, the solar panels will be less than nine feet above the ground surface. Therefore they would not be at a height that would interfere with air traffic patterns. For the DWSF site, the PV panels would be arranged in continuous rows of up to approximately 466 feet in length, with 14 feet between each row (per fire department requirements). The arrangement for the PV panels on the DESF site varies due to the site's irregular shape. The continuous rows of panels are approximately 197 feet to 253 feet in length with 14 feet between each row. To accommodate emergency access, PV panels would be spaced to maintain proper clearance. An additional 20-foot-wide, all weather access road would be integrated into the project design and located within each solar array grid to facilitate access to the inverter modules and transformers. These access roads would consist of an unpaved roadway surface within an aggregate base and capable of facilitating emergency vehicle access. Additionally, a 20-foot-wide all weather gravel road would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. These access roads would not increase hazards due to design features or incompatible uses. Therefore, a **less than significant** impact is identified for this issue area.

The proposed project would require relinquishments of several easements:

- Abandonment of the public service easement alley intermediate between the two existing parcels (APNs 051-035-001 and 051-035-002) on the west side of Brown Road.
- Abandonment of the northern 20 feet of Potrero Avenue from the east line of Brown Road to the west line of Canal Street.
- Abandonment of the northern 20 feet of Cocupa Avenue from the east line of Broadway Avenue to the west line of Brown Road.
- Abandonment of the eastern 40 feet of Broadway Avenue from the south line of Del Norte Avenue to the north line of Cocupa Avenue.



These roads are compacted dirt roadways that do not generate high volumes of traffic. A lot merger would also be required to merge the boundaries of the small internal lots and the land created through the approval of the road abandonment process. Requisition of these easements will not generate increased volumes of traffic. Therefore, a **less than significant** impact is identified for this issue area.

The project area is not located within an Airport Compatibility Land Use Plan (ALUCP) or within a "sphere of influence" for the Naval Air Facility El Centro.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Possible Safety Hazard from Design Features.

4.13-4 Design features related to the project sites would not result in hazards or incompatible land uses.

Dixieland East Solar Farm and Dixieland West Solar Farm

As discussed under impact 4.13-3, the project does include the relinquishment of several easements; however, these easements are compacted dirt roadways that do not generate high volumes of traffic. A 20-foot wide access road with an additional 20 foot wide all weather access road would be implemented into the project design and located within each solar array grid to facilitate access to the inverter modules and transformers. Additionally, a 20-foot wide all weather gravel road would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles.

As a condition of approval for the projects, the project applicant will be required to conduct a preconstruction roadway condition survey to document existing roadway conditions prior to the commencement of construction activities and prepare a report to determine the minimum road design criteria to support anticipated project traffic, and whether existing roadways comply. These access roads would not increase hazards due to design features or incompatible uses and a **less than significant** impact is identified.

An encroachment permit from Imperial County Public Works for the proposed primary and secondary driveways to the projects off Brown Road will be submitted. The route of transmission facilities may traverse County of Imperial owned land to allow a proposed Generation-Tie line to cross Brown Road; therefore submittal of an encroachment permit is required. With the issuance of the required Public Works encroachment permit, the transmission facilities would have **less than significant** impacts related to safety hazards.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Possible Safety Hazard from Inadequate Emergency Access.

Development of the project sites with the proposed projects would not result in inadequate emergency access.

Dixieland East Solar Farm and Dixieland West Solar Farm

20-foot wide access roads will be implemented into the project design for each project. These roads would be located within each solar array grid to facilitate access to the inverter modules and transformers. These access roads would consist of an unpaved roadway surface within an aggregate base and capable of facilitating emergency vehicle access. Additionally, a 20-foot-wide all weather gravel road would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. Therefore, a **less than significant impact** is identified for this issue area.



4.13-5

Mitigation Measure(s)

No mitigation measures are required.

IMPACTPossible Conflict with Adopted Policies, Plans or Programs.4.13-6Development of the project sites with the proposed projects would not result in a decrease in
performance or safety of adopted policies, plans programs for public transit, bicycle, or pedestrian
facilities.

Dixieland East Solar Farm and Dixieland West Solar Farm

As stated previously, there currently is no regular bus service or bicycle infrastructure in the general area and project related construction and operations and maintenance phases would not impact alternative modes of transportation. According to the Imperial County Bicycle Master Plan, a future Class II bicycle lane is proposed along Evan Hewes Highway. Post construction, each facility will employ up to three (3) individuals on a part-time basis to provide maintenance, repair, and other services required to ensure the facility continues generating energy over its lifetime. These workers will not be on site on a daily basis, but only as-needed for panel washing and maintenance and repair activities. Future operations and maintenance of the project area could potentially impact the proposed bikeway. As discussed in impact 4.13-3, abandonment of portions of Cocupa, Potrero, and Broadway will be required in order to facilitate a lot merger of the small internal lots. However the project does not propose modifications to be made to existing roadways serving future designated bikeway routes.

As a condition of approval, the project applicant is required to enter into a Roadway Maintenance Agreement with the County of Imperial prior to the issuance of a grading permit. The applicant is responsible for maintaining proposed haul routes during construction and bringing roadways up to an appropriate minimum standard to handle anticipated project traffic. At a minimum roadway preparation is required for Brown Road.

The perimeter of each of the projects will be fenced-in along the project boundaries and would not interfere with potential future designated bike routes. The fence lines and project components will be setback from Evan Hewes Highway. The setbacks from the Evan Hewes Highway will be at least 400 feet for DESF and 240 feet for DWSF. Therefore, the projects would not impact potential future bike routes traversing through or adjacent to the project sites. Therefore, impacts to this issue area are identified as **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

4.13.3 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

This section included an analysis of construction traffic for the proposed projects. As presented above, construction traffic would not result in a significant impact to any of the project area intersections. A similar scenario would occur during the decommissioning and site restoration stage for each of the projects. ADT would be similar to or less than the ADT required for construction. Similarly, the decommissioning activities would not result in a significant impact related to modification of air traffic patterns, possible safety hazards, or possible conflicts with adopted policies, plans, or programs as the decommissioning and subsequent restoration would revert the project sites to agricultural uses. Therefore, decommissioning and restoration of the project sites would not generate traffic resulting in a significant impact to the circulation network. **No impact** is identified and no mitigation is required.



Residual

The construction and operation of the proposed projects would not result in direct impacts to intersections, roadway segments, and freeway segments. Therefore, less than significant impacts have been identified. No mitigation is required and no residual unmitigated impacts would occur with implementation of the projects.

4.14 UTILITIES/SERVICE SYSTEMS

This section includes an evaluation of potential impacts for identified Utilities/Service Systems that could result from implementation of the projects. Utilities/Service Systems include wastewater treatment facilities, storm drainage facilities, water supply and treatment, solid waste disposal, and energy consumption. The impact analysis provides an evaluation of potential impacts to Utilities/Service Systems based on criteria derived from the California Environmental Quality Act (CEQA) Guidelines in conjunction with actions proposed in Chapter 3.0, Project Description.

The Initial Study/Notice of Preparation (IS/NOP) prepared for this Environmental Impact Report (EIR) determined that impacts with regards to solid waste disposal, storm drainage, and wastewater treatment would be less than significant. Solid waste generation would be minor for the construction and operation of the project. Solid waste will be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. There are over 40 solid waste facilities listed in Imperial County in the CalRecycle database. Trash would likely be hauled to the Imperial Solid Waste Site located approximately nine miles northeast from the project area. The facility has approximately 183,804 cubic yards of capacity remaining (reporting date May 2012). The Imperial Solid Waste Site has a maximum permitted throughput of 18 tons/day and is estimated to remain in operation until March 1, 2019 (http://www.calrecycle.ca.gov/SWFacilities/ Directory/13-AA-0001/Detail/). Therefore, there is ample landfill capacity to receive the minor amount of solid waste generated by project construction and operation. The project does not require expanded or new storm drainage facilities (other than on-site retention areas) because the proposed solar facilities would not generate a significant increase in the amount of impervious surfaces that would increase runoff during storm events. Water from solar panel washing would continue to percolate through the ground, as a majority of the surfaces within the project sites would remain pervious. Additionally, the project does not propose any operation and maintenance (O&M) buildings. Therefore, solid waste disposal, wastewater treatment, and storm drain facilities will not be discussed further. The IS/NOP is included in Appendix A of this EIR.

4.14.1 Environmental Setting

Water

The Imperial Valley area is located within the south-central part of Imperial County and is bound by Mexico on the south, the Algodones Sand Hills on the east, the Salton Sea on the north and San Diego County on the northwest, and the alluvial fans bordering the Coyote Mountains and the Yuha Desert to the southwest. This valley is an irrigated agricultural area. Approximately one-fifth of the nearly three million acres in Imperial County is irrigated for agricultural purposes, of which the majority are located within the Imperial Valley. The Imperial Valley area encompasses a total of 989,450 acres, of which 512,163 acres are irrigated. Imperial County's incorporated cities, unincorporated communities and supporting facilities, comprises approximately one percent of Imperial County's area, and the Salton Sea accounts for approximately seven percent of Imperial County's surface area.

The source of nearly all surface waters in Imperial County is the Colorado River. The water is diverted from the Colorado River at the Palo Verde Weir north of Blythe by the Palo Verde Irrigation District for use in the Palo Verde Valley of northeast Imperial County and southeast Riverside County; and at the Imperial Dam into the All-American Canal by the Imperial Irrigation District (IID) and the Bard Irrigation District for use in the Imperial, Yuma, Bard, and Coachella Valleys. The 82-mile All-American Canal has several main canals that branch off the East Highline, Central Main and Westside Main canals (IID n.d. (a)). These three canals supply water service to Imperial Valley and are operated and maintained by IID (IID, n.d.(a)). The IID serves irrigation water and electric power to farmers and residents in the lower southeastern portion of California's desert.

Approximately 97 percent of IID's water is used for agricultural purposes. The remaining three percent of its water deliveries supply seven municipalities, one private water company, two community water systems, as well as a variety of industrial uses and rural homes or businesses (IID n.d.(b)).



The IID has a specific area that it is responsible for supplying water to, which is referred to as the Imperial Unit. In addition to agricultural irrigation, the Imperial Unit includes the seven incorporated cities of Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial and Westmorland. The three unincorporated communities in the Imperial Unit are Heber, Niland and Seeley.

Energy

The IID supplies electricity to Imperial County. IID's 2014 Integrated Resource Plan (IRP) addresses the current challenges to meet retail load requirements, adapt to new renewable energy portfolio standards and reduce greenhouse gas emissions. The IRP includes implementation of energy programs necessary to reduce current energy load by at least five percent by 2015, with a 10 percent reduction goal set for 2020 (IID 2014). In addition, the Plan calls for generating 25 percent of annual energy requirements for its service area from renewable sources by 2016, and at least 33 percent by 2020; and continuing to reduce greenhouse gas emissions to 1990 levels by 2020 (IID 2014). The IID is also implementing an energy efficiency program with the goal of reducing load demand by at least five percent by 2015 with a 10 percent load reduction goal by 2020 (IID 2014).

4.14.1.1 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the projects.

State

California Senate Bill 610

California Senate Bill (SB) 610 is an act that amended Section 21151.9 of the Public Resources Code (PRC), and Sections 10631, 10656, 10910, 10911, 10912, and 10915 of the Water Code. SB 610 repealed Section 10913, and added and repealed Section 10657 of the Water Code. SB 610 was approved by the Governor and filed with the Secretary of State on October 9, 2001, and became effective January 1, 2002.

Under SB 610, water supply assessments must be furnished to local governments for inclusion in environmental documentation for certain projects (as defined in Water Code 10912 [a]) subject to CEQA. California enacted SB 267, amending the California Water Code's Section 10912 definition of a "project" that would trigger a Water Supply Assessment (WSA). The amended definition excludes low-water demand photovoltaic projects. Specifically, SB 267 states, "A proposed photovoltaic or wind energy generation facility approved on or after the effective date of the amendments made to this section at the 2011-12 Regular Session is not a project if the facility would demand no more than 75 acre-feet of water annually." (California water Code §10912 (a)(5)(B)). Because the projects will not create an annual water demand greater than 75 acre-feet, collectively, a WSA is not required for the projects.

California Water Code

California Water Code (Water Code) Sections 10656 and 10657 restrict state funding for agencies that fail to submit their urban water management plan to the Department of Water Resources. In addition, Water Code Section 10910 describes the WSA that must be undertaken for projects referred under PRC Section 21151.9, including an analysis of groundwater supplies. Water agencies are given 90 days from the start of consultation in which to provide a WSA to the CEQA lead agency. Water Code Section 10910 also specifies the circumstances under which a project for which a WSA was once prepared would be required to obtain another assessment. Water Code Section 10631, directs that contents of the urban water management plans include further information on future water supply projects and programs and groundwater supplies.

