LESA ASSESSMENT
FERRELL SOLAR FARM

FERRELL SOLAR FARM
(E/2 Section 1 (portion), T17S, R13E and NW/4 Section 7, T17S, R14E, SBB&M)

IMPERIAL COUNTY, CALIFORNIA

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LAND EVALUATION AND SITE ASSESSMENT MODEL

FERRELL SOLAR FARM
(E/2 Section 1 (portion), T17S, R13E and NW/4 Section 7, T17S, R14E, SBB&M)
IMPERIAL COUNTY, CALIFORNIA

The Land Evaluation and Site Assessment (LESA) model is an approach for rating the relative quality of land resources based upon specific measurable features. The LESA model was first developed by the federal Natural Resources Conservation Service (NRCS) in 1981. It was subsequently adapted in 1990 by the California Department of Conservation to evaluate land use decisions that affect the conversion of agriculture lands in California. The formulation of the California LESA Model is intended to provide lead agencies under the California Environmental Quality Act (CEQA) with an optional methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process.

For determining the potential CEQA significance resulting from the conversion of agricultural lands to some other purpose, the California Agricultural LESA Model has developed Scoring Thresholds which are used to compare the Final LESA Score and the Weighted Factor Scores for the Project with suggested Scoring Decisions. These LESA Scores do not take into consideration any proposed mitigation measures or other factors that might affect a lead agency's determination of the significance of the agricultural lands conversion impact under CEQA.

The information provided on the following pages present documentation of the LESA assessment prepared using the California Agricultural LESA Model for the Ferrell Solar Farm. The proposed Ferrell Solar Farm would be located about five miles west of the city of Calexico, California, on approximately 367 acres of privately owned land on APN 052-180-042-000 and APN 059-050-001-000 (Figure 1 and Figure 2). APN 052-180-042-000 and APN 059-050-001-000 are bounded on the north by the New River; bounded on the south by the Imperial Irrigation District (IID) Wistaria Canal; and bounded on the west by Corda Road.

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IMPERIAL COUNTY, CALIFORNIA

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Figure 1**: Location Map**

Figure 2**: Ferrell Solar Farm on an Aerial Photographic Base**

Land Evaluation Worksheet							
A	B	C	D	E	F	G	H
Soil Map Unit*	Project Acres	Proportion of Project Area	LCC** (irrigated)	LCC Rating (irrigated)***	LCC Score (C x E)	Storie Index**	Storie Index Score (C x G)
102	1.2	0.003	VIII	0	0.00	0	0.00
109	16.0	0.044	IIs	80	3.50	50	2.19
110	74.4	0.203	IIw	80	16.22	45	9.13
114	2.4	0.007	IIIw	60	0.39	42	0.27
115	242.9	0.662	IIIw	60	39.70	72	47.64
119	6.5	0.018	IIs	80	1.42	96	1.71
122	23.6	0.064	IIIw	60	3.85	44	2.82
Totals	367.1	1.00		LCC Total Score	65	Storie Index Total Score	64
Total Project Area (acres)=	367.1						

* The Soil Map Unit information and acreage were determined from the current soil survey information available at the USDA Natural Resources Conservation Service website: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx (Figure 3).

** The Land Capability Classification and Storie Index information was obtained from the current soil survey information available at the USDA Natural Resources Conservation Service website: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx (Appendix A).

*** The LCC Rating for irrigated land was determined from the LCC Point Rating Table 2 from the LESA Instruction Manual (California Department of Conservation 1997).

Table 1: Land Capability Classification (LCC) – Storie Index Rating

Tables — California Revised Storie Index (CA) — Summary By Map Unit

Summary by Map Unit — Imperial County, California, Imperial Valley Area (CA683)

