

Appendix A. California Agricultural LESA Worksheets

NOTES

Nakase Project

The Nakase Project is a 122 acre parcel located in the City of Lake Forest, Orange County, California. The site is currently occupied by a nursery and once the Project is approved the site will be developed with a master planned community. Eight soil mapping units have been identified on the site and the acres of each have been determined using GIS. The soils include: Unit 135 5.6 acres; Unit 136 4.0 acres; Unit 142 20.2 acres; Unit 149 27.8 acres; Unit 176 1.5 acres; Unit 174 11.6 acres; Unit 191 1.4 acres; and Unit 207 48.9 acres. The acreage of each soil type is divided by the total Project acreage, 121.1 acres to determine the proportion of each soil type that occurs on the Project site.

The LCCs for the eight soil types were found in the Orange County Soil Survey and are identified as follows: Unit 135 LCC IIIe; Unit 136 LCC IVe; Unit 142 LCC VIIe; Unit 149 LCC IIe; Unit 176 LCC VIe; Unit 174 LCC VIe; Unit 191 LCC VIIIw; and, Unit 207 LCC IIe. From the LCC Scoring Table the LCC point ratings for the eight soils are: Unit 135 LCC Rating 70; Unit 136 LCC Rating 50; Unit 142 LCC Rating 10; Unit 149 LCC Rating 90; Unit 176 LCC Rating 20; Unit 174 LCC Rating 20; Unit 191 LCC Rating 0; and, Unit 207 LCC Rating 90. The portion of each soil type represented is multiplied by its point rating in Column E to determine the LCC Score in Column F. The LCC Scores are then summed in Column F to get a total LCC Score of 65.6, which has been entered in Box <1> of the Final LESA Score Sheet.

Storie Index Ratings (SIR) for each soil type was obtained from the Orange County Soil Survey and are as follows: Unit 135 SIR 90; Unit 136 SIR 81; Unit 142 SIR 7; Unit 149 SIR 47; Unit 176 SIR 27; Unit 174 SIR 35; Unit 191 SIR 40; and, Unit 207 SIR 90. The Storie Index ratings are multiplied by the proportion of each soil type in the Project area and the score is entered in Column H. Column H is summed to get a total Storie Index Score of 59.1 points, which has been entered in Box <2> of the Final LESA Score Sheet.

Calculation of the Land Evaluation (LE) Score

Part 1. Land Capability Classification (LCC) Score:

- (1) Determine the total acreage of the project.
- (2) Determine the soil types within the project area and enter them in **Column A** of the **Land Evaluation Worksheet** provided on page 2-A.
- (3) Calculate the total acres of each soil type and enter the amounts in **Column B**.
- (4) Divide the acres of each soil type (**Column B**) by the total acreage to determine the proportion of each soil type present. Enter the proportion of each soil type in **Column C**.
- (5) Determine the LCC for each soil type from the applicable Soil Survey and enter it in **Column D**.
- (6) From the LCC Scoring Table below, determine the point rating corresponding to the LCC for each soil type and enter it in **Column E**.

LCC Scoring Table

LCC Class	I	IIe	IIIs,w	IIIe	IIIs,w	IVe	IVs,w	V	VI	VII	VIII
Points	100	90	80	70	60	50	40	30	20	10	0

- (7) Multiply the proportion of each soil type (**Column C**) by the point score (**Column E**) and enter the resulting scores in **Column F**.
- (8) Sum the LCC scores in **Column F**.
- (9) Enter the LCC score in box <1> of the **Final LESA Score Sheet** on page 10-A.

Part 2. Storie Index Score:

- (1) Determine the Storie Index rating for each soil type and enter it in **Column G**.
- (2) Multiply the proportion of each soil type (**Column C**) by the Storie Index rating (**Column G**) and enter the scores in **Column H**.
- (3) Sum the Storie Index scores in **Column H** to gain the Storie Index Score.
- (4) Enter the Storie Index Score in box <2> of the **Final LESA Score Sheet** on page 10-A.

Land Evaluation Worksheet

Land Capability Classification (LCC) and Storie Index Scores

A	B	C	D	E	F	G	H
Soil Map Unit	Project Acres	Proportion of Project Area	LCC	LCC Rating	LCC Score	Storie Index	Storie Index Score
135	5.6	0.05	IIIe	70	3.5	90	4.5
136	4.0	0.03	IVe	50	1.5	81	2.4
142	20.2	0.17	VIIe	10	1.7	7	1.2
149	27.8	0.23	Ile	90	20.7	47	10.8
176	1.5	0.01	VIe	20	0.2	27	0.3
174	11.6	0.10	VIe	20	2.0	35	3.5
191	1.4	0.01	VIIIw	0	0	40	0.4
207	48.9	0.40	Ile	90	36	90	36.0
Totals	121.1	(Must Sum to 1.0)		LCC Total Score	65.6	Storie Index Total Score	59.1

Site Assessment Worksheet 1.

