AGRICULTURAL RESOURCES

LOCAL AGRICULTURAL RESOURCES ASSESSMENT (LARA) MODEL RESULTS

for

NLP Valley Center Solar
SAN DIEGO COUNTY, CALIFORNIA
PDS2013-MUP-13-019

Date
February 10, 2014

Prepared by:
Dennis Campbell, County Agricultural Resources Specialist
County of San Diego
Planning & Development Services
5510 Overland Drive
San Diego, CA 92123-1666

1.0 EXECUTIVE SUMMARY

The following is an example executive summary:
The project proponent applied for a Major Use Permit to install a large-scale installation of solar panels at the 79-acre site (29471 Cole Grade Road), in Valley Center. The applicant proposes to install the solar panels on 45 acres within the project site. The project site comprises three properties (188-120-09, -10, and -12), at Cole Grade Road, Via Valencia and Wilhite Lane. The site has a history of agricultural production (citrus grove) and is mapped by the CA Farmland Monitoring and Mapping (FMMP) Program with Prime Farmland, Other Lands, Unique Farmland and Farmland of local Importance. Therefore, the site is considered an Agricultural Resource pursuant to the County Local Agricultural Resources Assessment (LARA) Model.

Based on the results of the LARA Model, the site is considered an Important Agricultural Resource. The site received a High ratings for all Required Factors: Soil Quality, Climate and Water Resources. The site received a High ratings for two of the three Complementary Factors: Land Use Consistency and Slope. The only Factor rated Low was Land Use Consistency. This combination of ratings indicates that the project site falls within the LARA Model's Scenario One and is an Important Agricultural Resource. The results of each LARA Model Factor rating that contribute to this determination are detailed below.

2.0 LOCAL AGRICULTURAL RESOURCE ASSESSMENT (LARA) MODEL

In determining whether impacts to agricultural resources are significant environmental effects, the CEQA Guidelines references the California Agricultural LESA Model (1997) prepared by the California Department of Conservation (DOC), as an optional methodology that may be used to assess the relative value of agriculture and farmland. In the past, the LESA Model has been applied to various agricultural properties throughout the County of San Diego to assess agricultural importance in association with proposed discretionary land use permits. After several years of practical experience with application of the LESA Model in San Diego County, the inadequacy of the Model in capturing the unique and varied character of San Diego agriculture has become apparent. An alternative approach, referred to as the Local Agricultural Resource Assessment (LARA) Model has been developed to assess the relative value of agricultural resources in San Diego County. Specific documentation of the LARA Model can be found in the Guidelines for Determining Significance for Agricultural Resources at http://www.sdcounty.ca.gov/pds/procguid.html#Agricultural Resources.

The LARA Model takes into account the following factors in determining the importance of an agricultural resource:

Required Factors:
- Water
- Climate
- Soil Quality

Complementary Factors:
- Surrounding Land Uses
- Land Use Consistency
- Topography

The following subsections detail the rating assigned to the project site for each of the above factors.

2.1 Water

The water rating is primarily based the site's County Water Authority (CWA) service status; however if the project does not already have imported water service, the underlying groundwater aquifer type and the presence of a groundwater well is also considered (Table 1).

The project site is located within the CWA boundaries and is served by the Valley Center Municipal Water District (VCMWD), with meters installed. Additionally, the site contains working groundwater wells. Therefore, the property scores High for Water Resources.

Table 1. Water Rating [1]

County Water Authority (CWA) Service Status	**Groundwater Aquifer Type and Well Presence**	**Rating**
Inside CWA service area with existing water infrastructure connections and a meter	*Any groundwater aquifer type*	*High*
Inside CWA service area with infrastructure connections to the site, but no meter has been installed	The site is located in an Alluvial or Sedimentary Aquifer *and* has an existing well	High
	The site is located in an Alluvial or Sedimentary Aquifer, but has no existing well	Moderate
	The site is located on Fractured Crystalline Rock and has an existing well	Moderate
	The site is located on Fractured Crystalline Rock, but has no existing well	Low
Outside CWA or inside CWA but infrastructure connections are not available at the site and no meter is installed	The site is located in an Alluvial or Sedimentary Aquifer *and* has an existing well	Moderate
	The site is located in an Alluvial or Sedimentary Aquifer, but has no existing well	Low
	The site is located on Fractured Crystalline Rock (with or without a well)	Low
	The site is located in a Desert Basin (with or without a well)	Low

[1] If more than one underlying groundwater aquifer type exists at a site, usually the aquifer type that could produce the most water should be used to obtain the water rating. If it would be more reasonable to apply the rating based on the aquifer that would produce less water, a clear justification and reason for doing so must be provided.

