COUNTY OF SAN DIEGO

GUIDELINES FOR DETERMINING SIGNIFICANCE AND REPORT FORMAT AND CONTENT REQUIREMENTS

AGRICULTURAL RESOURCES

LAND USE AND ENVIRONMENT GROUP

Planning & Development Services
Department of Public Works
Department of Agriculture, Weights & Measures

First Revision
June 23, 2015

Approved
March 19, 2007

APPROVAL

I hereby certify that these **Guidelines for Determining Significance and Report Format and Content Requirements for Agricultural Resources** are a part of the County of San Diego, Land Use and Environment Group's Guidelines for Determining Significance and Technical Report Format and Content Requirements and were considered by the Director of Planning & Development Services, in coordination with the Director of Public Works and the Director of Agriculture, Weights & Measures on the 23rd day of June 2015.

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I hereby certify that these **Guidelines for Determining Significance and Report Format and Content Requirements for Agricultural Resources** are a part of the County of San Diego, Land Use and Environment Group's Guidelines for Determining Significance and Technical Report Format and Content Requirements and have hereby been approved by the Deputy Chief Administrative Officer (DCAO) of the Land Use and Environment Group on the 23rd day of June 2015. The Director of Planning & Development Services is authorized to approve revisions to these Guidelines for Determining Significance and Report Format and Content Requirements for Agricultural Resources, except any revisions to the Guidelines for Determining Significance presented in Chapter 4.0 must be approved by the DCAO.

Approved, June 23, 2015

SARAH AGHASSI
Deputy CAO

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EXPLANATION

These Guidelines for Determining Significance for Agricultural Resources and information presented herein shall be used by County staff for the review of discretionary projects and environmental documents pursuant to the California Environmental Quality Act (CEQA). These Guidelines present a range of quantitative, qualitative, and performance levels for particular environmental effects. Normally, (in the absence of substantial evidence to the contrary), an affirmative response to any one Guideline will mean the project will result in a significant effect, whereas effects that do not meet any of the Guidelines will normally be determined to be "less than significant." Section 15064(b) of the State CEQA Guidelines states:

> "The determination whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on factual and scientific data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

The intent of these Guidelines is to provide a consistent, objective and predictable evaluation of significant effects. These Guidelines are not binding on any decision-maker and do not substitute for the use of independent judgment to determine significance or the evaluation of evidence in the record. The County reserves the right to modify these Guidelines in the event of scientific discovery or alterations in factual data that may alter the common application of a Guideline.

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TABLE OF CONTENTS

Section **Page**

INTRODUCTION **1**

1.0 GENERAL PRINCIPLES AND EXISTING CONDITIONS 2
1.1 State of California 2
1.2 San Diego County 2
1.2.1 Climate 4
1.2.2 Soil Quality 4
1.2.3 Topography 6
1.2.4 Water Resources 7
1.2.5 Land Cost and Availability 10

2.0 EXISTING REGULATIONS AND STANDARDS 11
2.1 State Regulations and Standards 11
2.2 Local Regulations and Standards 12

3.0 DETERMINING THE IMPORTANCE OF AGRICULTURAL RESOURCES . 17
3.1 LARA Model Instructions 22
3.1.1 Water 23
3.1.2 Climate 27
3.1.3. Soil Quality 30
3.1.4 Surrounding Land Use 34
3.1.5 Land Use Consistency 36
3.1.6 Slope 37

4.0 TYPICAL ADVERSE EFFECTS AND GUIDELINES FOR DETERMINING SIGNIFICANCE 38
4.1 Typical Adverse Effects 38
4.1.1 Direct Impacts 38
4.1.2 Indirect Impacts 39
4.1.3 Cumulative Impacts 41
4.2 Guidelines for Determining Significance 42
4.2.1 Impacts to Important Onsite Agricultural Resources 42
4.2.2 Indirect Impacts to Agricultural Resources 43
4.2.3 Conflicts with Agricultural Zoning and Williamson Act Contracts 45
4.2.4 Cumulative Impacts 45

5.0 STANDARD MITIGATION AND PROJECT DESIGN CONSIDERATIONS .. 47
5.1 Direct Impacts 47
5.1.1 Onsite Preservation 47
5.1.2 Agricultural Conservation Easements 50