Urban Water Management Planning Act — Assembly Bill 797

The Urban Water Management Planning Act was established by Assembly Bill 797 (AB 797) on September 21, 1983. Passage of this law was recognition by state legislators that water is a limited



resource and a declaration that efficient water use and conservation would be actively pursued throughout the state. The law requires water suppliers in California, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet per year (AFY) of water, to prepare and adopt a specific plan every five years which defines their current and future water use, sources of supply and its reliability, and existing conservation measures.

4.14.1.2 Existing Conditions

Water

The proposed projects are located on privately owned, undeveloped, but partially disturbed land encompassing approximately 53 acres. Besides the brief period between 1979 and 1984 in which the DESF site was used for agricultural production, both project sites have not been historically used for agricultural purposes. Therefore the annual water usage and estimated water consumption of either site has not been recorded by IID.

An existing concrete lined irrigation ditch runs along an elevated embankment from the Westside Main Canal to the west side of the DESF site. A set of water pumps and electrical transformer is located at the east end of the concrete lined ditch. The pumps no longer supply water to the ditch but feed an existing 12-inch diameter polyvinyl chloride pressurized water line that transects the DESF site (portion east of Brown Road). This line supplies water to the Imperial Lakes Water Ski Community approximately 0.5 miles west of DESF. This water line will remain in its current location and will not be impacted by the proposed projects.

Energy

The project sites are vacant. There is currently no energy demand on the project sites. The IID would provide electricity service to the project sites (i.e., during non-generating hours for the facility). IID meets its annual resource requirements through a mix of the IID-owned generation and a number of purchase power contracts that can take the form of must-take contracts and call options. The IID's generation resources range from hydroelectric resources on the All-American Canal System to San Juan Unit 3, a coal plant in New Mexico to the Palo Verdes Nuclear Generation Station near Phoenix. The IID also owns thermal generation facilities within its service territory, fueled by natural gas or diesel.

The goal of conserving energy implies the efficient use of energy. The means of achieving this goal includes: decreasing overall per capita energy consumption; decreasing reliance on fossil fuels such as coal, natural gas, and oil; and increasing reliance on renewable energy sources.

4.14.2 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to utilities/service systems, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

4.14.2.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to utilities/service systems are considered significant if any of the following occur:

Water Supply

- Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.



Energy

- Result in the need for new systems or supplies, or a substantial expansion or alteration to electricity, natural gas, or telephone that results in a physical impact on the environment.
- Result in inefficient energy uses of fuel type for each stage of the project including construction, operation, maintenance, and/or removal.
- Result in negative effects on local and regional energy supplies and require additional capacity.
- Result in increased effects to peak and base period demands for electricity and other forms of energy.
- Result in noncompliance with existing energy standards.
- Result in negative effects on energy resources.

As stated previously, it was determined through the preparation of the IS/NOP that impacts with regards to solid waste disposal and policies and wastewater treatment would be less than significant. Therefore, these issue areas will not be discussed further. Impacts associated with water quality are discussed in Section 4.9, Hydrology/Water Quality of this EIR.

4.14.2.2 Methodology

Project-specific data was used to calculate the projects water consumption during construction and at build-out collectively ("operational"). This EIR incorporates by reference previously prepared environmental documentation for other solar projects in the project vicinity including the Iris Cluster Solar Project and the Mount Signal Final EIR.

4.14.2.3 Impact Analysis

Water Supply

IMPACT Construction of New or Expansion of Existing Water Facilities.

4.14-1 The projects would utilize water supply from an on-site water systems and water supplies sourced from metered water services from nearby providers.

Dixieland East Solar Farm and Dixieland West Solar Farm

As discussed in Chapter 3.0 Project Description, no O&M buildings are proposed for either site; therefore, the projects would not require the construction or expansion of water facilities that could result in environmental impacts. 10,000 gallons of water in tanks on each project site will be provided exclusively for fire suppression purposes. The water tanks would be located near the primary entrance of each project site. The proposed water tanks would be located within the project sites and are included in the overall project footprint. Therefore, a **less than significant** impact is identified.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Increase in Water Demand.

4.14-2 The projects would utilize water supply from an on-site water system with water supplies sourced from metered water services from nearby providers.

Dixieland East Solar Farm and Dixieland West Solar Farm

As described in Section 3.0, Project Description, the duration of construction for DESF will take up to 22 weeks and DWSF will take up to 26 weeks. Combined the projects at peak construction may take up



to 36 weeks. It is estimated that over the entire construction period for DESF and DWSF projects, approximately 10 acre-feet of water will be required for all purposes, including dust control and suppression. Additionally, the actual project site development is relatively small in scale with only 18 out of the 53 acres being developed with solar facilities. The actual amount of water that will also be brought on site will vary depending on site conditions such as wind speed, direction, and the amount and timing of rainfall. The project will obtain metered Temporary Services from the Westside Main Canal to fill water trucks on an as needed basis. The service will likely shift to metered General Industrial water Service during operation to allow for panel washing.

The facilities would be remotely operated, controlled and monitored and with no requirement for daily onsite employees. Local and remote operations and maintenance staff would be on-call to respond to any alerts generated by the monitoring systems, and would be present on the site periodically to perform maintenance. A part-time operations and maintenance staff of two to three people per project would be responsible for performing all routine and emergency operational and maintenance activities. Such activities include inspections, equipment servicing, site and landscape clearing, and periodic washing of the PV modules if needed (up to four times per year) to increase the performance of the panels. DESF would require approximately 7,000 gallons of water for each routine panel washing operation. Approximately 10,000 gallons of water would be required for DWSF for each routine panel washing operation. Replacement parts and components would be warehoused off site and deployed as needed. Most scheduled maintenance would occur during daytime hours but work may be performed at night for safety reasons.

During operations, panel washing may be conducted up to four times per year to increase the performance of the panels. Approximately 7,000 gallons of water for each routine panel washing during operation will be required for DESF, and approximately 10,000 gallons will be required for DWSF. Water may also be required during decommissioning of the projects and site restoration at the end of the project's 20-yearlife. However, it is anticipated that this water need would be less than what is required for construction and operation of the projects. A **less than significant** impact is identified.

Mitigation Measure(s)

No mitigation measures are required.

Energy Consumption

IMPACTResult in the Need for New Systems or Supplies, or a Substantial Expansion or Alteration to4.14-3Electricity, Natural Gas, or Telephone.

The projects include the construction of a small scale renewable energy facility and would not require a substantial expansion of new utility service.

Dixieland East Solar Farm and Dixieland West Solar Farm

As currently proposed, the projects have a 20-year Power Purchase Agreement (PPA) with the IID awarded through its Feed-in Tariff (FIT) program. Through the tariff, IID will purchase all generation from the facility and all Renewable-Energy Credits (REC) will belong to IID. The projects will help California meet its Renewable Portfolio Standard of 33 percent of retail electricity sales from renewable sources by the end of 2020.

The electricity generation process associated with the projects would utilize solar technology to convert sunlight directly into electricity. Solar PV technology is consistent with the definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California Public Resources Code. The projects would generate and transmit renewable energy resources and is considered a beneficial effect rather than an impact. The use of energy associated with the projects includes both construction and operational activities. Construction activities typically include site grading and clearing.



The projects will utilize existing transmission infrastructure owned by IID. Therefore, no new transmission lines are being proposed.

The projects would not use natural gas during the construction or operation of the projects. The facilities would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Because no O&M buildings are being proposed, the proposed project would not result in the need for additional natural gas or telephone facilities. Therefore, a **less than significant** impact is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

IMPACTResult in Inefficient Energy Uses of Fuel Type.4.14-4The projects will require the consumption of fossil fuels during construction activities.

Dixieland East Solar Farm and Dixieland West Solar Farm

Construction-Related Energy Consumption

Construction activities consume energy through the use of heavy construction equipment and truck and worker traffic. The main pieces of equipment that may be used at any one time during construction may include:

- Vibratory post driver
- Crawler tractors/dozer
- Dump, concrete, and tender truck
- Forklift/aerial lift/boom
- Generator/compressor
- Grader/scraper
- Roller/compactor
- Tractor/loader/backhoe
- Vibratory plate (handheld)
- Flatbed truck
- Water truck

The projects will use energy-conserving construction equipment, including standard mitigation measures for construction combustion equipment recommended in the Imperial County Air Pollution Control District. CEQA Air Quality Handbook as discussed in Section 4.3, Air Quality of this EIR. The use of better engine technology, in conjunction with the ICAPCD's standard mitigation measures will reduce the amount of energy used for the projects. The standard mitigation measures for construction combustion equipment include:

- Using alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment.
- Minimizing idling time either by shutting equipment off when not in use or reducing the time of idling to five minutes as a maximum.
- Limiting the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
- Replacing fossil fueled equipment with electrically driven equivalents (provided they are not run on a portable generator set).
- Construction equipment operating on-site should be equipped with two to four degree engine timing retard or precombustion chamber engines.



- Construction equipment used for the projects should utilize EPA Tier 2 or better engine technology.
- Keeping vehicles well maintained to prevent leaks and minimize emissions, and encourage employees to do the same.

Consistent with the intent of AB 32, the projects would demonstrate that there are policies in place that would assist in providing statewide reduction in CO_2 . The following greenhouse gas offset measures have been shown to be effective by CARB and would be implemented wherever possible.

Diesel Equipment (Compression Ignition) Offset Strategies (40% to 60% Reduction)

- 1. Use electricity from power poles rather than temporary diesel power generators.
- 2. Construction equipment operating on-site should be equipped with two to four degree engine timing retard or precombustion chamber engines.
- 3. Construction equipment used for the projects should utilize EPA Tier 2 or better engine technology.

Vehicular Trip (Spark Ignition) Offset Strategies (30% to 70% Reduction)

- 4. Encourage commute alternatives by informing construction employees and customers about transportation options for reaching your location (i.e. post transit schedules/routes).
- 5. Help construction employees rideshare by posting commuter ride sign-up sheets, employee home zip code map, etc.
- 6. When possible, arrange for a single construction vendor who makes deliveries for several items.
- 7. Plan construction delivery routes to eliminate unnecessary trips.
- 8. Keep construction vehicles well maintained to prevent leaks and minimize emissions, and encourage employees to do the same.

Implementation of ICAPCD's standard mitigation measures and the greenhouse gas offset measures listed above will ensure that the projects' energy consumption during construction is **less than significant**.

Operational-Related Energy Consumption

The U.S. Energy Information Administration reports the net energy generation for the state from all sources is approximately 199,518,567 megawatt-hours (MW-h). The electricity generation process associated with the projects would use solar PV technology to convert sunlight directly into electricity. Solar PV technology is consistent with the definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California Public Resources Code. The projects would generate renewable energy resources and is considered a beneficial effect rather than an impact. Therefore, a less than significant impact is identified for the operational-related energy consumption.

Mitigation Measure(s)

No mitigation measures are required.



IMPACT Result in Negative Effects on Local and Regional Energy Supplies Requiring Additional 4.14-5 Capacity.

The projects are the construction of a small scale renewable energy facility and would therefore provide additional capacity to the regional supply.

Dixieland East Solar Farm and Dixieland West Solar Farm

As discussed in Section 3.0, Project Description, the projects have a 20-year PPA with IID through its Feed-in Tariff (FIT) program. Through the tariff, IID will purchase all generation from the facility and all Renewable-Energy Credits (REC) will belong to IID. The projects will help California meet its RPS of 33 percent of retail electricity sales from renewable sources by the end of 2020. Please see discussion under Impact 4.14-1. The projects would not result in negative effects on local and regional energy supplies requiring additional capacity. Therefore, a less than significant impact is identified.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Result in Increased Effects to Peak and Base Period Demands for Electricity and Other 4.14-6 Forms of Energy.

> The projects would not result in increased effects to peak and base period demands for electricity and other forms of energy.

Dixieland East Solar Farm and Dixieland West Solar Farm

The expected energy usage during generating and non generating hours for the proposed projects will be minimal as no O&M buildings are being proposed. Furthermore, the electricity generation process associated with the projects would use solar PV technology to convert sunlight directly into electricity. Solar PV technology is consistent with the definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California Public Resources Code. The projects would generate renewable energy resources and therefore, this is considered a beneficial effect rather than an impact. The transmission lines would not have operational energy consumption.

Additionally, implementation of ICAPCD's standard mitigation measures and the greenhouse gas offset measures listed above will ensure that the projects energy consumption during construction is less than significant.

Mitigation Measure(s)

No mitigation measures are required.

IMPACT Result in Noncompliance with Existing Energy Standards.

4.14-7 The projects would assist IID in meeting California's mandate to procure 33 percent of its power from renewable resources.