2.2 Climate

Sunset Zones are used as a standard measure of climate suitability due to the variability of microclimate conditions that the Sunset zones take into account. Recognizing that the Sunset Zones were not developed as a tool to determine the suitability for commercial agricultural production, their use is not intended to determine suitability for specific crops, rather they are a measure of overall climate suitability for the typical agricultural commodities produced in San Diego County. The project site is located within Sunset Zone 21, which has a rating of High.

Climate (Sunset Zone) Description	Rating
Zone 21 is an air drained thermal belt that is good for citrus and is the mildest zone that gets adequate winter chilling for some plants. Low temperatures range from 23 to 36 degrees F, with temperatures rarely dropping far below 30 degrees.	**High**

2.3 Soil Quality

The project's soil quality rating is based on the presence of soils that meet the quality criteria for Prime Farmland or Farmland of Statewide Importance, as defined by the FMMP, which are available for agricultural use and that have been previously used for agriculture.

The project is underlain by four soils that are mapped as Prime Farmland and Farmland of Statewide Significance, by the FMMP. These soils are shown in Table 2, the Soil Quality Matrix and include Placentia sandy loam, 2-9 percent slopes, Bonsall sandy loam, 2-9 percent slopes, eroded, Fallbrook sandy loam, 5-9 percent slopes and Greenfield sandy loam, 2-5 percent slopes. The soils have been in historical agricultural production and several acres of these soils were eliminated as available for agricultural production because they are overlain by existing structures, drainage areas and / or biologically sensitive lands or were not farmed in the past. Both review and analysis of the project Biological Resources Study and historical aerial photographs were used to determine the lands that are unavailable for agricultural production. The findings are found within Table 2, below.

Although some areas of the non-Prime Farmland and Farmland of Statewide Signficance Soils are unavailable for agricultural production, since those lands are weighted with a zero, in Table 2, these areas were not counted, as the overall soils rating would not be affected by doing so.

Finally, the site contains over ten acres of contiguous Prime Farmland and Farmland of Statewide Significance Soils and includes a Soils Matrix score of 0.75. Therefore, Based on the information found in Table 2 and that provided in this description, the project's soil quality rating is High, as detailed in Table 2.