5.2 Indirect Impacts 52
5.2.1 Project Design Elements 52
5.2.2 Right to Farm Acts 54
5.3 Cumulative Impacts 55

6.0 REFERENCES 56

LIST OF TABLES

Table 1 State LESA and County LARA Agricultural Model Comparison 20
Table 2 Interpretation of LARA Model Results 22
Table 3 Water Rating 23
Table 4 Groundwater Availability and Quality Effects on Water Rating 24
Table 5 Crop Water Use Averages 26
Table 6 Climate Rating 28
Table 7 Soil Quality Matrix 32
Table 8 Soil Quality Matrix Interpretation 33
Table 9 Surrounding Land Use Rating 35
Table 10 Land Use Consistency Rating 37
Table 11 Slope Rating 37
Table 12 Agricultural Preservation Requirements 47

LIST OF ATTACHMENTS

Attachment A Important Definitions 59
Attachment B Areaclimates and "Sunset Zone" Descriptions 60
Attachment C Soil Candidate Criteria and Candidate Listing for Prime Farmland and Farmland of Statewide Importance in San Diego County 63
Attachment D Agriculture Commissioner Memo 68
Attachment E Federal and State Regulations and Agricultural Conservation Programs 69
Attachment F Defining a Project's Zone of Influence (ZOI) 71
Attachment G Summary of Modifications and Revisions 73

List of Acronyms

AWM	County Department of Agriculture, Weights and Measures
CEQA	California Environmental Quality Act
CSA	Community Supported Agriculture
DOC	State of California, Department of Conservation
DWR	State of California, Department of Water Resources
FHA	Farm and Home Advisor
FMMP	California Farmland Mapping and Monitoring Program
FPPA	Federal Farmland Protection Policy Act
GIS	Geographic Information System
LAFCO	Local Agency Formation Commission
LARA	Local Agricultural Resource Assessment Model
LCC	Land Capability Classification
LESA Model	Land Evaluation and Site Assessment Model
MWD	Municipal Water District
NASS	National Agricultural Statistics Service
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
PACE	Purchase of Agricultural Conservation Easement
PDS	Planning & Development Services
SWP	State Water Project
TDS	Total Dissolved Solids
UCCE	University of California Cooperative Extension
USDA	United States Department of Agriculture

INTRODUCTION

This document provides guidance for evaluating adverse environmental effects that a proposed project may have on agricultural resources[1]. Specifically, this document addresses the following questions that are adapted from the California Environmental Quality Act (CEQA) Guidelines, Appendix G, II. Agricultural Resources:

Would the project:

a) Convert Prime Farmland, Unique Farmland, Farmland of Statewide or Local Importance (Important Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency, or other agricultural resources, to non-agricultural use?

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Important Farmland or other agricultural resources, to non-agricultural use?

The definition of an agricultural resource has been broadened from the State definition (Important Farmlands mapped pursuant to the FMMP) to include any land with an active agricultural operation[1], or any site with a history of agricultural production based on aerial photography or other data sources identifying agricultural land uses. The reason for the broadening of the definition of an agricultural resource is to capture the large number of small farms in San Diego County that the State FMMP mapping effort does not capture due to the 10 acre minimum mapping unit. Confining evaluation of impacts to State definition would result in an inconsistent application of these significance guidelines among similar land uses. Similarly, if it is found that lands mapped as agriculture by the State or other public agencies have never been used for agriculture, these lands should not be considered agricultural resources.

[1] A detailed definition of this term is provided in Attachment A, Important Definitions.

1.0 GENERAL PRINCIPLES AND EXISTING CONDITIONS

The following sections discuss general agricultural resource principles and existing conditions in the County of San Diego.[2]

1.1 State of California

California's 28.1 million acres (2002) of agricultural lands produce important economic and environmental benefits to the people of the state, nation and world. Agricultural land supports one of California's major industries and is responsible for the production of a significant portion of the nation's food and fiber. Agricultural lands in the form of farmland or grazing land cover approximately one-third of the state. The state is also a major exporter of agricultural product to the rest of the world. A unique combination of geography, climate and soils enables California to produce efficiently many agricultural products and has led to California being the number one agricultural producer in terms of total agricultural value among all states in the nation.

