# AGRICULTURAL RESOURCES

## LOCAL AGRICULTURAL RESOURCES ASSESSMENT (LARA) MODEL RESULTS

**for**

**AES FALLBROOK BATTERY ENERGY STORAGE**
**SAN DIEGO COUNTY, CALIFORNIA**
**PDS2018-MPA-18-010**

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## 1.0 EXECUTIVE SUMMARY

The project proposes to construct a battery energy storage system (BESS) on a 4.22 acre parcel. The BESS would consist of a warehouse building, transformers, a high voltage substation, parking lot and an operation room. Access is proposed from East Mission road through a private road easement.

Historically, the project site has been used for a citrus grove, but the agricultural use is no longer active. The site is not incorporated within either a Williamson Act Agriculture Contract or an Agricultural Preserve Area. There are no existing structures on the project site.

Based on the results of the Local Agricultural Resources Assessment (LARA) Model, the site is not considered an important agricultural resource. The site received a high rating for climate, a moderate rating for soil and a low rating for water. Under the Lara model, having one of the required factors, water, climate and soil, identified as a low importance, would deem the site to not be a significant 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 off 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 site is located within the County Water Authority Boundary, with service availability to Fallbrook Public Utility. The site is located on Cretaceous Plutonic, Fractured Crystalline Rock but has no existing well on the legal project site. Based on Table 1 below, this factor is considered to be a low rating.

**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 23, which has a **high** rating.

| Climate (Sunset Zone) Description | Rating |
|---|---|
| **Zone 23** represents thermal belts of the Coastal Areaclimate and is one of the most favorable for growing subtropical plants and most favorable for growing avocados. Zone 23 occurs in coastal incorporated cities and also occurs in the unincorporated communities of Fallbrook, Rainbow, Bonsall, San Dieguito, Lakeside, western portions of Crest and Valle De Oro, Spring Valley, Otay, and western portion of Jamul-Dulzura. | **High** |