Map unit symbol	Map unit name	Rating	Component name (percent)	Acres in AOI	Percent of AOI
102	BADLAND	Not Rated	Badland (85%)	1.2	0.3%
			Imperial (2%)		
			Holtville (2%)		
			Meloland (2%)		
			Indio (2%)		
109	HOLTVILLE SILTY CLAY	Grade Three - Fair	Holtville (85%)	16.0	4.4%
			Glenbar (5%)		
			Imperial (5%)		
110	HOLTVILLE SILTY CLAY, WET	Grade Three - Fair	Holtville, WET (85%)	74.4	20.3%
114	IMPERIAL SILTY CLAY, WET	Grade Three - Fair	Imperial, WET (85%)	2.4	0.7%
			Holtville (4%)		
115	IMPERIAL-GLENBAR SILTY CLAY LOAMS, WET, 0 TO 2 PERCENT SLOPES	Grade Two - Good	Imperial, WET (40%)	242.9	66.2%
			Glenbar, WET (40%)		
119	INDIO-VINT COMPLEX	Grade One - Excellent	Indio (35%)	6.5	1.8%
			Vint (30%)		
122	MELOLAND VERY FINE SANDY LOAM, WET	Grade Three - Fair	Meloland, WET (85%)	23.6	6.4%
			Imperial (3%)		
			Holtville (3%)		
Totals for Area of Interest				367.1	100.0%

Figure 3**: Ferrell Solar Farm Soils Map**

	Site Assessment Worksheet 1		
	Project Size Score*		
	I	J	K
	LCC Class I-II	LCC Class III	LCC Class IV-VIII
Project Acres per LCC Class			1
Project Acres per LCC Class	16		
Project Acres per LCC Class	74		
Project Acres per LCC Class		2	
Project Acres per LCC Class		243	
Project Acres per LCC Class	7		
Project Acres per LCC Class		24	
Total Project Acres per LCC Class	**97**	**269**	**1**
**** Project Size Scores***	**100**	**100**	**0**
Highest Project Size Score	**100**		
* Project Size Score was determined from the Project Size Scoring Table from the LESA Instruction Manual (California Department of Conservation 1997).			

Table 2: Project Size Rating

Site Assessment Worksheet 2				
Water Resources Availability				
A	**B**	**C**	**D**	**E**
Project Portion	**Water Source**	**Proportion of Project Area**	**Water Availability Score***	**Weighted Availability Score (C x D)**
1	Irrigation District Only	1.0	100	100
2				
3				
4				
5				
6				
		(Must Sum to 1.0)	***Total Water Resource Score***	100

* The Water Availability Score was determined using the Water Resources Availability Scoring Table from the LESA Instruction Manual (California Department of Conservation 1997).

Table 3: Water Resources Availabilty Rating

Site Assessment Worksheet 3						
Surrounding Agricultural Land & Surrounding Protected Resource Land						
A	B	C	D	E	F	G
Zone of Influence*					Surrounding Agricultural Land Score (From LESA Manual Table 6)	Surrounding Protected Resource Land Score (From LESA Manual Table 7)**
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture (B/A)	Percent Protected Resource Land (C/A)		
2315.6	2038	0	88.0	0.0	90	0

* In conformance with the instructions in the LESA Instruction Manual (California Department of Conservation 1997), the Zone of Influence was determined by drawing the smallest rectangle that could completely encompass the entire Project Area. A second rectangle was then drawn which extended one quarter mile on all sides beyond the first rectangle. The Zone of Influence is represented by the entire area of all parcels with any lands inside the outer rectangle, less the area of the proposed project (Figure 4).

** The LESA Instruction Manual (California Department of Conservation 1997) describes *Protected Resource Land* as those lands with long term use restrictions that are compatible with or supportive of agricultural uses of land. Included among them are the following: Williamson Act contracted lands; Publicly owned lands maintained as park, forest, or watershed resources; and Lands with agricultural, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban or industrial uses.

