APPENDIX A: AVENAL ENERGY
CALIFORNIA AGRICUTURAL LESA WORKSHEET

The California Agricultural LESA Model is composed of six different factors. Two "Land Evaluation" factors are 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. For a given project, each of these factors is separately rated on a 100 point scale. The factors are then weighted relative to one another and combined, resulting in a single numeric score for a given project, with a maximum attainable score of 100 points. It is this project score that becomes the basis for making a determination of a project's potential significance, based upon a range of established scoring thresholds. The California Agricultural LESA Instruction Manual found at the California Department of Conservation, Division of Land Resource Protection website provides detailed instructions on how to complete the LESA worksheet.

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 A-2.
(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	IIs, w	IIIe	IIIs, w	IVe	IVs, w	V	VIe, s, w	VIIe, s, w	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 A-10.

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 A-10.

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
SM	34.80	1.00	11e	90	90.00	85	85.00
Totals	**6**	**1.00**		***LCC Total Score***	**90.00**	***Storie Index Total Score***	**85.00**
		(Must Sum To 1.0)					

Site Assessment Worksheet 1.
Project Size Score

	I	J	K
	LCC Class I - II	LCC Class III	LCC Class IV- VIII
	34.8		
Total Acres	**34.8**		
Project Size Scores	**34.8**	**0**	

Highest Project Size Score **50**

Part 1. Project Size Score

(1) Using **Site Assessment Worksheet 1** provided on page A-2, 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 A-10.

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 dry land agricultural activity as well.

(2) Divide the site into portions according to the type or types of irrigation or dry land cropping that is available in each portion. Enter this information in **Column B** of **Site Assessment Worksheet 2 - Water Resources Availability** provided on page A-5.

(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 provided on page A-6, 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 A-10.

Site Assessment Worksheet 2.
Water Resource Availability

A	B	C	D	E
Project Portion	Water Source	Proportion of Project Area	Water Availability Score	Weighted Availability Score (C x D)
1	Well	100	100	100
2				
3				
4				
5				
6				
		1.00	***Total Water Resource Score***	**100.00**
		(Must Sum to 1.0)		

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 dry land production in both drought and non-drought years.						25
13	Irrigated production not feasible, but rainfall adequate for dry land production in non-drought years but not in drought years).						20
14	Neither irrigated nor dry land production feasible.						0

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 (1,320 feet) 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	95
70-79	90
65-69	85
60-64	80
55-59	70
50-54	60
45-49	50
40-44	40
35-39	30
30-34	20
20-29	10
<19	0

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

Part 4. Surrounding Protected Resource Land Score

The Surrounding Protected Resource Land 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 LESA Instruction Manual (e.g., Williamson Act contracted lands, publicly owned lands maintained as park, forest, or watershed resources).

(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	95
70-79	90
65-69	85
60-64	80
55-59	70
50-54	60
45-49	50
40-44	40
35-39	30
30-34	20
20-29	10
<20	0

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

Surrounding Agricultural Land and Surrounding Protected Resource Land

A	B	C	D	E	F	G
Zone of Influence					Surrounding Agricultural Land Score (from table on page A-7)	Surrounding Protected Resource Land Score (from table on page A-8)
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture (B/A)	Percent Protected Resource Land (C/A)		
1212	1212	32.9	32.90	1.00	100	90

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.