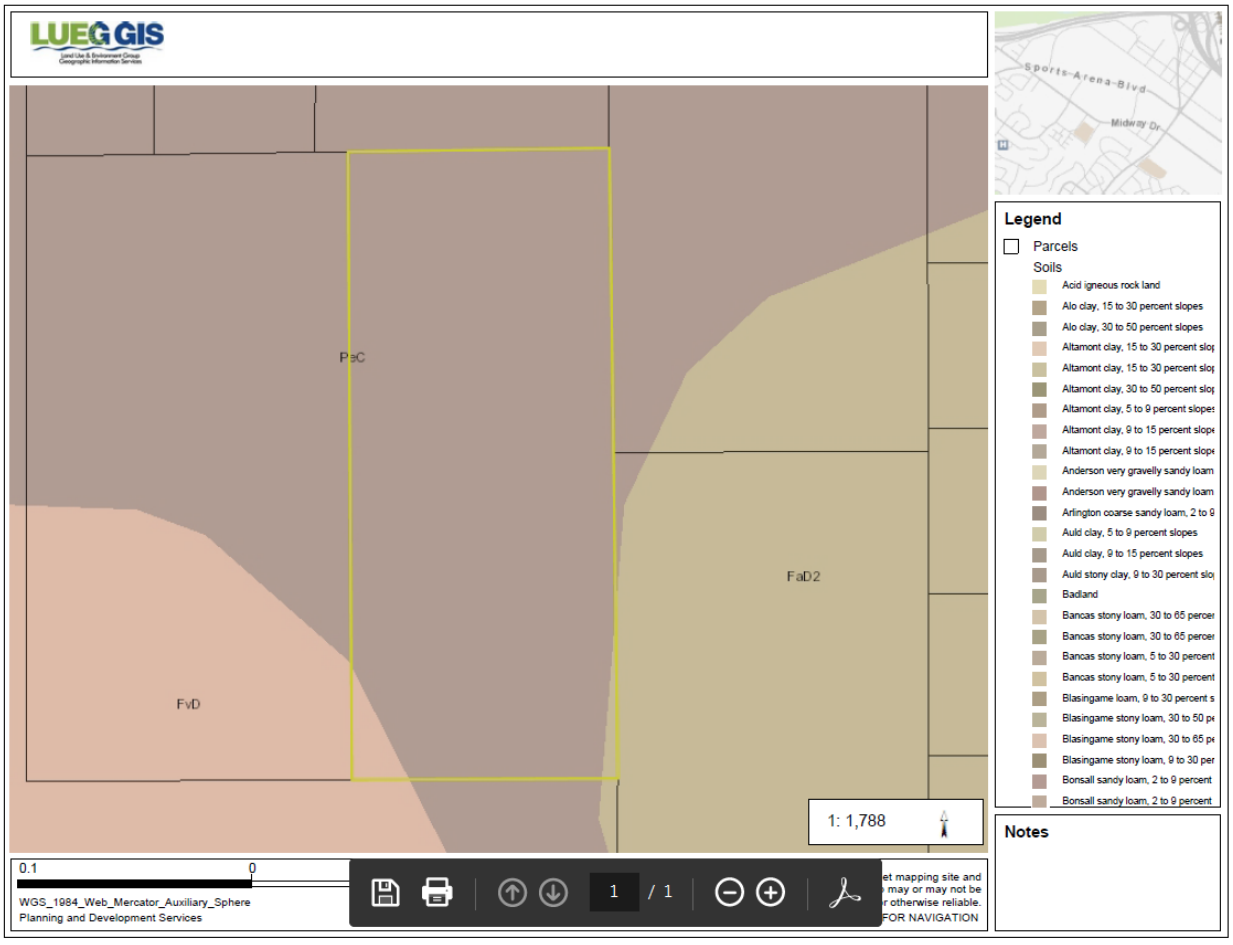
## 2.3 Soil Quality

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 Farmland Mapping and Monitoring Program (FMMP) that are available for agricultural use and that have been previously used for agriculture.

Of the total 4.22 acres of the project site, approximately 4.08 acres are of Placentia Sandy Loam 2 to 9 percent slopes(PeC), .09 acres are of Fallbrook-Vista Sandy Loams 9 to 15 percent slopes (FvD), and 0.05 acres are of Fallbrook Sandy Loam 9 to 15 percent slopes eroded soil (FaD2). PeC soil type is considered by the State to be a quality soil and is listed as a Farmland of Statewide Local Importance Soil by FMMP. PeC soil type encompasses a majority of the project site at 4.08 acres to which all acres are considered available for agricultural use. The remaining 0.14 acres available for agricultural use on site does not meet the soil quality criteria defined by FMMP.

The project's soil quality score is **0.97**, as detailed in Table 2, Soil Quality Matrix. Projects with a soil quality matrix score between 0.66 and 1.00 are valued highly since it indicates that the large majority of the agricultural resources onsite have soils that meet the soil quality criteria for Prime Farmland or Farmland of Statewide Importance, defined by FMMP. However, a minimum of 10 contiguous acres of Prime Farmland or Farmland of Statewide Importance soil by FMMP is also required for the rating of high for soil quality. The requirement that the land be contiguous recognizes that small, scattered pockets of high quality soils are less valuable for agricultural use than an area of contiguous high quality soils. Therefore, the project receives a **moderate** rating for soil quality based on this score.

## Figure 1. Soil Types



## Soil Quality Matrix

| | Column A | Column B | Column C | Column D | Column E | Column F | Column G |
|---|---|---|---|---|---|---|---|
| Row 1 | **Soil Type** | **Acreage of each Soil Type** | **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** |
| Row 2 | Fallbrook Sandy Loam, 9 to 15 percent slopes, eroded | .05 | 0 | .05 | .012 | 0 | 0 |
| Row 3 | Fallbrook-Vista Sandy Loams, 9 to 15 percent slopes | .09 | 0 | .09 | .021 | 0 | 0 |
| Row 4 | Placentia Sandy Loam, 2 to 9 percent slopes | 4.08 | 0 | 4.08 | .967 | 1 | .967 |
| | **Total** | **4.22** | | **4.22** | | | |
| | | | | | | ***SOIL QUALITY MATRIX SCORE*** | **0.97** |

## 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 |

## 3.0 LARA MODEL RESULTS

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

| Required Factors | Complementary Factors |
|---|---|
| Water = Low | Surrounding land use = N/A |
| Climate = High | Land use consistency rating = N/A |
| Soil Quality = Moderate | Slope = N/A |

**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 under Scenario 5, indicating that the site is **NOT an important agricultural resource.**