Surrounding Parcels***	Acres	Protected Resource Land?	Percent Protected Resource Land	Acres in Protected Land	Agricultural Land?	Percent Agricultural Land	Acres of Agriculture
052-180-042	204.0	N	0	0	Y	96	195.8
052-180-043	178.7	N	0	0	Y	96	171.5
052-180-050	46.1	N	0	0	Y	100	46.1
052-180-051	89.4	N	0	0	Y	100	89.4
052-210-035	14.6	N	0	0	Y	100	14.6
052-210-036	364.0	N	0	0	Y	100	364.0
059-040-006	165.6	N	0	0	Y	50	82.8
059-040-007	15.3	N	0	0	Y	98	15.0
059-040-008	60.5	N	0	0	Y	15	9.1
059-040-009	18.1	N	0	0	N	0	0.0
059-040-010	38.8	N	0	0	N	0	0.0
059-040-011	10.0	N	0	0	Y	32	3.2
059-040-012	35.1	N	0	0	N	0	0.0
059-040-013	128.4	N	0	0	Y	85	109.2
059-040-014	0.6	N	0	0	N	0	0.0
059-050-001	163.1	N	0	0	Y	100	163.1
059-060-006	163.6	N	0	0	Y	95	155.4
059-060-007	163.2	N	0	0	Y	100	163.2
059-110-006	134.2	N	0	0	Y	99	132.8
059-120-002	78.7	N	0	0	Y	100	78.7
059-120-003	82.1	N	0	0	Y	100	82.1
059-120-004	161.6	N	0	0	Y	100	161.6
Total	**2315.6**		**Total**	**0**		**Total**	**2038**

**The Imperial County Assessors website was accessed to identify the surrounding parcel numbers (http://imperialcounty.net/Assessor/index.html). The percentage of agriculture was determined from a map overlay used to estimate the proportion of land in agriculture and the California Department of Conservation Important Farmland Map Series.