Dixieland East Solar Farm and Dixieland West Solar Farm

The electricity generation process associated with the projects would utilize solar technology to convert sunlight directly into electricity. Solar PV (or CPV) technology is consistent with the definition of an "eligible renewable energy resource" in Section 399.12 of the California Public utilities Code and the definition of "in-state renewable electricity generation facility in Section 25741 of the California Public Resources Code.



The use of energy associated with the projects includes both construction and operational activities. Implementation of ICA PCD's Standard mitigation measures and the greenhouse gas offset measures listed above will ensure that the projects energy consumption during construction is reduced to a level below significance. The projects would no result in noncompliance with existing energy standards. The projects would generate renewable energy resources, resulting in beneficial effects. Therefore, impacts would be **less than significant**.

Mitigation Measure(s)

No mitigation measures are required.

 IMPACT
 Result in negative effects on energy resources.

 4.14-7
 The projects would assist IID in meeting California's mandate to procure 33 percent of its power from renewable resources.

Dixieland East Solar Farm and Dixieland West Solar Farm

The projects would not result in negative effects on energy resources. The projects would assist IID in meeting California's mandate to procure 33 percent of its power from renewable resources, which is considered a beneficial impact. Therefore, impacts would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

4.14.3 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

It is anticipated that a small quantity of water would be required during decommissioning of the projects and site restoration at the end of the projects' 20-year life. However, it is anticipated that this water need would be less than what is required for construction and operation of the projects. Therefore, a **less than significant** impact is identified and no mitigation is required. Decommissioning and restoration activities would not require energy so no impact is identified and no mitigation is required.

Residual

The projects will not result in significant impacts to the water supply or energy resources of Imperial County; therefore, no mitigation is required. The projects will not result in residual impacts.

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5.0 ANALYSIS OF LONG-TERM EFFECTS

5.1 GROWTH INDUCING IMPACTS

In accordance with Section 15126.2(d) of the California Environmental Quality Act (CEQA) Guidelines, an Environmental Impact Report (EIR) must:

"discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth ... Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

Projects promoting direct growth will impose burdens on a community by directly inducing an increase in population, or resulting in the construction of additional developments in the same area. For example, infrastructure projects involving the expansion, modifications, or additions to infrastructure could have the potential to directly promote growth by removing existing physical barriers or allowing for additional development through capacity increases. New roadways leading into a previously undeveloped area directly promote growth by removing previously existing physical barriers to development and a new wastewater treatment plant would allow for further development within a community by increasing infrastructure capacity. Because these types of infrastructure projects directly serve related projects and result in an overall impact to the local community, associated impacts cannot be considered isolated. Indirect growth typically includes substantial new permanent employment opportunities and can result from these aforementioned modifications.

The proposed projects are located within the unincorporated area of Imperial County and do not involve the development of permanent residences that would result in a direct population growth in the area. The proposed projects involve the construction and operation of solar facilities. According to the project applicant, the construction workforce is expected to reach a peak (overlapping construction activities) of approximately 30 temporary workers for construction of the projects each project. The maximum number of employees working on the two solar projects at one time will be 40 employees. The unemployment rate in Imperial County, as of July 2015 (not seasonally adjusted) was 21.1 percent (Labor Market Information Division of the California Employment Development Department 2015). The applicant expects to utilize construction workers from the local and regional area. Based on the unemployment rate, and the availability of the local workforce, construction of the proposed projects would not have a growth-inducing effect related to workers moving into the area and increasing the demand for housing and services. After the construction of the proposed projects, no permanent construction workers would be hired. The facilities would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. A part-time operations and maintenance staff of two to three people per project would be responsible for performing all routine and emergency operational and maintenance activities. As such, the proposed projects would not induce substantial population growth in the area.

While the proposed projects would contribute to energy supply, which indirectly supports population growth, the proposed development of these projects is a response to the State's need for renewable energy to meet its Renewable Portfolio Standard. Unlike a gas-fired power plant, the proposed projects are not being developed as a source of base-load power in response to growth in demand for electricity. The power generated would be added to the State's electricity grid with the intent that it would displace fossil fueled power plants and their associated environmental impacts, consistent with the findings and declarations in Senate Bill 2 (2011) that a benefit of the Renewable Portfolio Standard is displacing fossil fuel consumption within the state. In addition, the Energy Policy Act of 2005 (Title II, Section 211) helps the Department of Interior (DOI) work towards achieving the goal of approving at least



10,000 megawatts (MW) of renewable energy on public lands by 2015. The projects are being proposed in response to State and Federal policy and legislation promoting development of renewable energy.

The proposed projects would supply energy to accommodate and support existing demand and projected growth, but it would not foster any new growth because (1) the additional energy would be used to ease the burdens of meeting existing statewide energy demands within and beyond the area of the project sites; (2) the energy would be used to support already-projected growth; or, (3) the factors affecting growth are so diverse that any potential connection between additional energy production and growth would necessarily be too speculative and uncertain to merit further analysis.

Under CEQA, an EIR should consider potentially significant energy implications of a project (see CEQA Guidelines Appendix F(II); Pub. Res. Code Section 21100(b)(3)). However, the relationship between the proposed project's increased electrical capacity and the growth-inducing impacts outside the surrounding area is too speculative and uncertain to warrant further analysis. When a project's growth-inducing impacts are speculative, the lead agency should consider 14 California Code of Regulations §15145, which provides that, if an impact is too speculative for evaluation, the agency should note this conclusion and terminate discussion of the impact. As the court explained in *Napa Citizens for Honest Gov't v. Napa County Board of Supervisors* (2001) 91 Cal. App.4th 342, 368: "Nothing in the Guidelines, or in the cases, requires more than a general analysis of projected growth." *Napa Citizens, 91* CA4th at 369. The problem of uncertainty of the proposed project's growth-inducing effects cannot be resolved by collection of further data due to the diversity of factors affecting growth.

While this document has considered that the proposed projects, as energy projects, might foster regional growth, the particular growth that could be attributed to the proposed projects is unpredictable, given the multitude of variables at play, including uncertainty about the nature, extent, and location of growth and the effect of other contributors to growth besides the proposed projects. No accurate and reliable data is available that could be used to predict the amount of growth outside the area that would result from the proposed project's contribution of additional electrical capacity. The County of Imperial has not adopted a threshold of significance for determining when an energy project is growth-inducing. Further evaluation of this impact is not required under CEQA.

Additionally, the projects would not involve the development of any new roadways, new water systems, or sewer and thus, the projects would not further facilitate additional development into outlying areas. The facilities would be remotely operated, with no requirement for daily on-site employees. No habitable structures are proposed on the project sites (such as O&M buildings); therefore, there would be no wastewater generation from the proposed projects. No infrastructure improvements (potable water and septic system) would be required. For these reasons, none of the projects would be growth-inducing.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

In accordance with CEQA Guidelines Section 15126.2(c), an EIR must identify any significant irreversible environmental changes that would be caused by implementation of the proposed projects being analyzed. Irreversible environmental changes may include current or future commitments to the use of non-renewable resources or secondary growth-inducing impacts that commit future generations to similar uses.

Energy resources needed for the construction of the proposed projects would contribute to the incremental depletion of renewable and non-renewable resources. Resources such as timber used in building construction are generally considered renewable and would ultimately be replenished. Non-renewable resources such as petrochemical construction materials, steel, copper, lead and other metals, gravel, concrete, and other materials are typically considered finite and would not be replenished over the lifetime of each of the projects. Thus, the projects would irretrievably commit resources over the anticipated 20-year life of the projects. However, after 20 years, these projects are planned to be decommissioned and the project applicant is required to restore land to its pre-project state. Consequently, some of the resources on the sites could potentially be retrieved after the sites have been decommissioned. The applicant anticipates using the best available recycling measures at the time of decommissioning.



Implementation and operation of the proposed projects would promote the use of renewable energy and contribute incrementally to the reduction in demand for fossil fuel use for electricity-generating purposes. Therefore, the incremental reduction in fossil fuels would be a positive effect of the commitment of nonrenewable resources. Additionally, the projects are consistent with future buildout plans for the project sites under the General Plan as well as with the State's definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California Public Resources Code. Furthermore, as shown in Figure 3-3, the project sites are located within a proposed Renewable Energy/Geothermal overlay zone. The Renewable Energy/Geothermal overlay zone category was developed to identify areas in Imperial County that could be developed with any form of renewable energy technology, including geothermal production. This Renewable Energy overlay zone category provides the greatest range of opportunities for future development of renewable energy, while preserving and protecting agricultural, natural, and cultural resources.

5.3 UNAVOIDABLE ADVERSE IMPACTS

In accordance with CEQA Guidelines Section 15126(b), EIRs must include a discussion of significant environmental effects that cannot be avoided if the proposed project is implemented. The impact analysis, as detailed in Section 4.0 of this EIR, concludes that no unavoidable significant impacts were identified. Where significant impacts have been identified, mitigation measures are proposed, that when implemented, would reduce the impact level to less than significant.



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6.0 CUMULATIVE IMPACTS

The *California Environmental Quality Act (CEQA) Guidelines* (Section 15355) define a cumulative impact as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The *CEQA Guidelines* [Section 15130(a)(1)] further states that "an Environmental Impact Report (EIR) should not discuss impacts which do not result in part from the project."

Section 15130(a) of the *CEQA Guidelines* provides that "[A]n EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable..." Cumulatively considerable, as defined in Section 15065(a)(3), "means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

An adequate discussion of significant cumulative impacts requires either: (1) "a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or (2) "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact."

The *CEQA Guidelines* recognize that cumulative impacts may require mitigation, such as new rules and regulations that go beyond project-by-project measures. An EIR may also determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The Lead Agency must identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable (*CEQA Guidelines* Section 15130(a)(3)).

This EIR evaluates the cumulative impacts of the projects for each resource area, using the following steps:

- (1) Define the geographic and temporal scope of cumulative impact analysis for each cumulative effects issue, based on the project's reasonably foreseeable direct and indirect effects.
- (2) Evaluate the cumulative effects of the projects in combination with past and present (existing) and reasonably foreseeable future projects and, in the larger context of the Imperial Valley.
- (3) Evaluate the projects' incremental contribution to the cumulative effects on each resource considered in Chapter 4, Environmental Analysis. When the projects' incremental contribution to a significant cumulative impact is considerable, mitigation measures to reduce the projects' "fair share" contribution to the cumulative effect are discussed, where required.

6.1 GEOGRAPHIC SCOPE AND TIMEFRAME OF THE CUMULATIVE EFFECTS ANALYSIS

The geographic area of cumulative effects varies by each resource area considered in Chapter 4. For example, air quality impacts tend to disperse over a large area, while traffic impacts are typically more localized. Similarly, impacts to the habitats of special-status wildlife species need to be considered within its range of movement and associated habitat needs. The analysis of cumulative effects in this EIR considers a number of variables including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on the topography surrounding the project sites and the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope of the direct effects of the scope of the direct effects of that project.



The cumulative development scenario includes projects that extend through year (2030), which is the planning horizon of the County of Imperial General Plan. Likewise, the lease term for the solar fields is 20 years with land restoration commencing thereof, should the lease and/or CUP not be renewed. It is likely that other similar projects would be developed between the year 2030 and the end of the lease term. However, due to uncertain development patterns that far in the future, it is too speculative to accurately determine the type and quantity of cumulative projects beyond the planning horizon of the County's adopted County General Plan.

PROJECTS CONTRIBUTING TO POTENTIAL CUMULATIVE IMPACTS 6.2

The CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the projects are to be considered: the use of a list of past, present, and probable future projects (the "list approach") or the use of adopted projections from a general plan, other regional planning document, or certified EIR for such a planning document (the "plan approach").

This cumulative impact analysis utilizes the project's, where applicable based on geography and the resource area analyzed, identified in the Final Programmatic Environmental Impact Report for the Renewable Energy and Transmission Element Update (State Clearinghouse No. 2014071062), which analyzed the expected environmental impacts resulting from approval of the Renewable Energy and Transmission Element and associated impacts from subsequent development of future renewable energy facilities in Imperial County. As discussed in Chapter 3 of this EIR, as part of the Renewable Energy and Transmission Element Update, which was approved by the County in October 2015, the County developed a draft-Renewable Energy (RE) Overlay Zone Map, which identifies locations within the County authorized for development and operation of renewable energy projects with an approved Renewable Energy Conditional Use Permit (RECUP). The proposed RE Overlay Zone is focused in areas that were determined to be the most suitable for the development of renewable energy facilities while minimizing the impact to other established uses. The RE Overlay Zone covers approximately 61,627.10 acres of land and surface water within the Salton Sea. The Overlay Zone Map contains three categories: 1) Geothermal. 2) Renewable Energy, and 3) Renewable Energy/Geothermal. As shown in Figure 3-3, the project sites are located within a proposed Renewable Energy/Geothermal overlay zone. The Renewable Energy/Geothermal overlay zone category was developed to identify areas that could be developed with any form of renewable energy technology, including geothermal production. This Renewable Energy overlay zone category provides the greatest range of opportunities for future development of renewable energy, while preserving and protecting agricultural, natural, and cultural resources.