In addition to its economic importance, the state's agricultural land also plays a critical environmental role. Farmland provides valuable areas of extensive pervious surfaces that allow stormwater infiltration in addition to groundwater recharge. Farms and ranches are wildlife habitats for many common game and endangered species. Agricultural land provides valuable open space, giving visual relief for urban dwellers, and protecting the rural way of life important to farmers, ranchers, and small-town residents. Studies have also shown that the public values highly the preservation of local agricultural land and the availability of locally grown food.

While California enjoys many economic, social and environmental benefits from agricultural land, there are constant pressures that affect its future. Some of these pressures include changes in market demand for agricultural products; introduction of exotic pests and diseases; increasing energy, infrastructure, land and water costs; urban sprawl; foreign imports of agricultural products; labor supply and costs; and increasing regulatory requirements.

1.2 San Diego County

San Diego County includes the City of San Diego, 17 other incorporated cities and a large unincorporated area that includes significant acreages of publicly owned lands. San Diego County is the only county in California that qualifies as both a major urban county and is ranked among the top ten agricultural counties in the state in terms of agricultural value. It is estimated that of the County's approximately 2.73 million acres, 305,573 acres (2013) are in agriculture. While San Diego County has the fifth highest urban population among counties in the United States, it has the nineteenth largest agricultural economy nationwide (2012 Census of Agriculture) San Diego County

[2] Statistics and agricultural production data in this document are from the 2005 San Diego County Annual Crop Report, the 2002 United States Department of Agriculture (USDA), National Agricultural Statistics Service (NASS) Agricultural Census, or the 2004 California Agriculture Overview from the USDA, NASS.

agriculture produces the highest dollar value per acre ($6,054/acre) of any county in California according to the 2013 County of San Diego Crop Report. San Diego County has also enjoyed 4 consecutive years of growth in agricultural value, with a total reported value of $1.85 billion in 2013. Agriculture in San Diego County has an estimated annual economic impact to the region of $5.36 billion and ranks fifth as a component of San Diego County's economy as reported by the Greater San Diego Chamber of Commerce.

San Diego County is the southwestern most county in the state, enjoying a subtropical climate that optimizes production of a variety of crops that may be more difficult to produce elsewhere in the state. Moreover, the way agriculture is conducted on the County's approximately 5,732 farms differs greatly from agricultural operations in the majority of California. Economically productive agriculture is conducted on small farms, with 68 percent of farms ranging from 1 to 9 acres in size, 75% of farmers living on their farms and 90% of farms being family owned. In contrast, the average size of farms statewide is 316 acres.

A variety of agricultural commodities make up San Diego County's agriculture. In terms of total value, nursery and flower crops account for 62%; fruits and nuts account for 22%; field crops account for <1%, vegetables account for 9%; and livestock and poultry products (i.e. milk and eggs), livestock and poultry (i.e. cattle, chickens, hogs, rabbits, sheep) specialty crops, and apiary products account for approximately 1% each. San Diego County is rated as one of the top five counties in California for production of nursery products, flowers & foliage, fresh market tomatoes, lemons, avocados, chicken eggs, mushrooms and grapefruit. San Diego County leads California and the nation in the production value of avocados, nursery, and floriculture.

In addition to conventional agricultural production, organic production[3] has growing importance in the County. San Diego County leads the State of California with 379 growers registered with the AWM's Agricultural Standards Enforcement program, as organic. San Diego organic growers produced over 125 different crops in 2013. Local organic products are sold across the country and a portion is sold directly to local restaurants, natural food stores, Certified Farmers' Markets and Community Supported Agriculture (CSA) programs. Members of an organic CSA program receive boxes of seasonal organic fruits and vegetables throughout the year.

The agricultural industry in San Diego County is shaped by a variety of local factors, including climate; soil quality; topography; water quality, cost and availability; land cost and availability; and surrounding land uses. Further, agriculture is greatly influenced by wider global markets and commodity price fluctuations.

[3] The USDA defines organic production as "A production system that is managed to respond to site-specific conditions by integrating cultural, biological and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity."

1.2.1 Climate

Climate varies widely throughout the County, from the coastal regions where some weather stations have never recorded freezing temperatures to the inland valleys that are often moderated by the maritime influence, but also are subject to the continental influence which can bring greater temperature extremes and freezing temperatures. Local mountainous areas, such as the community of Julian, receive adequate winter chill to support tree crops that require seasonal cold temperatures for optimal production. Further east, the desert subtropical climate supports successful citrus and nursery operations.