Figure 1. Prime Soil Types

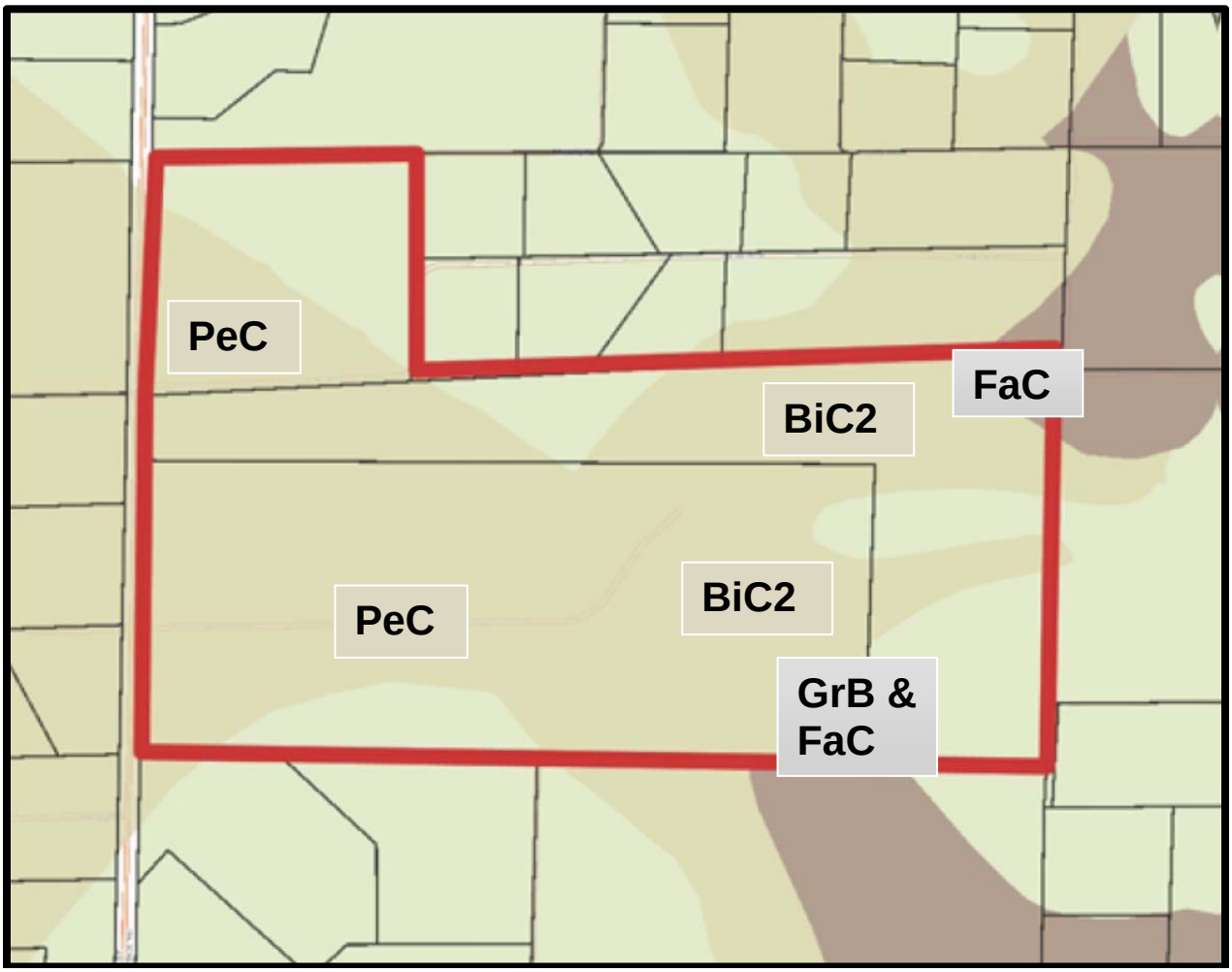


Table 2. Soil Quality Matrix

	Column A	Column B	Column C	Column D	Column E	Column F	Column G
	Soil Type	**Size of project site (acreage)**	**Unavailable for agricultural use**	**Available for agricultural use**	**Proportion of project site**	**Is soil candidate for prime farmland or farmland of statewide significance? (Yes = 1, No = 0)**	**Multiply Column E x Column F**
Row 1	Placentia sandy loam, 2 to 9 percent slopes (PeC)	46.7	3.3	43.4	0.55	1	0.55
Row 2	Bonsall sandy loam, 2 to 9 percent slopes, eroded (BiC2)	17.0	3.0	14.0	0.18	1	0.18
Row 3	Fallbrook sandy loam, 5 to 9 percent slopes (FaC)	0.2	0	0.2	0.002	1	0.002
Row 4	Greenfield sandy loam, 2 to 5 percent slopes (GrB)	0.6	0	0.6	0.008	1	0.008
Row 5	Fallbrook sandy loam, 9 to 30 percent slopes, eroded (FeE2)	6.0	0	6.0	0.08	0	0
Row 6	Fallbrook rocky sandy loam, 9 to 15 percent slopes, eroded	6.0	0	6.0	0.08	0	0

	Column A	Column B	Column C	Column D	Column E	Column F	Column G
	Soil Type	**Size of project site (acreage)**	**Unavailable for agricultural use**	**Available for agricultural use**	**Proportion of project site**	**Is soil candidate for prime farmland or farmland of statewide significance? (Yes = 1, No = 0)**	**Multiply Column E x Column F**
	(FaD2)						
Row 7	Fallbrook-Vista sandy loams, 15 to 30 percent slopes (FvE)	1.2	0	1.2	0.02	0	0
Row 8	Fallbrook sandy loam, 5 to 9 percent slopes,eroded (FaC2)	1.0	0	1.0	0.01	0	0
Row 9	Total	78.7	Total	75.7			
Row 10						***Soil Quality Matrix Score***	**0.75**