Of the cumulative projects considered in the Renewable Energy and Transmission Element Update EIR, Table 6-1 provides a list of related projects that are actually located within the vicinity of the project sites. No other potential projects are known within the project sites vicinity.

CUMULATIVE IMPACT ANALYSIS 6.3

6.3.1 Aesthetics

The cumulative study area for projects considered in the visual resources cumulative impact analysis considers a five mile radius from the project sites. Views beyond five miles are obstructed by a combination of the flat topography coupled with the Earth's curvature. The short-term visual impacts of the projects would be in the form of general construction activities including grading and the use of construction machinery. Longer-term visual impacts of the projects would be in the form primarily of the presence of solar array grids. The projects would be enclosed by a security fence. DWSF's project fence line and the project components will be set back at least 240 feet from Evan Hewes highway to minimize visual impacts.



Project Name	Description of Project	Size/ Location	Status
Imperial Solar Energy Center–West (CACA- 51644)	Imperial Solar Energy Center-West consists of two primary components: (1) the construction and operation of the 250 MW Imperial Solar Energy Center West solar energy facility; and (2) the construction and operation of the electrical transmission line and associated access/ maintenance road that would connect from the solar facility to the existing Imperial Valley substation. The development of the solar energy center is on 1,130 acres of vacant land previously utilized for agricultural purposes.	North of I-8 and immediately west of Westside Main Canal	Final EIR certified in June 2011.
Campo Verde Solar	The Campo Verde Project is located on a 1,400- acre site. The electricity generated at the facility powers nearly 48,000 homes.	Accessed by Diehl Road and south of I8	Approved. Commercial operation began in October 2013.
IID 230 kV Imperial Valley to Dixieland Transmission Line and Expansion of Substations Project	Construction of a 230kilovolt (kV) transmission line (referred to as the ID Line) between the Imperial Valley (IV) and Dixieland Substations, including associated poles and maintenance roads, and substation improvements to the existing Dixieland Substation. This proposed transmission line would be located within a portion of the Utility Corridor "N" of BLM's California Desert Conservation Area in unincorporated Imperial County, southwest of EI Centro, California. The transmission line would be located within a new 140-foot-wide right-of- way (ROW) through both Federal and non- Federal lands. In addition to a new transmission line, IID would construct a new 230-kV substation approximately 400 feet north of the IV Substation (proposed Liebert Substation) and expand the existing Dixieland Substation.	The proposed transmission line would be located within a portion of the Utility Corridor "N" of BLM's California Desert Conservation Area in unincorporated Imperial County, southwest of El Centro, California.	

 TABLE 6-1. PROJECTS CONSIDERED IN THE CUMULATIVE IMPACT ANALYSIS

Source: Compiled by HDR 2015.

As provided in Section 4.1, Aesthetics, areas to the east of the project area (east of the Westside Main Canal), are generally level and characterized as an agriculturally dominated landscape. Views to the north, south, and west are characterized as a desert environment. As previously described, the project sites are currently disturbed natural habitat. No distinctive visual resources, with the exception of background views of the mountains are located within the general area. Construction of the projects would alter the existing visual character of the project areas and their surroundings as a result of converting existing vacant dessert land to a small-scale solar energy facility. Because the visual changes associated with the projects would be located in a remote area viewed by a minimal number of people, the project sites are not located within scenic vistas, and are not readily viewable from any frequently travelled interstates or scenic highways no impact has been identified. Additionally, the proposed heights of project components would not obscure the background views of the mountains. The small addition to existing power lines that will connect with the existing substation would be similar to the existing conditions in the area, and would generally not be perceptible at a distance. Further, the project sites would be would be transitioned back to their prior (pre-solar project) conditions following the decommissioning of the solar uses. As a result, although the visual character of the project area would change from that of a desert landscape to one with developed characteristics, a less than significant impact associated with the proposed projects has been identified.



Development of the proposed projects in conjunction with the cumulative projects identified in Table 6-1 will gradually change the visual character of the south-central portion of Imperial Valley, and in particular those areas that are currently agricultural lands that have been approved for utility-scale solar projects. However, projects located within private lands and/or under the jurisdiction of the County of Imperial are being designed in accordance with the County of Imperial's General Plan and Land Use Ordinance, which includes policies to protect visual resources in the County.

Cumulative projects including the Imperial Solar Energy Center West, Campo Verde, and others south of Interstate 8 (I-8) would not have a cumulative effect on a scenic vista because they are located in an area that is not identified as a designated scenic resource and would not affect a scenic vista. Nor would the project's contribution be cumulatively considerable for these reasons. All cumulative projects would not impact scenic resources within a state scenic highway as no designated state scenic highway is located within five miles of these cumulative projects.

Finally, all projects listed in Table 6-1 would not produce a substantial amount of light and glare, as no significant source of light or glare is proposed, or the projects will otherwise comply with the County lighting ordinance. Based on these considerations, no significant cumulatively considerable aesthetic impact is anticipated.

6.3.2 Agriculture and Forestry Resources

The geographic scope of cumulative impacts related to agricultural resources is Imperial County because the Imperial Valley Agricultural Complex is 500,000 acres of more-or-less contiguous farm fields located in the Imperial Valley and surrounded by desert and mountain habitat. Irrigated agriculture within the Imperial Valley is made possible by the Colorado Aqueduct. The timeframe considered is the life of the projects since the land would be returned to their prior (pre-solar project) conditions in accordance with a project-specific Reclamation Plan.

Continuing development within the portions of Imperial County that are actively farmed and/or cultivated would result in the conversion of land currently utilized for agricultural production to urban and other land uses. This agricultural conversion has been a continuing trend in the County; based on Department of Conservation (DOC) farmland conversion reports (see Table 4.2-1). During the 2008-2010 time frame, 8,173 acres of Important Farmland were converted to non-agricultural uses (DOC, 2014).

Until about 2011, agricultural land conversion in the County was attributable to more traditional types of development, such as residential subdivisions. However, the residential housing market declined, and was essentially replaced with an influx of renewable energy projects. In particular, the County has experienced a rapid influx of applications for solar development in very recent years. Currently, there are over two dozen solar-related projects proposed within the County. Figure 6-1 depicts the various proposed solar projects in the County and their relationship to agricultural lands.

As discussed in Section 4.2, Agricultural Resources, the project sites do not contain prime farmland or farmland of statewide importance, and are not currently farmed. The DESF has not been irrigated for the production of farmland for over 30 years. The project sites are primarily designated as Other Land. The northern edge of DESF and the northeastern corner of DWSF are designated as Farmland of Local Importance; however, this area does not contain active farmland. It should be noted that analysis of Other Land and Farmland of Local Importance is not required under CEQA significance criteria, as these designations are not considered an "agricultural land" per CEQA Statute Section 21060.1(a). Therefore, development of the DESF and DWSF sites would result in no impact to important farmlands and would have no incremental contribution to a significant agricultural resources cumulative impact.





Figure 6-1. Proposed Solar Projects in Imperial County



With the adoption of the Renewable Energy and Transmission Element, future renewable projects in the County would be authorized for development and operation within designated renewable energy overlay zones. The proposed overlay zones are concentrated in areas that were determined to be the most suitable for the development of renewable energy facilities while minimizing the impact to other established uses. As shown in Figure 3-3, the project sites are located within a proposed Renewable Energy/Geothermal overlay zone. The Renewable Energy/Geothermal overlay zone category was developed to identify areas that could be developed with any form of renewable energy technology, including geothermal production. This Renewable Energy overlay zone category provides the greatest range of opportunities for future development of renewable energy, while preserving and protecting resources (i.e., agricultural resources).

6.3.3 Air Quality

The Salton Sea Air Basin (SSAB) is used as the geographic scope for the analysis of cumulative air quality impacts due to the geographic factors which are the basis for designating the SSAB, the existence of an Air Quality Management Plan (AQMP), State Implementation Plan (SIP), and requirements set forth by the Imperial County Air Pollution Control District (ICAPCD), which apply to both the construction and operational aspects of all cumulative projects within the SSAB.

As identified in Section 4.3, Air Quality, currently the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of 8-hour ozone, PM_{10,7} and PM_{2.5}. More specifically, Imperial County is classified as a "serious" non-attainment area for PM₁₀ and a "moderate" non-attainment area for 8-hour ozone for the National Ambient Air Quality Standards (NAAQS). and non-attainment for PM_{2.5} for the urban areas of Imperial County. On November 13, 2009, EPA published Air Quality Designations for the 2006 24-Hour Fine Particle (PM_{2.5}) National Ambient Air Quality Standards wherein Imperial County was listed as designated nonattainment for the 2006 24-hour PM_{2.5} NAAQS. However, the nonattainment designation for Imperial County is only for the urban area within the County and it has been determined that the proposed projects are located within the nonattainment boundaries for PM_{2.5}. On April 10, 2014, the CARB Board gave final approval to the 2013 Amendments to Area Designations for CAAQSs. For the State PM_{2.5} standard, effective July 1, 2014, the City of Calexico will be designated nonattainment.

The Air Quality Attainment Plan (AQAP) for the SSAB, through the implementation of the AQMP (previously AQAP) and SIP for PM_{10} , sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. With respect to PM_{10} , the ICAPCD implements Regulation VIII – Fugitive Dust Rules, to control these emissions and ultimately lead the basin into compliance with air standards, consistent with the AQAP. Within Regulation VIII are Rules 800 through 806, which address construction and earthmoving activities, bulk materials, carry-out and track-out, open areas, paved and unpaved roads, and conservation management practices. Best Available Control Measures to reduce fugitive dust during construction and earthmoving activities include but are not limited to:

- Phasing of work in order to minimize disturbed surface area;
- Application of water or chemical stabilizers to disturbed soils;
- Construction and maintenance of wind barriers; and
- Use of a track-out control device or wash down system at access points to paved roads.

Compliance with Regulation VIII is mandatory on all construction sites, regardless of size. However, compliance with Regulation VIII does not constitute mitigation under the reductions attributed to environmental impacts. In addition, compliance for a project includes: (1) the development of a dust control plan for the construction and operational phase; and (2) notification to the air district is required 10 days prior to the commencement of any construction activity.



Construction

The proposed projects would generate air emissions due to vehicle and dust emissions associated with construction activities. Similar effects would also be realized upon site decommissioning, which would be carried out in conjunction with the projects' restoration plan, and subject to applicable ICAPCD standards. Likewise, the other cumulative projects identified in Table 6-1 would result in the generation of air emissions during construction activities.

With respect to the proposed projects, during the construction and decommissioning phases, the projects would generate particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns ($PM_{2.5}$), reactive organic gas (ROG), and nitrogen oxide (NO_x) emissions during each active day of construction.

Air emissions from the construction of the entire SEPV Project would not exceed the ICAPCD significance thresholds for ROG, CO, NO_x, and PM₁₀ therefore, the impact would be less than significant.

However, the projects' impact could be cumulatively considerable because: (1) portions of the SSAB are nonattainment already (PM₁₀ and PM_{2.5}), although mitigated by ICAPCD Regulations as discussed above; and, (2) project construction would occur on most days, including days when ozone already in excess of State standards. Additionally, the effects would again be experienced in the future during decommissioning in conjunction with site restoration. The proposed projects, in conjunction with the construction of other cumulative projects as identified in Table 6-1 could result in a cumulatively considerable increase in the generation of PM_{10} and NO_x ; however, like the proposed projects, cumulative projects would be subject to mitigation as pursuant to County ICAPCD's Regulations and Rules, and the cumulative impact would be reduced to a level less than significant through compliance with these measures. Because the projects will be required to implement measures consistent with ICAPCD regulations designed to alleviate the cumulative impact associated with PM₁₀, the proposed project's contribution is rendered less than cumulatively considerable.

Operation

In the long-term, operation of the proposed projects would result in minor emissions associated with Table 4.3-9 (see Section, 4.3 Air Quality) summarizes the operation and maintenance activities. operational air emissions associated with the projects, and indicates that all operational emissions would not exceed significance thresholds; therefore, the impact would be less than significant. Operational impacts of other renewable energy facilities, including those in the relative vicinity of the proposed projects as identified in Table 6-1 would also be similar, although these cumulative projects involve large areas, their operational requirements are very minimal, requiring minimal staff or use of machinery or equipment that generate emissions. Further, alternative energy projects, such as the projects, would assist attainment of regional air quality standards and improvement of regional air quality by providing clean, renewable energy sources. Consequently, the projects would provide a positive contribution to the implementation of applicable air quality plan policies and compliance with Executive Order S-3-05.