Table 4: Surrounding Agricultural & Protected Resource Land Rating

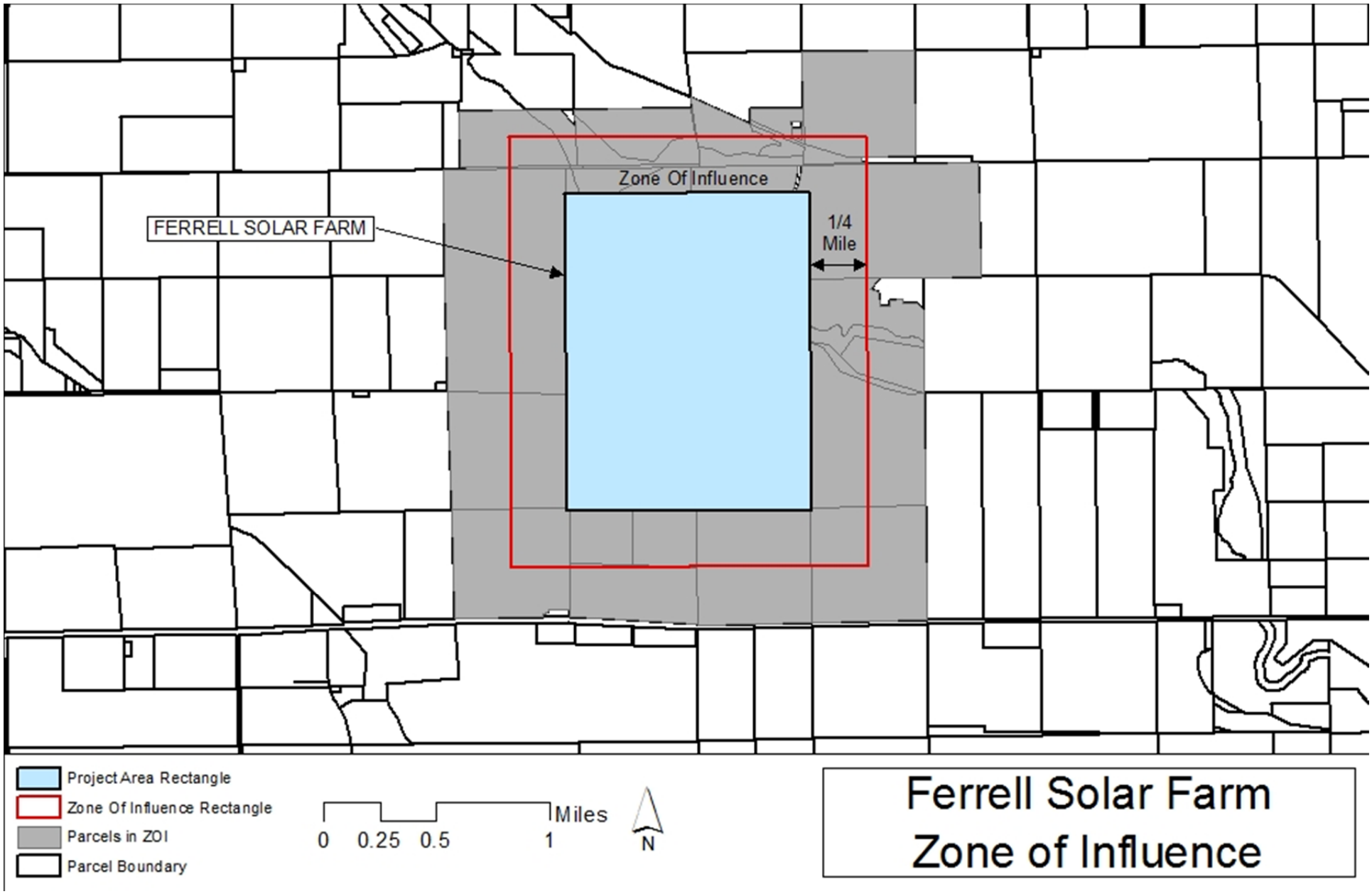

Figure 4**: Zone of Influence Map**

Final LESA Score Sheet			
	Factor Scores	Factor Weight	Weighted Factor Scores
LE Factors			
Land Capability Classification	65.09	0.25	16.27
Storie Index	63.76	0.25	15.94
LE subtotal		0.50	32.21
SA Factors			
Project Size	100	0.15	15.00
Water Resource Availability	100	0.15	15.00
Surrounding Agricultural Land	90	0.15	13.50
Protected Resource Land	0	0.05	0.00
SA Subtotal		0.50	43.50
		Total LESA Score	**75.71**

California LESA Model Scoring Thresholds	
Total LESA Score	**Scoring Decision**
0 to 39 Points	Not Considered Significant
40 to 59 Points	Considered Significant only if LE and SA subscores are each greater than or equal to 20 points
60 to 79 Points	Considered Significant unless either LE or SA subscore is less than 20 points
80 to 100 Points	Considered Significant

Table 5: Final LESA Score

APPENDIX A: FERRELL SOLAR FARM SOILS DETAILS

Imperial County, California, Imperial Valley Area

102—BADLAND

Map Unit Setting

Mean annual precipitation: 0 to 3 inches
Mean annual air temperature: 72 to 75 degrees F
Frost-free period: 300 to 350 days

Map Unit Composition

Badland: 85 percent
Minor components: 8 percent

Description of Badland

Setting

Parent material: Alluvium derived from mixed sources

Properties and qualities

Slope: 30 to 75 percent
Depth to restrictive feature: 0 to 4 inches to paralithic bedrock

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 8e
Hydrologic Soil Group: D

Minor Components

Imperial

Percent of map unit: 2 percent

Holtville

Percent of map unit: 2 percent

Meloland

Percent of map unit: 2 percent

Indio

Percent of map unit: 2 percent

Data Source Information

Soil Survey Area: Imperial County, California, Imperial Valley Area
Survey Area Data: Version 5, Jul 25, 2008

Imperial County, California, Imperial Valley Area

109—HOLTVILLE SILTY CLAY

Map Unit Setting

Elevation: -230 to 200 feet
Mean annual precipitation: 0 to 3 inches
Mean annual air temperature: 72 to 75 degrees F
Frost-free period: 300 to 350 days

Map Unit Composition

Holtville and similar soils: 85 percent
Minor components: 15 percent

Description of Holtville

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed sources

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to slightly saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water capacity: Moderate (about 7.6 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 2s
Land capability (nonirrigated): 7s
Hydrologic Soil Group: C

Typical profile

0 to 17 inches: Silty clay
17 to 24 inches: Clay
24 to 35 inches: Silt loam
35 to 60 inches: Loamy very fine sand