Project Size Score

	I	J	K
LCC Class	LCC Class I - II	LCC Class III	LCC Class IV - VIII
	27.8	5.6	4.0
	48.9		20.2
			1.5
			11.6
			1.4
Total Acres	76.7	5.6	38.7
Project Size Scores	90	0	0
Highest Project Size Score	90		

LESA Worksheet (cont.)

NOTES CON.

Column I sums to 76.7 acres of Class I or II soils.
 Column J sums to 5.6 acres of Class III soils.
 Column K sums to 38.7 acres of Class IV to VIII soils.

Column I - 76.7 acres of Class I or II soils corresponds to a score of 90 points.

Column J - 5.6 acres of Class III soils corresponds to a score of 0 points.

Column K- 38.7 acres of Class IV to VIII soils corresponds to a score of 0 points.

The highest score is for Column I, 90 points, which has been entered in box <3> of the Final LESA Score Sheet.

Calculation of the Site Assessment (SA) Score

Part 1. Project Size Score:

- (1) Using **Site Assessment Worksheet 1** provided on page 2-A, enter the acreage of each soil type from **Column B** in the **Column - I, J or K** - that corresponds to the LCC for that soil. (Note: While the Project Size Score is a component of the Site Assessment calculations, the score sheet is an extension of data collected in the Land Evaluation Worksheet, and is therefore displayed beside it).
- (2) Sum **Column I** to determine the total amount of class I and II soils on the project site.
- (3) Sum **Column J** to determine the total amount of class III soils on the project site.
- (4) Sum **Column K** to determine the total amount of class IV and lower soils on the project site.
- (5) Compare the total score for each LCC group in the Project Size Scoring Table below and determine which group receives the highest score.

Project Size Scoring Table

Class I or II		Class III		Class IV or Lower	
Acreage	Points	Acreage	Points	Acreage	Points
>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
10<	0	20-39	30	40<	0
		10-19	10		
		10<	0		

- (6) Enter the **Project Size Score** (the highest score from the three LCC categories) in box <3> of the **Final LESA Score Sheet** on page 10-A.

LESA Worksheet (cont.)

NOTES

There is one type of irrigation on the Project site: Well water is used all year. During periods of drought Irvine Ranch Water District (IRWD) water is used as a supplement to the on-site well water when needed. The Project site includes one portion according to irrigation availability:

Portion 1: Well water used on 100% of the Project Site. During Non-Drought Years irrigated production is feasible. There are typically no physical restrictions nor economic restrictions on-site during Non-Drought Years. During Drought Years, irrigated production is feasible however. If hot weather persists than Irvine Ranch Water District water is available to supplement the well water. Economic restrictions can also occur on site during Drought Years as the rise in water costs could result in the reduction of consumption on the Project site for the existing nursery.

Portion 1 - (80 points)(1.0) = 80 points

Portion 1 = 80 points has been entered in Box <4> of the Final LESA Score Sheet.

Part 2. Water Resource Availability Score:

- (1) Determine the type(s) of irrigation present on the project site, including a determination of whether there is dryland agricultural activity as well.
- (2) Divide the site into portions according to the type or types of irrigation or dryland cropping that is available in each portion. Enter this information in **Column B** of **Site Assessment Worksheet 2. - Water Resources Availability**.
- (3) Determine the proportion of the total site represented for each portion identified, and enter this information in **Column C**.
- (4) Using the Water Resources Availability Scoring Table, identify the option that is most applicable for each portion, based upon the feasibility of irrigation in drought and non-drought years, and whether physical or economic restrictions are likely to exist. Enter the applicable Water Resource Availability Score into **Column D**.
- (5) Multiply the Water Resource Availability Score for each portion by the proportion of the project area it represents to determine the weighted score for each portion in **Column E**.
- (6) Sum the scores for all portions to determine the project's total Water Resources Availability Score
- (7) Enter the Water Resource Availability Score in box <4> of the **Final LESA Score Sheet** on page 10-A.

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	Irvine Ranch Water District Domestic and Recycled	1.0	80	80
2				
3				
4				
5				
6				
		(Must Sum to 1.0)	Total Water Resource Score	80

Water Resource Availability Scoring Table

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

NOTES

The Project site is surrounded by 7 parcels totaling approximately 545.3 acres. The ZOI is composed of these parcels and as such is 545.3 acres in size.

After reviewing images from Google Earth, the parcels composed of the ZOI look to be under urban uses, and no agricultural uses are visible. Review of the United States Department of Agriculture National Agricultural Statistics Service CropScape-Cropland Data Layer website (<https://nassgeodata.gmu.edu/CropScape/>) for 2017 indicates that the ZOI contains 18.9 acres of Grass/Pasture which is considered a "crop" category. As such, the percent of the ZOI in agriculture is 18.9 acres divided by 545.3 acres, or 3.5 percent. This percentage (3.5 percent) corresponds to a score of 0 points.