However, from a cumulative air quality standpoint, the potential cumulative impact associated with the generation of PM₁₀ and PM_{2.5} emissions during operation of the cumulative projects is a concern due to the fact that Imperial County is classified as a "serious" non-attainment area for PM₁₀ and a "moderate" non-attainment area for 8-hour ozone for the NAAQS and non-attainment for PM2.5 for the urban areas of Imperial County. With respect to PM_{2.5}, the cumulative development identified in Table 6-1, including the proposed projects are not located within urban areas of the Imperial Valley, therefore, the contribution of PM_{2.5} emissions is not considered cumulatively considerable.

As shown in Table 4.3-10, the projects' operational contribution to PM_{10} is below a level of significance. However, when combined with other cumulative projects, the operational PM₁₀ emissions would likely exceed daily thresholds which is considered a potentially significant cumulative impact. As with the construction phases, the cumulative projects would be required to comply with ICAPCD's Regulation VIII for dust control (Regulation VIII applies to both the construction and operational phases of projects). As a result, the ICAPCD would require compliance with the various dust control measures and may, in



additional be required to prepare and implement dust control plans as approved by the ICAPCD, which is a component of ICAPCD's overall framework of the AQAP for the SSAB, which sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. Therefore, the projects would not contribute to long-term cumulatively considerable air quality impacts and the projects would not result in cumulatively significant air quality impacts.

6.3.4 **Biological Resources**

The geographic scope for considering cumulative impacts on biological resources includes the Imperial Valley and related biological habitats. The geographic scope also allows for the consideration of the Pacific Migration Flyway. Table 6-1 lists the projects considered for the biological resources cumulative impact analysis.

In general terms, in instances where a potential impact could occur, the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) have promulgated a regulatory scheme that limits impacts to these species. The effects of the projects would be rendered less than significant through mitigation requiring compliance with all applicable regulations that protect plant, fish, and animal species, as well as waters of the U.S. and State. Other cumulative projects in the project study areas would also be required to avoid impacts to special-status species and/or mitigate to the satisfaction of the CDFW and USFWS for the potential loss of habitat. As described in Section 4.4, Biological Resources, the projects have the potential to result in impacts to biological resources. These impacts are generally focused on potential construction-related affects to burrowing owl, raptor species, migratory birds, mountain plover, long billed curlew, short billed dowitcher, horned lark, and loggerhead shrike.

Burrowing Owls are protected by the CDFW mitigation guidelines for burrowing owl (2012) and Consortium guidance (1993), which require a suite of mitigation measures to ensure direct effects to burrowing owls during construction activities are avoided and indirect effects through burrow destruction and loss of foraging habitat are mitigated at prescribed ratios. Mitigation Measures 4.4-1a-BR-1 and through 4.4-1bBR-3 contain these requirements thereby minimizing potential impacts to these species to a less than significant level. Additionally, as provided in Section 4.4, Biological Resources, the project sites contain suitable habitat for migratory birds, raptors, and other sensitive non-migratory bird species mountain plover, long billed curlew, short billed dowitcher, horned lark, and loggerhead shrike. As a result of project-related construction activities, one or more of these species could be harmed. However, with the implementation of Mitigation Measures 4.4-1e, 4.4-1f, and 4.4-1gBR-5 and BR-6 as identified in Section 4.4 Biological Resources, these impacts would be reduced to a level of less than significant. Similarly, the cumulative projects within the geographic scope of the projects would be required to comply with the legal framework as described above. Based on these considerations, impacts to biological resources would not be cumulatively considerable.

As with the proposed projects, each of the cumulative projects would be required to provide mitigation for impacts to biological resources. Although some quantitative information regarding cumulative project biological impacts was available, such information was not available for most. Therefore, the analysis below is conducted qualitatively and in the context that the cumulative projects would be subject to a variety of statutes and administrative frameworks that require mitigation for impacts to biological resources.

Birds listed at 50 CFR 10.3 are protected by the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of Birds listed at 50 CFR 10.3 are protected by the MBTA (16 U.S.C. 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The MBTA is enforced by USFWS. This act prohibits the killing of any migratory birds without a valid permit. Any activity which contributes to unnatural migratory bird mortality could be prosecuted under this act. With few exceptions, most birds are considered migratory under this act. Raptors and active raptor nests are protected under California Fish and Wildlife Codes 3503.5, 3503, 3513.

The Federal Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act provide protection for water-related biological resources by controlling pollution, setting water quality standards, and preventing jurisdictional streams, lakes, and rivers from being filled without a federal permit. No


jurisdictional wetlands are located with the project sites or off-site transmission area that could otherwise be directly impacted by construction of the proposed projects. Likewise, Mitigation Measures 4.9-1a and 4.9-4 would be required to avoid or minimize potential water quality impacts that could otherwise indirectly impact biological resources.

The proposed projects would comply with these and other laws, regulations and guidelines and therefore would not contribute substantially to a cumulative biological resources impact. Similarly, the cumulative actions within the geographic scope of the proposed projects will be required to comply with the legal frameworks set forth above, as well as others. The cumulative actions will be required to mitigate their impacts to a less than significant level.

6.3.5 Cultural Resources

As discussed in Section 4.5, Cultural Resources, all items recorded during the pedestrian survey, and the prehistoric site evaluated during the testing program are not "unique archaeological resources" or "historical resources" under CEQA. Therefore, the projects would not impact cultural resources and would not contribute to a cumulative impact to cultural resources.

The other cumulative projects would be required to provide mitigation for any direct impacts to cultural resources to reduce impacts. Because the cultural resources within the geographic scope of this cumulative impact analysis are important for their potential contribution to knowledge of history. Mitigation Measures CR-1 and CR-2 are included in this EIR to ensure the proper collection and systematic data recovery for any undocumented archaeological resources that may be encountered during construction. Implementation of these mitigation measures would reduce the potential for cumulative impacts to these resources as a result of the projects.

Based on these findings, there would be no net loss in the cumulative value/context of cultural resources within the geographic scope of the cumulative analysis. With the inclusion and compliance with the required mitigation measures, the value of any undocumented archaeological resources encountered during construction would be exhausted through a data recovery program. Therefore, the projects would not result in a cumulative cultural resources impact.

Geology and Soils 6.3.6

The Imperial Valley portion of the Salton Trough physiographic province of Southern California is used as the geographic scope for the analysis of cumulative impacts on geology/soils and mineral resources. Cumulative development would result in an increase in population and development that could be exposed to hazardous geological conditions, depending on the location of proposed developments. Geologic and soil conditions are typically site specific and can be addressed through appropriate engineering practices. Cumulative impacts to geologic resources would be considered significant if the projects would be impacted by geologic hazard(s) and if the impact could combine with off-site geologic hazards to be cumulatively considerable. None of the projects identified within the geographic scope of potential cumulative impacts would intersect or be additive to the projects' site-specific geology and soils impacts; therefore, no cumulative effects are identified for geology/soils.

With regards to mineral resources, no mineral resources are located within the boundaries of the project study areas. Therefore, the projects would not result in a cumulative geology/soils impact for mineral resources.

6.3.7 **Greenhouse Gas Emissions**

Emissions of greenhouse gases (GHGs) have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. Although the emissions of the projects alone would not cause global climate change, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. In turn, global climate change has the potential to result in rising sea levels, which can inundate low-lying areas; affect rainfall and snowfall, leading to changes in water supply; and affect habitat, leading to adverse effects on



biological resources. The South Coast Air Quality Management District (SCAQMD) has proposed a threshold of 3,000 tonnes of carbon dioxide equivalents (tCO_{2e}), for residential and commercial projects; which was applied to the project analysis as provided in Section 4.7, Greenhouse Gases. As provided, the proposed projects' CO₂ emissions would not exceed SCAQMD's threshold of 3,000 tCO₂e. Although the proposed projects would not exceed SCAQMD's threshold, consistent with the intent of AB 32, the proposed projects should demonstrate that policies are in place that would assist in providing a statewide reduction in CO₂ emissions. Therefore, Mitigation Measures GHG-1 and GHG-2 are prescribed as additional reduction strategies to further improve air quality and reduce GHG emissions.

Given that the projects are characterized as renewable energy projects and places emphasis on solar power generation, project operations would be almost carbon-neutral with the majority of the operational GHG emissions associated with employee vehicle trips. Based on these considerations, no significant long-term operational GHG impacts would occur and, therefore, project-related GHG impacts would not be cumulatively considerable.

6.3.8 Hazards/Hazardous Materials

The geographic scope considered for cumulative impacts from health, safety and hazardous materials is the area within one mile of the boundary of the project sites. One mile is the standard American Society of Testing and Materials (ASTM) standard search distance for hazardous materials.

Under cumulative conditions, implementation of the projects in conjunction with development of projects listed in Table 6-1 is not anticipated to present a public health and safety hazard to residents. Additionally, the projects and related projects would all involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction and operation. Impacts from these activities are less than significant for the projects because the storage, use, disposal, and transport of hazardous materials are extensively regulated by various Federal, state, and local laws, regulations, and policies. It is foreseeable that the projects and related projects would implement and comply with these existing hazardous materials laws, regulations, and policies. Therefore, the related projects would not cause a cumulative impact, and the projects would not result in a cumulatively considerable incremental contribution to a cumulative impact related to use or routine transport of hazardous materials.

6.3.9 Hydrology/Water Quality

The geographic scope for considering cumulative hydrology and water quality impacts is the Imperial Valley Hydrologic Unit as defined by the Colorado Basin Regional Water Quality Control Board (RWQCB) Basin Plan (2005). The construction of the projects are expected to result in short-term water quality impacts. It is expected that some of the cumulative projects, which are not yet built, could be under construction at the same time as the projects. Therefore, substantial short-term cumulative water quality impacts may occur during simultaneous construction of the projects and other cumulative projects. However, compliance with the SWRCB's National Discharge Pollution Discharge Elimination System (NPDES) general permit for activities associated with construction (2009-0009-DWQ) would reduce water quality impacts. As with the projects, each of the cumulative projects would be required to comply with the Construction General Permit. The SWRCB has determined that the Construction General Permit protects water quality, is consistent with the Clean Water Act, and addresses the cumulative impacts of numerous construction activities throughout the State. This determination in conjunction with the implementation of Mitigation Measures HWQ-1 and HWQ-2 would ensure short-term water quality impacts are not cumulatively considerable.

The projects are not expected to result in long-term operations-related impacts related to water quality. The projects would mitigate potential water quality impacts by implementing site design, source control, and treatment control BMPs. Some cumulative projects would require compliance with the SWRCB's NPDES general permit for industrial activities, as well as rules found in the Federal Clean Water Act, Section 402(p)(1) and 40 CFR 122.26, and implemented Order No. 90-42 of the RWQCB. Quantitative information for cumulative projects considered for long-term water quality impacts was not available; however, with implementation of SWRCB, CRRWQCB, and County policies, plans, and ordinances



governing land use activities that may degrade or contribute to the violation of water quality standards, cumulatively considerable impacts to water quality would be minimized to a less than significant level.

Based on a review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the project sites are located within Zone X, which is an area determined to be outside of the 100-year floodplain. As such, the projects would not result in a significant cumulatively considerable impact to floodplains by constructing new facilitates within an identified flood hazard zone.

As discussed in Section 4.9, Hydrology/Water Quality, the proposed projects would not result in the alteration of existing drainage patterns thereby increasing the rate or amount of surface runoff in a manner that could result in on or off-site flooding and downstream erosion and sedimentation. The proposed on-site retention basins would provide more than the required runoff storage volume. Based on these considerations, the projects would not contribute to or result in a significant cumulatively considerable adverse hydrological or water quality impact.

6.3.10 Land Use and Planning

The geographic scope for the analysis of cumulative land use and planning impacts is typically defined by government jurisdiction. The geographic scope for considering potential inconsistencies with the General Plan's policies, including agriculture, from a cumulative perspective includes all lands within the County's jurisdiction and governed by its currently adopted General Plan. In contrast, the geographic scope for considering potential land use impacts or incompatibilities include the project sites plus a one-mile buffer to ensure a consideration for reasonably anticipated potential direct and indirect effects.

As provided in Section 4.10, Land Use and Planning, the projects would not involve any facilities that could otherwise divide an established community. Based on this circumstance, no cumulatively considerable impacts would occur. As discussed in Section 4.10, Land Use and Planning, the projects would not conflict with the goals and objectives of the County of Imperial General Plan. In addition, a majority of the cumulative projects identified on Table 6-1 would not result in a conflict with applicable land use plans, policies, or regulations. In the event that incompatibilities or land use conflicts are identified for other projects listed in Table 6-1, similar to the projects, the County would require mitigation to avoid or minimize potential land use impacts. Based on these circumstances, no cumulatively considerable impact would occur.