Minor Components

Glenbar

Percent of map unit: 5 percent

Imperial
Percent of map unit: 5 percent

Indio
Percent of map unit: 3 percent

Vint
Percent of map unit: 2 percent

Data Source Information

Soil Survey Area: Imperial County, California, Imperial Valley Area
Survey Area Data: Version 5, Jul 25, 2008

Imperial County, California, Imperial Valley Area

110—HOLTVILLE SILTY CLAY, WET

Map Unit Setting

Elevation: -230 to 200 feet
Mean annual precipitation: 0 to 3 inches
Mean annual air temperature: 72 to 75 degrees F
Frost-free period: 300 to 350 days

Map Unit Composition

Holtville, wet, and similar soils: 85 percent
Minor components: 15 percent

Description of Holtville, Wet

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed sources

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to slightly saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water capacity: Moderate (about 7.6 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated and drained
Land capability classification (irrigated): 2w
Land capability (nonirrigated): 7w
Hydrologic Soil Group: C

Typical profile

0 to 17 inches: Silty clay
17 to 24 inches: Clay
24 to 35 inches: Silt loam
35 to 60 inches: Loamy very fine sand

Minor Components

Glenbar

Percent of map unit: 5 percent

Imperial
Percent of map unit: 5 percent

Indio
Percent of map unit: 3 percent

Vint
Percent of map unit: 2 percent

Data Source Information

Soil Survey Area: Imperial County, California, Imperial Valley Area
Survey Area Data: Version 5, Jul 25, 2008

Imperial County, California, Imperial Valley Area

114—IMPERIAL SILTY CLAY, WET

Map Unit Setting

Elevation: -230 to 200 feet
Mean annual precipitation: 0 to 3 inches
Mean annual air temperature: 72 to 75 degrees F
Frost-free period: 300 to 350 days

Map Unit Composition

Imperial, wet, and similar soils: 85 percent
Minor components: 15 percent

Description of Imperial, Wet

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey alluvium derived from mixed sources and/or clayey lacustrine deposits derived from mixed sources

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Very slightly saline to slightly saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 20.0
Available water capacity: Moderate (about 8.3 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability classification (irrigated): 3w
Land capability (nonirrigated): 7w
Hydrologic Soil Group: C

Typical profile

0 to 12 inches: Silty clay
12 to 60 inches: Silty clay loam

Minor Components

Glenbar

Percent of map unit: 4 percent

Meloland
Percent of map unit: 4 percent

Holtville
Percent of map unit: 4 percent

Niland
Percent of map unit: 3 percent

Data Source Information

Soil Survey Area: Imperial County, California, Imperial Valley Area
Survey Area Data: Version 5, Jul 25, 2008

Imperial County, California, Imperial Valley Area

115—IMPERIAL-GLENBAR SILTY CLAY LOAMS, WET, 0 TO 2 PERCENT SLOPES

Map Unit Setting

Elevation: -230 to 200 feet
Mean annual precipitation: 0 to 3 inches
Mean annual air temperature: 72 to 75 degrees F
Frost-free period: 300 to 350 days

Map Unit Composition

Glenbar, wet, and similar soils: 40 percent
Imperial, wet, and similar soils: 40 percent
Minor components: 20 percent

Description of Imperial, Wet

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey alluvium derived from mixed sources and/or clayey lacustrine deposits derived from mixed sources

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Very slightly saline to slightly saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 20.0
Available water capacity: Moderate (about 8.6 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability classification (irrigated): 3w
Land capability (nonirrigated): 7w
Hydrologic Soil Group: C

Typical profile

0 to 12 inches: Silty clay loam
12 to 60 inches: Silty clay loam

Description of Glenbar, Wet

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to slightly saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 15.0
Available water capacity: High (about 10.8 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability classification (irrigated): 3w
Land capability (nonirrigated): 7w
Hydrologic Soil Group: B

Typical profile

0 to 13 inches: Silty clay loam
13 to 60 inches: Clay loam

Minor Components

Holtville

Percent of map unit: 10 percent

Meloland

Percent of map unit: 10 percent

Data Source Information

Soil Survey Area: Imperial County, California, Imperial Valley Area
Survey Area Data: Version 5, Jul 25, 2008