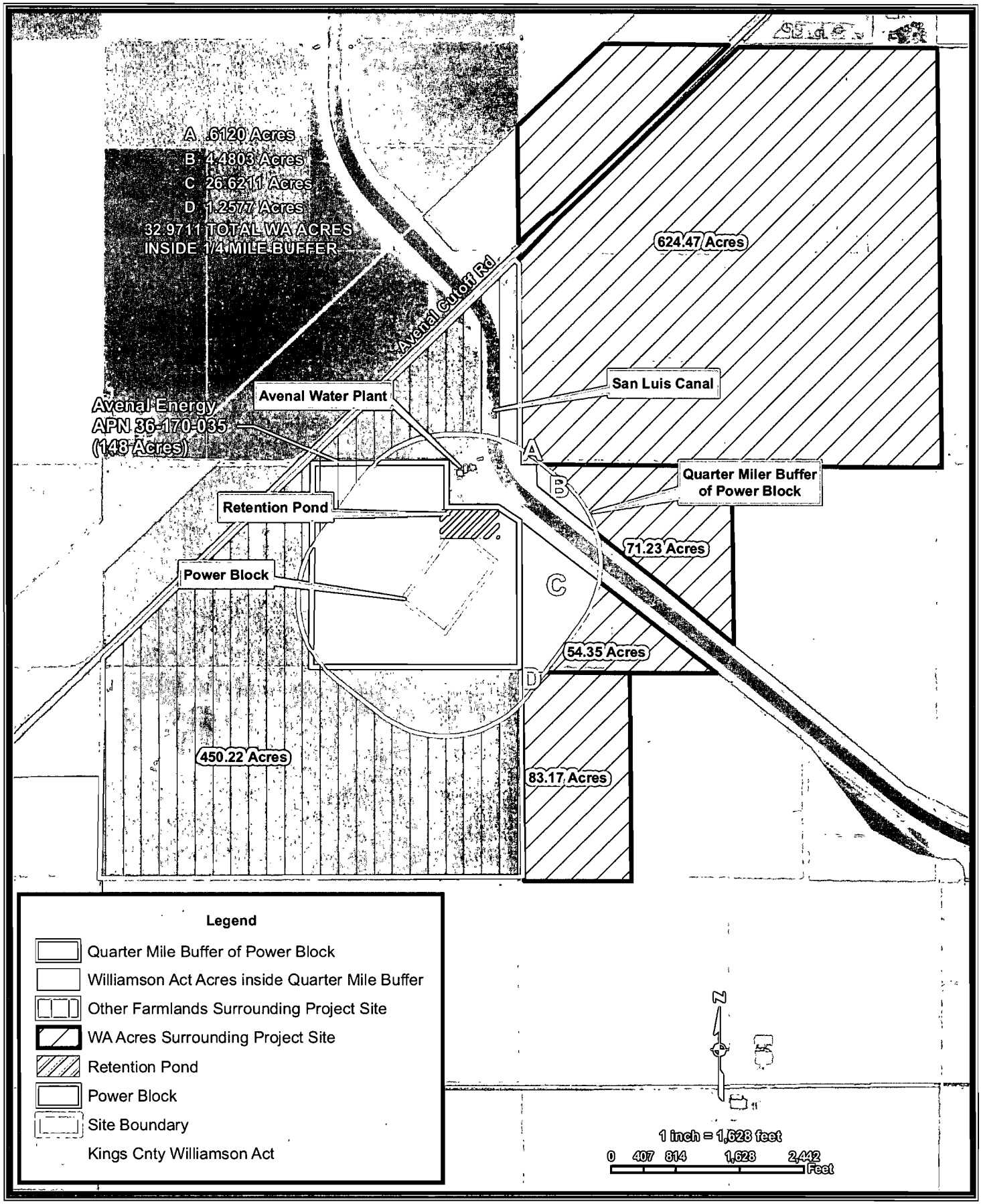
		Factor Scores	Factor Weight	Weighted Factor Scores
LE Factors				
Land Capability Classification (see page A-2)	<1>	90	0.25	22
Storie Index Rating (see page A-2)	<2>	85	0.25	21.25
LE Subtotal			**0.50**	**43.25**
SA Factors				
Project Size (see page A-2)	<3>	50	0.15	7.5
Water Resource Availability (see page A-5)	<4>	100	0.15	15
Surrounding Agricultural Land (see page A-9)	<5>	100	0.15	15
Surrounding Protected Resource Land (see page A-9)	<6>	90	0.05	4.5
SA Subtotal			**0.50**	**42**
			Final LESA Score	**85.25**

California Agricultural LESA 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

The California Agricultural LESA Model is designed to make determinations of the potential significance of a project's conversion of agricultural lands during the Initial Study phase of the CEQA review process. Scoring thresholds are based upon both the total LESA score as well the component LE and SA subscores. In this manner the scoring thresholds are dependent upon the attainment of a minimum score for the LE and SA subscores so that a single threshold is not the result of heavily skewed subscores (i.e., a site with a very high LE score, but a very low SA score, or vice versa). For additional information on the significance scoring thresholds under the California Agricultural LESA Model, consult Section 4 in the LESA Instruction Manual.

Avenal Energy - LESA Model Land Evaluation



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SOURCE: NAIP Background Image & Tele Atlas and Department of Conservation Farmland mapping

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