6.3.11 Noise and Vibration

When determining whether the overall noise (and vibration) impacts from related projects would be cumulatively significant and whether the projects' incremental contribution to any significant cumulative impacts would be cumulatively considerable, it is important to note that noise and vibration are localized occurrences; as such, they decrease rapidly in magnitude as the distance from the source to the receptor increases. Therefore, only those related projects and identified in Table 6-1 that are in the direct vicinity of the project sites and those that are considered influential in regards to noise and vibration would have the potential to be considered in a cumulative context with the projects' incremental contribution.

Construction equipment noise from the related projects identified in Table 6-1 would be similar in nature and magnitude to those discussed for the projects in Section 4.11, Noise and Vibration. Specifically, noise levels from on-site construction activities would fluctuate depending on the particular type, number, and duration of usage for the varying equipment. Construction noise from the proposed projects was analyzed at the nearest sensitive receptors. For the nearest sensitive receptors, the highest construction noise levels would be experienced when construction is nearest, identified as the mobile home residence located 175 feet east of the DESF site. At this distance, the received sound level would be 73 dBA Leq 1-hour; however, this sound level would only be experienced for a day or two at most since the project centroid would be considered an average for the duration of construction and would be approximately 1,300 feet from the nearest residential area. At this distance the received sound level would level would be 49 dBA Leq 1-hour. Because construction would be restricted to daytime hours over a period of



36 weeks for the entire project, the use of muffled equipment shall be kept in good working order, and would not exceed applicable regulatory limits. The associated construction noise impacts would be considered less than significant. Although no significant noise impact has been identified. Mitigation Measures NOI-1 through NOI-4 would ensure that noise would not rise to a level of significance. These measures are expected to be sufficient in minimizing construction noise related impacts to a less than significant level. Thus, the incremental contribution of the projects to significant cumulative noise impact would not be cumulatively considerable.

Groundborne noise and vibration levels from construction of the aforementioned related projects would be similar in nature and magnitude to those discussed in Section 4.11, Noise and Vibration. Specifically, construction activities would result in varying degrees of temporary groundborne noise and vibration, depending on the specific construction equipment used and activities involved (see, for example, Table 4.11-5). Although detailed information is not currently available, construction of the related projects would be anticipated to result in maximum groundborne noise and vibration levels associated with bulldozing activities. According to the Federal Transit Administration (FTA), levels associated with the use of a large bulldozer are 0.089 inches per second (in/sec) peak particle velocity (PPV) at 25 feet, respectively. With respect to the prevention of structural damage, bulldozing would not exceed the Caltrans-recommended level of 0.2 in/sec PPV even at a distance of 25 feet. Given that all adjacent structures would generally be 100 feet of more from construction activities, the projects would result in less than significant vibration impacts and, therefore, these impacts are not cumulatively considerable.

Stationary-source and vehicular noise from the aforementioned related projects would be similar in nature and magnitude to those discussed for the projects in Section 4.11, Noise and Vibration. Operation of the related projects could result in the long-term stationary source noise levels that exceed applicable standards at nearby sensitive receptors and/or result in substantial increases in ambient noise levels. Given that the project facilities would be constructed within the A-2 zone, long-term operational noise levels are not expected to exceed normally acceptable noise levels for this zone (e.g., 70 dBA day-night average sound level [L_{dn}]). Thus, the incremental contribution of the projects to significant cumulative noise impacts would not be cumulatively considerable.

6.3.12 **Public Services**

The projects would result in increased demand for public services (fire protection service and law enforcement services) (see Section 4.12, Public Services). Future development in the Imperial Valley, including projects identified in Table 6-1, would also increase the demand for public services. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public services within their jurisdictional boundaries. In conjunction with the projects' approval, the project applicant would also be conditioned to ensure sufficient funding is available for any fire protection or prevention needs and law enforcement services. Based on the type of projects proposed (e.g. solar energy generation), their relatively low demand for public services other than fire and police, it is reasonable to conclude that the projects would not increase demands for education, or other public services. Service impacts associated with the projects related to fire and police would be addressed through payment of impact fees as part of the project's Conditions of Approval to ensure that the service capabilities of these departments are maintained. Therefore, no cumulatively considerable impacts would occur.

Transportation/Traffic 6.3.13

As discussed in Section 4.13, Transportation/Traffic, during construction the project will generate less than 100 peak hour trips (PCEs) and 148 daily trips (PCEs); however this is considered a worst case scenario. Therefore, the proposed project's impact would not degrade existing LOS since both roadways are lightly used and traffic volumes, even during construction of DESF and DWSF, would be well below the capacities of the roadways. Additionally, during operation, each facility will employ up to three individuals on a part-time basis to provide maintenance, repair, and other services required to ensure the facility continues generating energy over its lifetime. These workers will not be on-site on a daily basis, but only as-needed for panel washing and maintenance and repair activities. No capacity-related traffic



impacts are anticipated as a result of this project. Therefore, the DESF and DWSF projects will not exceed the County's intent of providing a system of roads and streets which operate at a LOS C or better, during construction and/or operation. A less than significant impact is identified and no mitigation is required.

The proposed projects, in conjunction with existing, approved, proposed and reasonably foreseeable projects within the County, would have the potential to result in cumulative traffic impacts; however, it is unlikely that the majority of the foreseeable projects within the County would be under construction at the same time as the proposed projects. Furthermore, as the majority of cumulative projects in Imperial County are renewable energy facilities, it is anticipated that these are likely to be developed over a long period of time and it is unlikely that a large number of future facilities would be developed at the same time. Due to the long duration of development, it is unlikely that high levels of construction traffic would occur concurrently. Therefore, the proposed projects would not result in cumulatively considerable roadway or intersection impacts.

6.3.14 Utilities/Service Systems

Future development in Imperial County would increase the demand for utility service in the region. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public utilities within their jurisdictional boundaries. As indicated in Sections 4.14, Utilities/Service Systems, the necessary public utilities would be provided to the projects by IID; however, the projects by themselves are not expected to substantially increase demands for any particular service provider. The related projects identified in Table 6-1 would rely on similar service providers. No habitable structures are proposed on the project sites (such as O&M buildings); therefore, there would be no wastewater generation from the proposed projects. No extension of sanitary sewer service would be required. The projects would be comprised of mostly recyclable materials and would not generate significant volumes of solid waste that could otherwise contribute to significant decreases in landfill capacity. Based on these considerations, the projects would result in less than significant impacts to existing utility providers and, therefore, would not result in cumulatively considerable impacts.

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7.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

In accordance with Section 15128 of the California Environmental Quality Act (CEQA) Guidelines, an Environmental Impact Report (EIR) must contain a statement briefly indicating the reasons that various potential significant effects of a project were determined not to be significant. Based on the Initial Study and Notice of Preparation prepared for the proposed projects (Appendix A), Imperial County has determined that the proposed projects would not have the potential to cause significant adverse effects associated with the topics identified below. Therefore, these topics are not addressed in this EIR; however, the rationale for eliminating these topics is briefly discussed below.

7.1 FORESTRY RESOURCES

The project sites are located on privately owned, undeveloped, but partially disturbed land. No portion of the project sites (or the immediate vicinity) is zoned or designated as forest lands, timberlands, or Timberland Production. As such, the projects would not result in a conflict with existing zoning or cause rezoning. Therefore, implementation of the proposed projects would not impact forestry resources.

7.2 MINERAL RESOURCES

The project sites are not used for mineral resource production and the applicant is not proposing any form of mineral extraction. According to the Conservation and Open Space Element of the County of Imperial General Plan, no known mineral resources occur within the project sites nor do the project sites contain mapped mineral resources. As such, the proposed projects would not adversely affect the availability of any known mineral resources within the project sites.

7.3 RECREATION

The proposed projects would not generate new employment on a long-term basis. The facilities would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. A parttime operations and maintenance staff of two to three people per project would be responsible for performing all routine and emergency operational and maintenance activities. As such the project would not significantly increase the use or accelerate the deterioration of regional parks or other recreational facilities. The temporary increase of population during construction that might be caused by an influx of workers would be minimal and not cause a detectable increase in or impact on the use of parks. Additionally, the projects do not include or require the expansion of recreational facilities.

7.4 POPULATION AND HOUSING

The project sites are currently vacant. Development of housing is not proposed as part of the projects. The facilities would be remotely operated, controlled and monitored and with no requirement for daily onsite employees. A part-time operations and maintenance staff of two to three people per project would be responsible for performing all routine and emergency operational and maintenance activities. Such activities include inspections, equipment servicing, site and landscape clearing, and periodic washing of the PV modules if needed (up to four times per year) to increase the performance of the panels. The proposed projects would not result in a substantial population growth, as the number of employees required to operate and maintain the facilities is minimal. Furthermore, no residences are located within the project sites.

7.5 PUBLIC SERVICES

Schools, Parks and Other Facilities

The proposed projects do not include the development of residential land uses that would result in an increase in population or student generation. Construction of the proposed projects would not result in an increase in student population within the Imperial County's School District since it is anticipated that construction workers would commute in during construction operations.



Additionally, operation of the proposed projects would require minimal part-time staff for maintenance. Therefore, substantial permanent increases in population that would adversely affect local parks, libraries, and other public facilities (such as post offices) are not expected.

7.6 UTILITIES

Wastewater and Stormwater

The projects would generate a minimal volume of wastewater during construction. During construction activities, wastewater would be contained within portable toilet facilities and disposed of at an approved site. No habitable structures are proposed on the project sites (such as O&M buildings); therefore, there would be no wastewater generation from the proposed projects. The proposed projects would not exceed wastewater treatment requirements of the Regional Water Quality Control Board (RWQCB). The proposed projects are not anticipated to generate a significant increase in the amount of runoff water from water use involving solar panel washing. Water will continue to percolate through the ground, as a majority of the surfaces on the project site will remain pervious. The proposed projects would not substantially alter the existing drainage pattern of the site, substantially increase the rate of runoff, or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. No IID drains or canals will be removed or relocated within the project. A less than significant impact is identified for these issue areas.

Solid Waste

During construction and operation of the projects, waste generation will be minor. Solid waste will be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. There are over 40 solid waste facilities listed in Imperial County in the CalRecycle database. Trash would likely be hauled to the Imperial Solid Waste Site located approximately nine miles northeast from the project area. The facility has approximately 183, 804 cubic yards of capacity remaining (reporting date May 2012). The Imperial Solid Waste Site has a maximum permitted throughput of 18 tons/day and is estimated to remain in operation until March 1, 2019 (http://www.calrecycle.ca.gov/SWFacilities/Directory/13-AA-0001/Detail/). Therefore, there is ample landfill capacity to receive the minor amount of solid waste generated by project construction and operation.

Additionally, because the proposed projects would generate solid waste during construction and operation, they will be required to comply with State and local requirements for waste reduction and recycling; including the 1989 California Integrated Waste Management Act and the 1991 California Solid Waste Reuse and Recycling Access Act of 1991. Also, conditions of the CUP for each project site will contain provisions for recycling and diversion of construction waste per policies of the County. A less than significant impact is identified for this issue.

Further, when the proposed projects reach the end of their operational life, the components will be decommissioned and deconstructed. Decommissioning of the projects will require removal of the solar panels and associated infrastructure and returning the landscape to condition prior to construction. It is expected that many components will be suitable for recycling or reuse and the facility decommissioning will be designed to optimize such salvage as circumstances allow and in compliance with all local, state, and federal regulations as they exist at the time of decommissioning. Commercially reasonable efforts will be used to recycle or reuse materials from the decommissioning of the project sites. All other materials will be disposed of at a licensed facility. Therefore, no impacts are identified for this issue.



8.0 ALTERNATIVES

8.1 INTRODUCTION

The identification and analysis of alternatives is a fundamental concept under the California Environmental Quality Act (CEQA). This is evident in that the role of alternatives in an Environmental Impact Report (EIR) is set forth clearly and forthrightly within the CEQA statutes. Specifically, CEQA §21002.1(a) states:

"The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided."

The CEQA Guidelines require an EIR to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines §15126.6(a)). The CEQA Guidelines direct that selection of alternatives focus on those alternatives capable of eliminating any significant environmental effects of the project or of reducing them to a less-than significant level, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly. In cases where a project is not expected to result in significant impacts after implementation of recommended mitigation, review of project alternatives is still appropriate.

The range of alternatives required within an EIR is governed by the "rule of reason" which requires an EIR to include only those alternatives necessary to permit a reasoned choice. The discussion of alternatives need not be exhaustive. Furthermore, an EIR need not consider an alternative whose implementation is remote and speculative or whose effects cannot be reasonably ascertained.

Alternatives that were considered but were rejected as infeasible during the scoping process should be identified along with a reasonably detailed discussion of the reasons and facts supporting the conclusion that such alternatives were infeasible.

Based on the alternatives analysis, an environmentally superior alternative is designated among the alternatives. If the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives (CEQA Guidelines §15126.6(e)(2)).