Imperial County, California, Imperial Valley Area

119—INDIO-VINT COMPLEX

Map Unit Setting

Elevation: -230 to 300 feet
Mean annual precipitation: 0 to 3 inches
Mean annual air temperature: 72 to 75 degrees F
Frost-free period: 300 to 350 days

Map Unit Composition

Indio and similar soils: 35 percent
Vint and similar soils: 30 percent
Minor components: 35 percent

Description of Indio

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed sources and/or eolian deposits derived from mixed sources

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water capacity: Moderate (about 8.5 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 2s
Land capability (nonirrigated): 7e
Hydrologic Soil Group: B

Typical profile

0 to 12 inches: Loam
12 to 72 inches: Stratified loamy very fine sand to silt loam

Description of Vint

Setting

Landform: Basin floors

Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium and/or eolian deposits derived from mixed

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water capacity: Low (about 4.9 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 2s
Land capability (nonirrigated): 7e
Hydrologic Soil Group: A

Typical profile

0 to 10 inches: Loamy fine sand
10 to 60 inches: Loamy sand

Minor Components

Meloland

Percent of map unit: 12 percent

Holtville

Percent of map unit: 12 percent

Rositas

Percent of map unit: 11 percent

Data Source Information

Soil Survey Area: Imperial County, California, Imperial Valley Area
Survey Area Data: Version 5, Jul 25, 2008

Imperial County, California, Imperial Valley Area

122—MELOLAND VERY FINE SANDY LOAM, WET

Map Unit Setting

Elevation: -230 to 200 feet
Mean annual precipitation: 0 to 3 inches
Mean annual air temperature: 72 to 75 degrees F
Frost-free period: 300 to 350 days

Map Unit Composition

Meloland, wet, and similar soils: 85 percent
Minor components: 15 percent

Description of Meloland, Wet

Setting

Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed sources and/or eolian deposits derived from mixed sources

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Slightly saline to moderately saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water capacity: Moderate (about 7.8 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated and drained
Land capability classification (irrigated): 3w
Land capability (nonirrigated): 7w
Hydrologic Soil Group: C

Typical profile

0 to 12 inches: Very fine sandy loam
12 to 26 inches: Stratified loamy fine sand to silt loam
26 to 71 inches: Clay

Minor Components

Imperial

Percent of map unit: 3 percent

Indio
Percent of map unit: 3 percent

Holtville
Percent of map unit: 3 percent

Glenbar
Percent of map unit: 3 percent

Vint
Percent of map unit: 3 percent

Data Source Information

Soil Survey Area: Imperial County, California, Imperial Valley Area
Survey Area Data: Version 5, Jul 25, 2008

California Revised Storie Index Rating (CA)

The Storie Index is a soil rating based on soil properties that govern a soil's potential for cultivated agriculture in California.

The Storie Index asseses the productivity of a soil from the following four characteristics: Factor A, degree of soil profile development; factor B, texture of the surface layer; factor C, slope; and factor X, manageable features, including drainage, microrelief, fertility, acidity, erosion, and salt content. A score ranging from 0 to 100 percent is determined for each factor, and the scores are mukltiplied together to derive an index rating.

For simplification, Storie Index ratings have been combined into six grades classes as follows: Grade 1 (excellent), 100 to 80; grade 2 (good), 79 to 60; grade 3 (fair), 59 to 40; grade 4 (poor), 39 to 20; grade 5 (very poor), 19 to 10; and grade 6 (nonagricultural), less than 10.

Report—California Revised Storie Index Rating (CA)

The Storie Index is a soil rating based on soil properties that govern a soil map unit component's potential for cultivated agriculture. [Absence of an entry indicates that a Storie Index rating is not applicable or was not estimated]. For simplification, Storie Index ratings have been combined into six grades as follows: Grade 1 (Excellent): Soils that rate between 80 and 100 and which are suitable for a wide range of crops. Grade 2 (Good) Soils that rate between 60 and 79 and which are suitable for a wide range of crops. Grade 3 (Fair): Soils that range between 40 and 59. Soils in this grade may give good results with certain specialized crops. Grade 4 (Poor): Soils that rate between 20 and 39 and which have a narrow range in their agricultural potential. Grade 5 (Very Poor): Soil that rate between 10 and 19 and are of very limited agricultural use except for pasture because of adverse soil conditions. Grade 6 (Nonagricultural): Soils that rate less than 10. [The numbers in the "Limiting feature value" column range from 0.01 to 1.00. Soils with a smaller the value have a lower potential for cultivated agriculture. The table shows each of the sub-factors used to generate the Storie Index rating for each soil component].

