Appendix B:
Land Evaluation and Site Assessment Analysis

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B.1 - Irrigated Use Modeling

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Land Capability Classification (LCC) and Storie Index Scores

Soil Map Unit	Project Acres	Proportion of Project Area	LCC	LCC Rating	LCC Score	Storie Index	Storie Index Score
LeA	42	0.540540541	II w	80	43.2432	90	48.6486
WnA	35.7	0.459459459	II s	80	36.7568	69.5	31.9324
TOTAL	77.7	1		160	80	159.5	80.5811

nonirigated LCC	
4w	40
4s	40

LCC	LCC Rating
II w	80
II s	80

155.4

Total Acres	77.7				
Total Class I	Total Class II	Total Class III	Total Class IV	Total Class V	
0	77.7				

Table 3-Proj. Size Scoring

LCC Class I-II		LCC Class III		LCC Class IV-VIII	
Acres	Score	Acres	Score	Acres	Score
80 +	100	160 +	100	320 +	100
60-79	90	120-159	90	240-319	80
40-59	80	80-119	80	160-239	60
20-39	50	60-79	70	100-159	40
10-19.	30	40-59	60	40-99	20
fewer than 10	0	20-39	30	fewer than 40	0
		10-19.	10		
		fewer than 10	0		

Total Acres

Total Class I	Total Class II	Total Class III	Total Class IV	Total Class V
	77.7			

Total Acres	77.7	0	0
Score	90	0	0

TOTAL PROJECT SIZE RATING= 90

Project Portion	Water Source	Proportion	Water Availability Score	Weighted Availability Score (C x D)
1	Irrigation District Water Only			0
2	Groundwater only			0
3	Both irrigation and ground	100%	80	80
4	Not irrigated at all			0
	Total	1	Total water resource score	80

Within Merced Irrigation District

Table 5. Water Resource Availability Scoring

Option	Non-Drought Years			Drought Years			WATER RESOURCE SCORE
	RESTRICTIONS			RESTRICTIONS			
	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	
1	YES	NO	NO	YES	NO	NO	100
2	YES	NO	NO	YES	NO	YES	95
3	YES	NO	YES	YES	NO	YES	90
4	YES	NO	NO	YES	YES	NO	85
5	YES	NO	NO	YES	YES	YES	80
6	YES	YES	NO	YES	YES	NO	75
7	YES	YES	YES	YES	YES	YES	65
8	YES	NO	NO	NO	-- --	-- --	50
9	YES	NO	YES	NO	-- --	-- --	45
10	YES	YES	NO	NO	-- --	-- --	35
11	YES	YES	YES	NO	-- --	-- --	30
12	Irrigated production not feasible, but rainfall adequate for dryland production in both drought and non-drought years						25
13	Irrigated production not feasible, but rainfall adequate for dryland production in non-drought years (but not in drought years)						20
14	Neither irrigated nor dryland production feasible						0

80

45

in

LeA soil	capacity of the most limiting layer to tranmit water (Ksat): very low to modertaely low (0.00 to 0.06 in/hr)	hydrologic soil group C/D
WnA soil	capacity of the most limiting layer to tranmit water (Ksat): very low (0.00 to 0.00 in/hr)	hydrologic soil group C

Table 6: Surrounding Ag Land Rating

Percent of Project's Zone of Influence	Surround Ag Land Score
90-100%	100 points
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

Table 7: Surrounding Protected Resource Land Score

Percent of Project's Zone of Influence	Surround Ag Land Score
90-100%	100 points
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

Tables below from the most recent (2011) appendix

Surrounding Agricultural Land Scoring Table

Percent of ZOI in Agriculture	Surrounding Agricultural Land Score
90-100	100
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

(2) Sum the area of all parcels to determine the total acreage of the ZOI.

Prime Farmland 76.3 ac	76.3	612.8	not counting vacant as agriculture
Farmland of Statewide Imp	183.8	77.51%	
Unique Farmland 14.8 ac	14.8		
Farmland of Local Importa	337.9		22.5
Vacant or Disturbed Land	76.4		
Urban and Built-Up Land 1	101.4		
total	**790.6**		

Surrounding Protected Resource Land Scoring Table

Percent of ZOI Protected	Protected Resource Land Score
90-100	100
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

protected

274.9 only included prime, statewide importance, and unique

34.77% the surrounding lands were not Williamson Act contracted lands

Section III. Weighting of Factors and Final LESA Scoring

The California LESA Model is weighted so that 50 percent of the total LESA score of a given project is derived from the Land Evaluation factors, and 50 percent from the Site Assessment factors. Individual factor weights are listed below, with the sum of the factor weights required to equal 100 percent.

Land Evaluation Factors

Land Capability Classification	25%
Storie Index Rating	25%
Land Evaluation Subtotal	**50%**

Site Assessment Factors

Project Size	15%
Water Resource Availability	15%
Surrounding Agricultural Lands	15%
Surrounding Protected Resource Lands	5%
Site Assessment Subtotal	**50%**
Total LESA Factor Weighting	**100%**

Each factor is measured separately (each on 100 point scale) and entered in the appropriate line in **Column B** of the **Final LESA Scoresheet** (Table 8). Each factor's score is then multiplied by its respective factor weight, resulting in a weighted factor score in **Column D** as indicated in Table 8. The weighted factor scores are summed, yielding a Total LESA Score (100 points maximum) for a given project, which is entered in **Line 7** of **Column D**.