8.2 CRITERIA FOR ALTERNATIVES ANALYSIS

As stated above, pursuant to CEQA, one of the criteria for defining project alternatives is the potential to attain the project objectives. Established objectives of the project applicant for the proposed projects include:

Overall objective: To utilize Imperial County's abundance of available solar energy (sunlight) to generate renewable energy, consistent with the County General Plan renewable energy objectives. The project applicant and the County identified the following objectives for the projects:

- Construct and operate a solar energy facility capable of producing up to 5 megawatts (MW) of electricity to help meet the State-mandated Renewable Portfolio Standard (RPS) of providing 33 percent renewable energy by 2020.
- Construct and operate a solar power facility in the County's renewable energy overlay zone, ensuring that the projects are within areas determined to be the most suitable for the development of renewable energy facilities and with minimal impacts to the environment.



- Operate a facility at a location that ranks amongst the highest in solar resource potential in the nation.
- Interconnect with existing electrical transmission infrastructure to maximize opportunities for the sharing or use of existing utility transmission corridor(s) and to minimize potential environmental impacts associated with the construction of new infrastructure.
- Comply with the terms and requirements of the long-term power purchase agreement with the Imperial Irrigation District through its Feed-in Tariff program.
- Operate a renewable energy facility that does not produce significant noise nor emit any greenhouse gases.
- Help reduce reliance on foreign sources of fuel.
- Supply on-peak power to the electrical grid in California.
- Help California meet its statutory and regulatory goal of increasing renewable power generation, including greenhouse gas reduction goals of Assembly Bill (AB) 832 (California Global Warming Solutions Act of 2006).
- Contribute to Imperial County's economic growth and reputation as the renewable energy capital of the nation.

8.3 ALTERNATIVES CONSIDERED BUT REJECTED

Alternative Site

Section 15126.6(f)(2) of the CEQA Guidelines addresses alternative locations for a project. The key question and first step in the analysis is whether any of the significant effects of the proposed project would be avoided or substantially lessened by putting the proposed project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR. Further, CEQA Guidelines Section 15126.6(f)(1) states that among the factors that may be taken into account when addressing the feasibility of alternative locations are whether the project proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent).

Choosing an "Alternative Site" was considered but not selected for detailed analysis. The proposed project sites were chosen based on the following parameters: (1) location within the County's renewable energy overlay zone which would ensure that the projects are within areas determined to be the most suitable for the development of renewable energy facilities and with minimal impacts to the environment; (2) proximity to the Dixieland Substation; (3) meets the criteria for IID's Feed-in-Tariff Program (i.e., located within the IID service territory and interconnected in a manner that optimizes deliverable of generation to load centers); and (4) no significant resources present on project sites (i.e., Prime Farmland, Farmland of Statewide Importance, burrowing owl habitat, sensitive vegetation communities). Compared to the proposed project sites, alternative sites in Imperial County would not meet all of the abovementioned parameters. An alternative site on agriculturally zoned land east of the Westside Main Canal or south of I-8 could result in greater impacts associated with the conversion of Prime Farmland or Farmland of Statewide Importance to non-agricultural lands and impacts to burrowing owl habitat. An alternative site on BLM lands could result in greater impacts to cultural resources, native vegetation, and flat-tailed horned lizard habitat. Furthermore, the Applicant does not own or possess access to an alternative site in Imperial County to develop the proposed projects. Therefore, an alternative site was eliminated from further consideration in this EIR.

8.4 ALTERNATIVE 1: NO PROJECT/NO DEVELOPMENT ALTERNATIVE

The CEQA Guidelines require analysis of the No Project Alternative (Public Resources Code Section 15126). According to Section 15126.6(e), "the specific alternative of 'no project' shall also be evaluated



along with its impacts. The 'no project' analysis shall discuss the existing conditions at the time the Notice of Preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services."

The No Project/No Development Alternative assumes that the Dixieland East Solar Farm (DESF) and Dixieland West Solar Farm (DWSF) projects, as proposed, would not be implemented and the project sites would not be developed. The No Project/No Development Alternative would not meet any of the project objectives.

Environmental Impact of Alternative 1 – No Project/No Development Alternative

Aesthetics: Because the No Project/No Development Alternative would not modify the existing project sites or add construction to the project sites, there would be no change to the existing condition of the sites. Under this alternative, there would be no new source of light and glare, which could adversely affect day or nighttime views in the project area. Compared to the proposed projects, this alternative would have less of an impact related to aesthetics/visual resources.

Agriculture: Under the No Project/No Development Alternative, the project sites would not be developed and continue to be undeveloped vacant land. Compared to the proposed projects, implementation of this alternative would avoid the conversion of land designated as Other Land and Farmland of Local Importance per the Farmland Mapping and Monitoring Program (FMMP). However, as previously indicated, these designations are not considered an "agricultural land" per CEQA Statute Section 21060.1(a). Therefore, this alternative would not contribute to the conversion of agricultural lands or otherwise adversely affect agricultural operations. Compared to the proposed projects, this alternative would avoid the need for future restoration of the project sites to pre-project conditions.

Air Quality: Under the No Project/No Development Alternative, there would be no air emissions due to project construction or operation, and no project- or cumulative-level air quality impact would occur. Therefore, no significant impacts to air quality or violation of air quality standards would occur under this alternative. Moreover, this alternative would be consistent with existing air quality attainment plans and would not result in the creation of objectionable odors.

As discussed in Section 4.3, Air Quality, the proposed projects would not exceed the Imperial County Air Pollution Control District (ICAPCD) significance thresholds for ROG, CO, NO_x, and PM₁₀ during construction and operation. Although no significant air quality impacts would occur, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. During construction, the projects would require incorporation of mitigation to minimize significant air quality impacts to a less than significant level. Under the No Project/No Development Alternative, there would be no air emissions due to project construction or operation. Therefore, this alternative would result in less air quality emissions compared to the proposed projects. Additionally, the No Project/No Development Alternative would not reduce the long-term need for renewable electricity generation. As a consequence, while the No Project/No Development Alternative would not result in result of construction, it would likely not realize the overall benefits to regional air quality when compared to the operation of the proposed projects.

Biological Resources: Under the No Project/No Development Alternative, existing biological resource conditions within the project sites would largely remain unchanged and no impact would be identified. Also, unlike the proposed projects which require mitigation for impacts to raptor species and burrowing owl, this alternative would not result in construction of solar facilities that could otherwise result in significant impacts to these biological resources. As with the proposed projects, this alternative would avoid any impacts associated with habitat modification, riparian or wetlands, the movement of fish and wildlife species, and would not conflict with policies or ordinances relative to protection biological species



or any provisions of an applicable habitat conservation plan. Compared to the proposed projects, this alternative would avoid impacts to biological resources.

Cultural Resources: The projects include ground-disturbing activities that will extend to depths of 20 feet below the ground surface. As such, the projects have the potential to disturb previously undocumented cultural resources that could qualify as historical resources or unique archaeological resources pursuant to CEQA. The proposed projects also have the potential to impact paleontological resources. Under the No Project/No Development Alternative, the project sites would not be developed and no construction-related ground disturbance would occur. Therefore, compared to the proposed projects, this alternative would avoid impacts to cultural resources and paleontological resources.

Geology and Soils: Because there would be no development at the project sites under the No Project/No Development Alternative, no grading or construction of new facilities would occur. Therefore, there would be no impacts to project-related facilities as a result of local seismic or liquefaction hazards, unstable or expansive soils, or suitability of soils for supporting septic tanks. In contrast, the proposed projects would require the incorporation of mitigation measures to minimize impacts to a less than significant level. Compared to the proposed projects, this alternative would avoid significant impacts related to local geological and soil conditions.

Greenhouse Gas Emissions: Under the No Project/No Development Alternative, there would be no greenhouse gas (GHG) emissions resulting from project construction or operation. Therefore, no impact to global climate change would result from project-related GHG emissions, primarily associated with construction activities. For the proposed projects, a less than significant impact was identified for construction-related GHG emissions, and in the long-term, the projects would result in an overall beneficial impact to global climate change as the result of creation of renewable energy. While this alternative would not further implement policies (e.g., SB X1-2) for GHG reductions, this alternative would also not directly conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. This alternative would not create any new GHG emissions during construction but would not lead to a long-term beneficial impact to global climate change. Compared to the proposed projects, while the No Project/No Development Alternative would not result in new GHG emissions during construction, it would be less beneficial to global climate change as compared to the proposed projects.

Hazards and Hazardous Materials: The No Project/No Development Alternative would not include any new construction. Therefore, no potential exposure to hazardous materials would occur. Therefore, no impact is identified for this alternative for hazards and hazardous materials. As with the proposed projects, this alternative would not result in safety hazards associated with airport operations. Compared to the proposed projects, this alternative would have less of an impact related to hazards and hazardous materials.

Hydrology/Water Quality: The No Project/No Development Alternative would not result in modifications to the existing drainage patterns or volume of storm water runoff as attributable to the proposed projects, as existing site conditions and on-site pervious surfaces would remain unchanged. In addition, no changes with regard to water quality would occur under this alternative. However, in the context of existing sediment total maximum daily loads (TMDLs) for local drainages, this alternative would not realize the benefits that could be attributed to the projects in terms of reductions in exposed soil surfaces which are identified as a principle contributor to existing water quality impairments. In this context, this alternative would not contribute to any real reduction in the potential for water quality impacts especially, since the projects would require additional mitigation, which would not otherwise be required under this alternative to address existing water quality impairments. Compared to the proposed projects, from a drainage perspective, this alternative would avoid changes to existing hydrology. Similar to the proposed projects, this alternative would not result in the placement of structures within a 100-year flood zone.

Land Use and Planning: The No Project/No Development Alternative would not result in the modification of the existing land use on the project sites. Under the No Project/No Development Alternative, the project sites would not be developed and continue to be undeveloped vacant land. Similar to the proposed projects, the No Project/No Development Alternative would not divide an



established community. As with the proposed projects, this alternative would not conflict with any applicable habitat conservation plan or natural community conservation plan. Compared to the proposed projects, this alternative would have less of an impact related to land use and planning.

Noise: This alternative would not require construction or operation of the project facilities; therefore, this alternative would not increase ambient noise levels within the vicinity of the project sites. For this reason, no significant noise impacts would occur. As discussed in Section 4.11, Noise and Vibration, the proposed project would not result in significant noise impacts to sensitive receptors during construction and operation. However, implementation of mitigation would ensure that noise would not rise to a level of significance. The proposed projects could result in significant noise impacts to a limited number of receptors and, therefore, would require mitigation to reduce these impacts to a less than significant level. Compared to the proposed projects, this alternative would not generate noise reduce any potentially significant noise impacts and eliminate the need for the applied mitigation measures and would have less of an impact related to noise.

Public Services: The No Project/No Development Alternative would not increase the need for public services which would otherwise be required for the proposed projects (additional police or fire protection services). Therefore, no impact to public services is identified for this alternative. The proposed projects result in less than significant impacts; subject to payment of law enforcement and fire service fees. Compared to the proposed projects, this alternative would have fewer impacts related to public services.

Transportation/Traffic: Because there would be no new development under the No Project/No Development Alternative, no increase in vehicular trips during construction or operation would result for this alternative. For these reasons, no impact would occur and this alternative would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, conflict with an applicable congestion management program, change air traffic patterns, substantially increase hazards due to a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. Although the proposed projects would result in less than significant transportation/traffic impacts, compared to the proposed projects, this alternative would avoid an increase in vehicle trips on local roadways, and any safety related hazards that could occur in conjunction with the increase vehicle trips and truck traffic.

Utilities: The No Project/No Development Alternative would not require the expansion or extension of existing utilities, since there would be no new project facilities that would require utility service. The proposed projects would not result in any significant impacts to existing utilities. Compared to the proposed projects, this alternative would have less of an impact related to utilities.

Conclusion: Implementation of the No Project/No Development Alternative would generally result in reduced impacts for a majority of the environmental issues areas considered in Chapter 4, Environmental Analysis when compared to the proposed projects. A majority of these reductions are realized in terms of significant impacts that are identified as a result of project construction. However, this alternative would not realize the benefits of reduced GHG emissions associated with energy use, which are desirable benefits that are directly attributable to the proposed projects.

Comparison of the No Project/No Development Alternative to Project Objectives

The No Project/No Development Alternative would not meet any of the objectives of the projects. Additionally, the No Project/No Development Alternative would not help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of Assembly Bill (AB) 832 (California Global Warming Solutions Act of 2006).



ALTERNATIVE 2: DEVELOPMENT OF DIXIELAND EAST SOLAR 8.5 FARM SITE ONLY

Under this alternative, only the 24-acre DESF project would be constructed and operated. The purpose of this alternative is to avoid potential California Department of Fish and Wildlife (CDFW) and Regional Water Quality Control Board (RWQCB) jurisdictional resources located within the DWSF site. Five ephemeral, intermittent washes totaling 0.739 acres (1,520 linear feet) were identified within the DWSF site.