0 points is entered in box <5> of the Final LESA Score Sheet.

Part 3. Surrounding Agricultural Land Use Score:

- (1) Calculate the project's Zone of Influence (ZOI) as follows:
 - (a) a rectangle is drawn around the project such that the rectangle is the smallest that can completely encompass the project area.
 - (b) a second rectangle is then drawn which extends one quarter mile on all sides beyond the first rectangle.
 - (c) The ZOI includes all parcels that are contained within or are intersected by the second rectangle, less the area of the project itself.
- (2) Sum the area of all parcels to determine the total acreage of the ZOI.
- (3) Determine which parcels are in agricultural use and sum the areas of these parcels
- (4) Divide the area in agriculture found in step (3) by the total area of the ZOI found in step (2) to determine the percent of the ZOI that is in agricultural use.
- (5) Determine the Surrounding Agricultural Land Score utilizing the Surrounding Agricultural Land Scoring Table below.

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

- (5) Enter the Surrounding Agricultural Land Score in box <5> of the **Final LESA Score Sheet** on page 10-A.

Site Assessment Worksheet 3.

Surrounding Agricultural Land and Surrounding Protected Resource Land

A	B	C	D	E	F	G
Zone of Influence					Surrounding Agricultural Land Score (From Table)	Surrounding Protected Resource Land Score (From Table)
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture (A/B)	Percent Protected Resource Land (A/C)		
545.3	18.9	0	3.5	0	0	0

NOTES

Review of the California Department of Conservation California Land Conservation Act of 1965 2016 Status Report indicates that in 2015 Orange County (https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2016%20LCA%20Status%20Report.pdf) did not have any land inventoried under Williamson Act or Farmland Security Zone contracts. As such, the parcels of the ZOI do not have any Williamson Act or Farmland Security Zone contracts established. Furthermore, the parcels within the ZOI are fully urbanized; as such, there is no publicly owned lands maintained as park, forest, or watershed resources; and there are no lands with agriculture, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban or industrial uses.

Based on the information above, 0 percent of the ZOI is protected; as such, the Protected Resource Land score is 0 points.

0 points has been entered in Box <6> of the Final LESA Score Sheet.

Part 4. Protected Resource Lands Score:

The Protected Resource Lands scoring relies upon the same Zone of Influence information gathered in Part 3, and figures are entered in Site Assessment Worksheet 3, which combines the surrounding agricultural and protected lands calculations.

- (1) Use the total area of the ZOI calculated in Part 3. for the Surrounding Agricultural Land Use score.
- (2) Sum the area of those parcels within the ZOI that are protected resource lands, as defined in the California Agricultural LESA Guidelines.
- (3) Divide the area that is determined to be protected in Step (2) by the total acreage of the ZOI to determine the percentage of the surrounding area that is under resource protection.
- (4) Determine the Surrounding Protected Resource Land Score utilizing the Surrounding Protected Resource Land Scoring Table below.

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

(5) Enter the Protected Resource Land score in box <6> of the **Final LESA Score Sheet** on page 10-A.

LESA Worksheet (cont.)

NOTES

The component LE and SA Scores have been entered into the Final LESA Score Sheet. The LE factor scores were multiplied by the factor weights to determine the weighted score for each. The weighted LE factor scores were summarized to determine the LE portion of the Final LESA score.

The SA factor scores were multiplied by the factor weights to determine the weighted score for each. The weighted SA factor scores are summed to determine the SA portion of the Final LESA score. The LE and SA subtotals are summed to determine the Final LESA score.

The Final LESA Score for the Project is 56.7. This score is considered significant since the LE and SA subscores are each greater than or equal to 20 points. For further information on the scoring thresholds under the California Agricultural LESA Model, consult Section 4 of the LESA Instruction Manual.

Final LESA Score Sheet

Calculation of the Final LESA Score:

- (1) Multiply each factor score by the factor weight to determine the weighted score and enter in Weighted Factor Scores column.
- (2) Sum the weighted factor scores for the LE factors to determine the total LE score for the project.
- (3) Sum the weighted factor scores for the SA factors to determine the total SA score for the project.
- (4) Sum the total LE and SA scores to determine the Final LESA Score for the project.

		Factor Scores	Factor Weight	Weighted Factor Scores
LE Factors				
Land Capability Classification	<1>	65.6	0.25	16.4
Storie Index	<2>	59.1	0.25	14.8
LE Subtotal			0.50	31.2
SA Factors				
Project Size	<3>	90	0.15	13.5
Water Resource Availability	<4>	80	0.15	12
Surrounding Agricultural Land	<5>	0	0.15	0
Protected Resource Land	<6>	0	0.05	0
SA Subtotal			0.50	25.5
Final LESA Score				56.7