Table 3. Soil Quality Matrix Interpretation

Soil Quality Matrix Score	Soil Quality Rating
The site has a Soil Quality Matrix score ranging from 0.66 to 1.0 and has a minimum of 10 acres of contiguous Prime Farmland or Statewide Importance Soils	*High*
The site has a Soil Quality Matrix score ranging from 0.33 to 0.66 or the site has a minimum of 10 acres of contiguous Prime Farmland or Statewide Importance Soils	Moderate
The site has a Soil Quality Matrix score less than 0.33 and does not have 10 acres or more of contiguous Prime Farmland or Statewide Importance Soils	Low

2.4 Surrounding Land Use

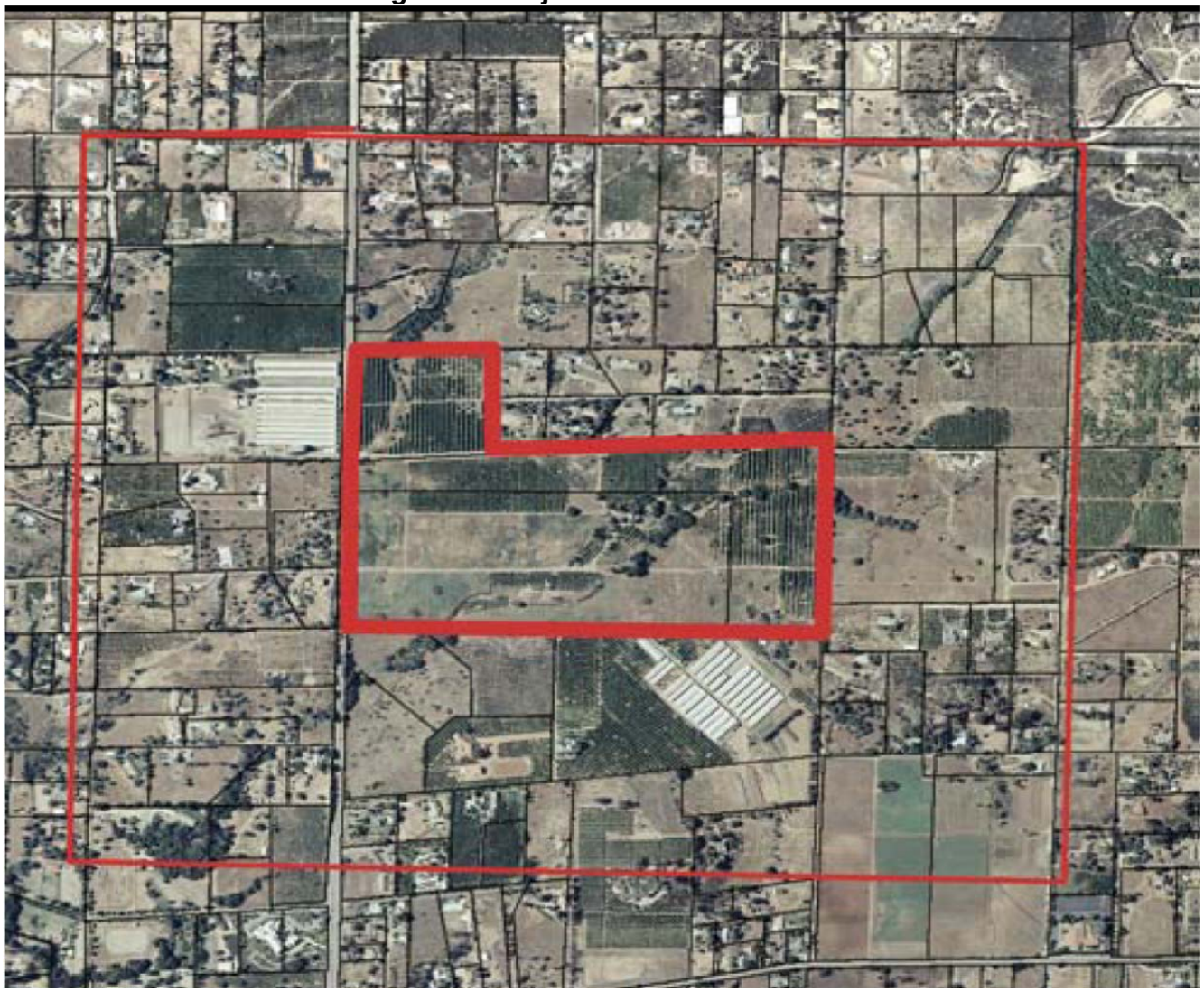
Surrounding land use is a factor in determining the importance of an agricultural resource because surrounding land uses that are compatible with agriculture make a site more attractive for agricultural use, due to lower expectations of nuisance issues and other potential impacts from non-farm neighbors. This factor also accounts for the degree to which an area is primarily agricultural, assigning a higher rating to areas dominated by agricultural uses than an area dominated by higher density, urban development.