Environmental Impact of Alternative 2: Development of Dixieland East Solar Farm Site Only

Aesthetics: Under Alternative 2: Development of DESF Site Only, the overall size of the solar energy facilities would be reduced by 29 acres. No significant visual aesthetic impact associated with the proposed projects has been identified as the project facilities would not impact scenic resources, result in the degradation of the existing visual character of the project sites, or result in light/glare impacts. In this context, Alternative 2: Development of DESF Site Only would not reduce or avoid an impact related to aesthetics, and would result in less than significant impacts similar to the proposed projects.

This alternative would avoid the conversion of land designated as Other Land and Agriculture: Farmland of Local Importance per the FMMP on the DWSF site. However, as previously indicated, these designations are not considered an "agricultural land" per CEQA Statute Section 21060.1(a). Therefore, similar to the proposed projects, this alternative would not contribute to the conversion of agricultural lands or otherwise adversely affect agricultural operations. Similar to the proposed projects, the need for future restoration of the project site to pre-project conditions would be required under this alternative. Compared to the proposed projects, this alternative would result in a reduction in acreage required to be restored to pre-project conditions, but would still require mitigation.

Air Quality: Under Alternative 2: Development of DESF Site Only, air emissions during construction would be less than the proposed projects because of the reduced site development. As discussed in Section 4.3, Air Quality, the proposed projects would not exceed the Imperial County Air Pollution Control District (ICAPCD) significance thresholds for ROG. CO. NO_x, and PM₁₀ during construction and operation. Although no significant air quality impacts would occur, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. The same mitigation measures would be required for this alternative as with the proposed projects. This alternative would be consistent with existing air quality attainment plans and would not result in the creation of objectionable odors. While air emissions would be slightly reduced, the impacts of this alternative to air quality would be similar.

Biological Resources: Under Alternative 2: Development of DESF Site Only, impacts to potential CDFW and RWQCB jurisdictional resources located within the DWSF site would be avoided. Five ephemeral, intermittent washes totaling 0.739 acres (1,520 linear feet) were identified within the DWSF site. Mitigation would still be required for impacts to burrowing owl; however, the overall number of burrowing owl locations potentially impacted would be less. Impacts to burrowing owl, migratory corridors, and other wildlife and habitats would be similar to that described for the projects. Compared to the proposed projects, this alternative would result in a reduction in impacts to biological resources, but would still require mitigation.

Cultural Resources: Under Alternative 2: Development of DESF Site Only, ground-disturbing activities will extend to depths of 20 feet below the ground surface, similar to the proposed projects. As such, this alternative has the potential to disturb previously undocumented cultural resources that could qualify as historical resources or unique archaeological resources pursuant to CEQA. Mitigation is required, in the form of monitoring during construction, to ensure that should unanticipated discovery of cultural resources or human remains be encountered, and proper measures are implemented to ensure these potential



impacts are addressed. Similar to the proposed projects, this alternative also has the potential to impact paleontological resources and mitigation would be required to reduce impacts to a less than significant level. However, compared to the proposed project, this alternative would result in a reduction in impacts to cultural resources and paleontological resources because of a reduced project footprint.

Geology and Soils: Under Alternative 2: Development of DESF Site Only, while the overall project footprint would be reduced, grading and construction of new facilities and solar arrays would still occur. Therefore, this alternative would still be subject to potential impacts related to seismic or liquefaction hazards and unstable or expansive soils. Similar to the projects, this alternative would require the incorporation of mitigation measures identified for the proposed projects to minimize these impacts to a less than significant level. Compared to the proposed projects, this alternative would result in similar geological and soil impacts.

Greenhouse Gas Emissions: Under Alternative 2: Development of DESF Site Only, the overall project footprint would be reduced thereby contributing to reductions in GHG emissions during project construction. However, as a consequence of the reduced size of the projects, this alternative would result in a reduced power production capacity as compared to the proposed projects; hence, the overall benefits of the projects to global climate change through the creation of renewable energy would also be reduced. This alternative would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Similar to the proposed projects, this alternative would not exceed South Coast Air Quality Management District's (SCAQMD's) threshold of 3,000 tonnes of carbon dioxide equivalents (tCO_{2e}). Compared to the proposed projects, this alternative would contribute to similar and desirable reductions in GHG emissions and associated contribution to global climate change through the production to global climate change through the production of renewable energy, although to a lesser degree.

Hazards and Hazardous Materials: Similar to the proposed projects, no potential exposure to hazardous materials would occur under this alternative. Impacts associated with wildfire hazards and airport safety would be similar to that described for the proposed projects. Compared to the proposed projects, this alternative would result in similar hazards and hazardous materials impacts.

Hydrology/Water Quality: Because the overall project footprint would be reduced, this alternative would realize a minor reduction in the corresponding impacts to hydrology and on-site drainage; however, the same mitigation measures would be applicable to this alternative. Similar to the proposed projects, no impacts would result from flooding and facilities will not be placed within floodplains. Compared to the proposed projects, this alternative would result in fewer hydrology/water quality impacts.

Land Use and Planning: Similar to the proposed projects, Alternative 2: Development of DESF Site Only would not divide an established community or result in incompatibilities with adjacent agricultural uses. As with the proposed projects, this alternative would not conflict with any applicable habitat conservation plan or natural community conservation plan. Compared to the proposed projects, land use and planning impacts resulting from this alternative would be similar to those identified for the proposed projects.

Noise: As discussed in Section 4.11, Noise and Vibration, the proposed project would not result in significant noise impacts to sensitive receptors during construction and operation. However, implementation of mitigation would ensure that noise would not rise to a level of significance. As with the proposed projects, Alternative 2: Development of DESF Site Only would result in significant, but mitigable noise impacts associated with construction activities. Compared to the proposed projects, tThis alternative would require the operations of the same facilities required for the projects and, therefore, would have similar impacts as the proposed project. not reduce any significant noise impacts associated with this alternative would not expose persons or generate noise levels in excess of applicable noise standards, exposure persons to, or generate excessive groundborne vibration, or expose persons to excessive aircraft noise. As with the proposed projects, noise impacts resulting from this alternative would be similar to those identified for the proposed projects. Compared to the proposed projects, this alternative would result in a similar impact related to noise for the proposed projects.



Public Services: While the overall project footprint would be slightly smaller, the impacts of this alternative to public services and associated service ratios would be similar. Similar to the proposed projects, this alternative would be conditioned to provide law enforcement and fire service development impact fees. Compared to the proposed projects, this alternative would result in a similar impact related to public services.

Transportation/Traffic: Due to the reduction in the overall project footprint, this alternative would result in a reduced level of vehicle and truck trips as compared to the proposed projects. The increase in vehicular traffic was identified as a less than significant impact for the proposed projects. In this context, Alternative 2: Development of DESF Site Only would not reduce or avoid an impact related to transportation/traffic, and would result in less than significant impacts similar to the proposed projects. As with the proposed projects, this alternative would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, conflict with an applicable congestion management program, change air traffic patterns, substantially increase hazards due to a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. Compared to the proposed projects, this alternative would result in a similar impact related to transportation/traffic.

Utilities: Similar to the proposed projects, Alternative 2: Development of DESF Site Only would not require the expansion or extension of existing utilities. This alternative would still require water for dust suppression and solar panel washing, but at a reduced amount. No significant utilities impact was identified with implementation of the proposed projects. In this context, Alternative 2: Development of DESF Site Only would not reduce or avoid an impact related to utilities, and would result in less than significant impacts similar to the proposed projects.

Conclusion: Implementation of Alternative 2: Development of DESF Site Only would result in reduced impacts for the following environmental issues areas as compared to the proposed projects: agriculture, biological resources, cultural resources, greenhouse gas emissions (construction phase only), and hydrology/water quality. This alternative would not result in any greater environmental impacts when compared to the proposed projects.

Comparison of Alternative 2: Development of Dixieland East Solar Farm Site Only

Alternative 2: Development of DESF Site Only would meet most of the basic objectives of the proposed projects and should remain under consideration. However, this alternative would make it more difficult to achieve the overall objective of providing a total of five megawatts of renewable solar energy, because the 3 MW DWSF Project would not be constructed.

8.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 8-1 provides a qualitative comparison of the impacts for each alternative compared to the proposed projects. As noted in Table 8-1, the No Project/No Development Alternative would be considered the environmentally superior alternative, since it would eliminate all of the significant impacts identified for the projects. However, CEQA Guidelines Section 15126.6(e)(2) states that "if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." The environmentally superior alternative would be Alternative 2: Development of DESF Site Only because it would reduce impacts for the following environmental issues areas as compared to the proposed projects agriculture, biological resources, cultural resources, greenhouse gas emissions (construction phase only), and hydrology/water quality.



Environmental Issue Area	Proposed Project	Alternative 1 - No Project/ No Development	Alternative 2 - Development of DESF Site Only
Aesthetics	Less than Significant	CEQA Significance: No impact	CEQA Significance: Less than significant
		Comparison to Projects: Less impact	Comparison to Projects: Similar impact
Agriculture	Mitigated to below a level less than significant	CEQA Significance: No impact	CEQA Significance: Mitigated to below a level less than significant
		Comparison to Projects: Less impact (avoid)	Comparison to Projects: Less impact
Air Quality	Less than significant	CEQA Significance: No impact	CEQA Significance: Less than significant
		Comparison to Projects: Less impact	Comparison to Projects: Similar impact
Biological Resources	Mitigated to below a level less than significant	CEQA Significance: No impact	CEQA Significance: Mitigated to below a level less than significant
		Comparison to Projects: Less impact (avoid)	Comparison to Projects: Less impact (avoid)
Cultural Resources	Mitigated to below a level less than significant	CEQA Significance: No impact	CEQA Significance: Mitigated to below a level of significance
		Comparison to Projects: Less impact (avoid)	Comparison to Projects: Less impact
Geology and Soils	Mitigated to below a level less than significant	CEQA Significance: No impact	CEQA Significance: Mitigated to below a level less than significant
		Comparison to Projects: Less impact (avoid)	Comparison to Projects: Similar impact
Greenhouse Gas Emissions	Mitigated to below a level less than significantLess than significant	CEQA Significance: No impact	CEQA Significance: Mitigated to below a level less than significant <u>Less than</u> significant
		Less impact	Comparison to Projects: Less impact during construction. Would not achieve GHG emission reductions to the extent of the proposed project as less renewable energy would be produced

TABLE 8-1.	COMPARISON OF	ALTERNATIVE IMPACTS TO	PROPOSED PROJECT



Environmental Issue Area	Proposed Project	Alternative 1 - No Project/ No Development	Alternative 2 - Development of DESF Site Only
Hazards and Hazardous Materials	Less than Significant	CEQA Significance: No impact	CEQA Significance: Less than significant
		Comparison to Projects: Less impact	Comparison to Projects: Similar impact
Hydrology/ Water Quality	Mitigated to below a level less than significant	CEQA Significance: No impact	CEQA Significance: Mitigated to below a level less than significant
		Comparison to Projects Less impact	Comparison to Projects: Less impact
Land Use/Planning	Less than significant	CEQA Significance: No impact	CEQA Significance: Less than significant
		Comparison to Projects: Less impact	Comparison to Projects: Similar impact
Noise	Mitigated to below a level less than significantLess than significant	CEQA Significance: No impact	CEQA Significance: Mitigated to below a level less than significantLess than significant
		Comparison to Projects: Less impact	Comparison to Projects: Similar impact
Public Services	Less than Significant	CEQA Significance: No impact	CEQA Significance: Less than significant
		Comparison to Projects: Less impact	Comparison to Projects: Similar Impact
Transportation/ Traffic	Less than significant	CEQA Significance: No impact	CEQA Significance: Less than significant
		Comparison to Projects: Less impact	Comparison to Projects: Similar Impact
Utilities	Less than Significant	CEQA Significance: No impact	CEQA Significance: Less than significant
		Comparison to Projects: Less impact	Comparison to Projects Similar Impact



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Fomotor Engineering (Hydrology Study and Site Restoration Plan)

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George Dunn Engineering (Traffic Assessment) 1914 Paseo Pelota Palm Springs, CA 92262

GS Lyon Consultants, Inc. (Phase I Environmental Site Assessment) 780 N. 4th Street El Centro, CA 92243

Landmark Consultants, Inc. (Geotechnical Investigation Report) 780 N. 4th Street El Centro, CA 92243

OB-1 Air Analyses (Air Quality and Greenhouse Gas Report) 3784 Mission Avenue, Suite 148, PMB 601 Oceanside, CA 92058

Phoenix Biological Consulting (Biological Technical Report) PO Box 2238 Tehachapi, CA 93581



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