California Revised Storie Index Rating (CA)– Imperial County, California, Imperial Valley Area				
Map symbol and soil name	Pct. of map unit	California Revised Storie Index (CA)		
		Storie index rating	Storie index grade and limiting features	Limiting feature value
102—BADLAND				
Badland	85		Not Rated	

California Revised Storie Index Rating (CA)– Imperial County, California, Imperial Valley Area				
Map symbol and soil name	Pct. of map unit	California Revised Storie Index (CA)		
		Storie index rating	Storie index grade and limiting features	Limiting feature value
109—HOLTVILLE SILTY CLAY				
Holtville	85	50	Grade Three - Fair	
			Rated Soil Order	1.00
			Profile Group	1.00
			Wetness, flooding, ponding, drainage, erosion	1.00
			Nearly level to gently sloping	0.98
			Toxicity	0.85
110—HOLTVILLE SILTY CLAY, WET				
Holtville, wet	85	45	Grade Three - Fair	
			Rated Soil Order	1.00
			Profile Group	1.00
			Nearly level to gently sloping	0.98
			Wetness, flooding, ponding, drainage, erosion	0.90
			Toxicity	0.85
114—IMPERIAL SILTY CLAY, WET				
Imperial, wet	85	42	Grade Three - Fair	
			Rated Soil Order	1.00
			Profile Group	1.00
			Nearly level to gently sloping	0.98
			Wetness, flooding, ponding, drainage, erosion	0.90
			Toxicity	0.80

California Revised Storie Index Rating (CA)– Imperial County, California, Imperial Valley Area				
Map symbol and soil name	Pct. of map unit	California Revised Storie Index (CA)		
		Storie index rating	Storie index grade and limiting features	Limiting feature value
115—IMPERIAL-GLENBAR SILTY CLAY LOAMS, WET, 0 TO 2 PERCENT SLOPES				
Glenbar, wet	40	72	Grade Two - Good	
			Rated Soil Order	1.00
			Profile Group	1.00
			Nearly level to gently sloping	0.98
			USDA Texture	0.95
			Wetness, flooding, ponding, drainage, erosion	0.90
Imperial, wet	40	67	Grade Two - Good	
			Rated Soil Order	1.00
			Profile Group	1.00
			Nearly level to gently sloping	0.98
			USDA Texture	0.95
			Wetness, flooding, ponding, drainage, erosion	0.90
119—INDIO-VINT COMPLEX				
Indio	35	96	Grade One - Excellent	
			USDA Texture	1.00
			Rated Soil Order	1.00
			Profile Group	1.00
			Wetness, flooding, ponding, drainage, erosion	1.00
			Nearly level to gently sloping	0.98
Vint	30	83	Grade One - Excellent	
			Rated Soil Order	1.00
			Profile Group	1.00
			Wetness, flooding, ponding, drainage, erosion	1.00
			Nearly level to gently sloping	0.98
			Toxicity	0.94

California Revised Storie Index Rating (CA)– Imperial County, California, Imperial Valley Area				
Map symbol and soil name	Pct. of map unit	California Revised Storie Index (CA)		
		Storie index rating	Storie index grade and limiting features	Limiting feature value
122—MELOLAND VERY FINE SANDY LOAM, WET				
Meloland, wet	85	44	Grade Three - Fair	
			USDA Texture	1.00
			Rated Soil Order	1.00
			Profile Group	1.00
			Nearly level to gently sloping	0.98
			Wetness, flooding, ponding, drainage, erosion	0.90

Data Source Information

Soil Survey Area: Imperial County, California, Imperial Valley Area
Survey Area Data: Version 5, Jul 25, 2008