Figure 2 identifies the quarter-mile area surrounding the project site that defines the project's Zone of Influence (ZOI). Based on a review of the land uses within the ZOI, The majority of the surrounding properties are agricultural properties or mixed residential and agricultural properties. Based on review of these land uses, at least 50 percent of the ZOI is compatible with agricultural use and the site receives a High rating for surrounding land use.

Table 4. Surrounding Land Use Rating

Percentage of Land within ZOI that is Compatible with Agriculture	Surrounding Land Use Rating
50% or greater	*High*
Greater than 25% but less than 50%	Moderate
25% or less	Low

Figure 2. Project Zone of Influence



2.5 Land Use Consistency

The median parcel size associated with the project site compared to the median parcel size of parcels located within the ZOI is a complementary factor used in the LARA Model.

The ZOI includes 373 parcels with the largest parcel totaling 45 acres and the smallest parcel equaling 0.51 acre. The median parcel size within the ZOI is 2.5 acres. The subject site includes three parcels (10.87, 26.33 and 39.86 acres) and the median parcel size on the project site is 26.33 acres. The median parcel size of the project is over 10 acres that of the ZOI. Therefore, the project receives a Low land use consistency rating.

Table 5. Land Use Consistency Rating

Project's median parcel size compared to ZOI median parcel size	Land Use Consistency Rating
The project's median parcel size is smaller than the median parcel size within the project's ZOI	High
The project's median parcel size is up to ten acres larger than the median parcel size within the project's ZOI	Moderate
The project's median parcel size is larger than the median parcel size within the project's ZOI by ten acres or more	*Low*

2.6 Slope

The Slope Rating for the site is based on the average slope for the area of the site that is available for agricultural use, as identified the Soil Quality Rating Matrix. Approximately 70.3 acres are in the 0-15 percent slope range; six acres are in the 15-25 percent slope range; and 2.4 acres are above 25 percent slope. Therefore, the average slope for the site falls in the 0-15 percent category, resulting in a High slope rating.

Table 6. Slope Rating

Average Slope	Topography Rating
Less than 15% slope	*High*
15% up to 25% slope	Moderate
25% slope and higher	Low

3.0 LARA MODEL RESULTS

The ratings for each LARA Model factor for the project site are as follows:

Required Factors	Complementary Factors
Water = High	Surrounding land use = High
Climate = High	Land use consistency rating = Low
Soil Quality = High	Slope = High

Table 7. Interpretation of LARA Model Results

LARA Model Results			**LARA Model Interpretation**
Possible Scenarios	**Required Factors**	**Complementary Factors**	
Scenario 1	All three factors rated high	At least one factor rated high or moderate	The site is an important agricultural resource
Scenario 2	Two factors rated high, one factor rated moderate	At least two factors rated high or moderate	
Scenario 3	One factor rated high, two factors rated moderate	At least two factors rated high	
Scenario 4	All factors rated moderate	All factors rated high	
Scenario 5	At least one factor rated low importance	N/A	The site is *not* an important agricultural resource
Scenario 6	All other Model results		

Based on the site conditions, the project's LARA Model scoring falls within Scenario One, indicating that the site is an Important Agricultural Resource.