Factor Name	Factor Rating (0-100 points)	X	Factor Weighting (Total=1.0)	=	Weighted Factor Rating	
Land Evaluation						
1. Land Capability Classification	80		0.25		20	1. change from 80 to 40 if using the nonirrigated
2. Storie Index Rating	80.58		0.25		20.145	
						40.145
Site Assessment						
1. Project Size	90		0.15		13.5	
2. Water Resource Availability	80		0.15		12	
3. Surrounding Agricultural Lands	80		0.15		12	
4. Protected Resource Lands	0		0.05		0	
						37.5
				TOTAL	77.645	

Table 9. 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

B.2 - Nonirrigated Use Modeling

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Land Capability Classification (LCC) and Storie Index Scores

Soil Map Unit	Project Acres	Proportion of Project Area	LCC	LCC Rating	LCC Score	Storie Index	Storie Index Score
LeA	42	0.540540541	4w	40	21.6216	90	48.6486
WnA	35.7	0.459459459	4s	40	18.3784	69.5	31.9324
TOTAL	77.7	1		80	40	159.5	80.5811

nonirigated LCC	
4w	40
4s	40

LCC	LCC Rating
II w	80
II s	80

155.4

Total Acres 77.7

Total Class I	Total Class II	Total Class III	Total Class IV	Total Class V
0			77.7	

Table 3-Proj. Size Scoring

LCC Class I-II		LCC Class III		LCC Class IV-VIII	
Acres	Score	Acres	Score	Acres	Score
80 +	100	160 +	100	320 +	100
60-79	90	120-159	90	240-319	80
40-59	80	80-119	80	160-239	60
20-39	50	60-79	70	100-159	40
10-19.	30	40-59	60	40-99	20
fewer than 10	0	20-39	30	fewer than 40	0
		10-19.	10		
		fewer than 10	0		

Total Acres

Total Class I	Total Class II	Total Class III	Total Class IV	Total Class V
			77.7	

Total Acres	0	0	77.7	
Score	0	0	20	

TOTAL PROJECT SIZE RATING= 20

Project Portion	Water Source	Proportion	Water Availability Score	Weighted Availability Score (C x D)
1	Irrigation District Water Only			0
2	Groundwater only			0
3	Both irrigation and ground	100%	80	80
4	Not irrigated at all			0
	Total	1	Total water resource score	80

Table 5. Water Resource Availability Scoring

Option	Non-Drought Years			Drought Years			WATER RESOURCE SCORE
	RESTRICTIONS			RESTRICTIONS			
	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	
1	YES	NO	NO	YES	NO	NO	100
2	YES	NO	NO	YES	NO	YES	95
3	YES	NO	YES	YES	NO	YES	90
4	YES	NO	NO	YES	YES	NO	85
5	YES	NO	NO	YES	YES	YES	80
6	YES	YES	NO	YES	YES	NO	75
7	YES	YES	YES	YES	YES	YES	65
8	YES	NO	NO	NO	-- --	-- --	50
9	YES	NO	YES	NO	-- --	-- --	45
10	YES	YES	NO	NO	-- --	-- --	35
11	YES	YES	YES	NO	-- --	-- --	30
12	Irrigated production not feasible, but rainfall adequate for dryland production in both drought and non-drought years						25
13	Irrigated production not feasible, but rainfall adequate for dryland production in non-drought years (but not in drought years)						20
14	Neither irrigated nor dryland production feasible						0

80

45

in

LeA soil	capacity of the most limiting layer to tranmit water (Ksat): very low to modertaely low (0.00 to 0.06 in/hr)	hydrologic soil group C/D
WnA soil	capacity of the most limiting layer to tranmit water (Ksat): very low (0.00 to 0.00 in/hr)	hydrologic soil group C

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65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

Table 7: Surrounding Protected Resource Land Score

Percent of Project's Zone of Influence	Surround Ag Land Score
90-100%	100 points
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75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

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Surrounding Agricultural Land Scoring Table

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Surrounding Protected Resource Land Scoring Table

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Surrounding Agricultural Lands	15%
Surrounding Protected Resource Lands	5%
Site Assessment Subtotal	**50%**
Total LESA Factor Weighting	**100%**

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Factor Name	Factor Rating (0-100 points)	X	Factor Weighting (Total=1.0)	=	Weighted Factor Rating	
Land Evaluation						
1. Land Capability Classification	40		0.25		10	
2. Storie Index Rating	80.58		0.25		20.145	
						30.145 subtotal
Site Assessment						
1. Project Size	20		0.15		3	
2. Water Resource Availability	45		0.15		6.75	
3. Surrounding Agricultural Lands	80		0.15		12	
4. Protected Resource Lands	0		0.05		0	
						21.75 subtotal
				TOTAL	51.895	

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