A 1970 University of California Cooperative Extension (UCCE) book titled, “Climates of San Diego County: Agricultural Relationships” identified five areaclimates of maritime, coastal, transitional, interior, and desert. Within each areaclimate, similar climatic conditions are found, affecting suitability for crop production. The UCCE book also identified more detailed plantclimates, defined as a “climate in which specific plants, groups, or associations are evident and will grow satisfactorily, assuming water and soil are favorable.” (Close, et. al., 1970) Adapted from the plantclimates outlined in the UC Cooperative Extension Study, Generalized Western Plantclimate Zones, or "Sunset Zones" (from the Sunset Western Garden Books which popularized their usage) were developed to further differentiate the effect that latitude, elevation, ocean vs. continental air mass influence, and local terrain topology have on microclimates, freezing, and air and water drainage. Detailed descriptions of the areaclimates and “Sunset Zones” present in San Diego County are found in Attachment B.

Coastal and transitional areaclimates allow year round production due to low annual temperature variation and reduced heating and cooling costs as compared to hotter desert areas further east. These climates are also located in proximity to transportation infrastructure facilitating efficient product delivery to market. These factors make agriculture highly favorable and productive in the coastal and transitional areaclimates, where agriculture is concentrated.

1.2.2 Soil Quality

Detailed information on soils present in the region and their capability for agricultural use are contained in the United States Department of Agriculture Soil Surveys: Parts I & II (1973) and the County of San Diego Soil Interpretation Manual, Part III (1975). Descriptions of various measures of soil quality are presented below.

Land Capability Classification (LCC)
LCC classifies soils according to their limitations when cultivated and according to the way that they respond to management practices. Class I soils have no significant limitation for raising crops. Classes VI through VIII have severe limitations, limiting or precluding their use for agriculture. Capability subclasses are also assigned by adding a small letter to the class designation. Capability subclasses include the letters *e*, *w*, *s*, or *c*. The letter *e* shows that the main limitation is risk of erosion. The letter *w* indicates that

water in or on the soil interferes with plant growth or cultivation. The letter *s* indicates that the soil is limited mainly because it is shallow, droughty, or stony. Finally, the letter *c* is used only in some parts of the United States where cold or dry climates are a concern. Groupings are made according to the limitation of the soils when used to grow crops and the risk of damage to soils when they are used in agriculture. Productive agriculture in San Diego County typically occurs on soils having LCC ratings of III and IV, and a significant number of local soils have the class designations *e* and *c*, indicating limitations related to erosion and shallow soils.

Storie Index (SI)

SI, another traditional measure of soil quality, expresses numerically on a 100 point scale the relative degree of suitability or value of a soil for general intensive agriculture. Higher SI ratings indicate higher quality soils. The SI rating is based on several factors including profile characteristics (affecting root penetration), surface soil texture (affecting ease of tillage and capacity of soil to hold water), slope (affecting soil erosion), and other unique limiting factors of the soil such as poor drainage, high water table, salts, and acidity. Productive agriculture in San Diego County typically occurs on soils with low SI ratings (typically in the 30's).

Prime Agricultural Land

Soils in the San Diego County region are generally considered poor, with only 6% of the region's soils considered prime agricultural land, defined within Government Code §51201(c) as any soils having a LCC of I or II or a SI of 80 or higher. In San Diego County, prime agricultural land is sparsely scattered throughout the region and is often constrained by protected biological resources such as wetlands, restricting the feasibility of their use. Because San Diego County has generally steep terrain and erodible soils, the soil quality measures of LCC and SI rate local soils as poor due to the importance of slope and erodibility in the formulas that determine these soil ratings.

Prime Farmland Soils and Soils of Statewide Importance

The Department of Conservation's (DOC) Farmland Mapping and Monitoring Program's (FMMP) Farmland categories are based on local soil characteristics and irrigation status, with the best quality land identified as Prime Farmland and Farmland of Statewide Importance. The DOC publishes a list of soils that meet the soil quality criteria for Prime Farmland soils and soils of Statewide Importance (Attachment C). The soil criteria are defined by the Natural Resources Conservation Service (NRCS) and are unique to each county. In San Diego County, 44 local soils qualify for the Prime Farmland designation and 65 soils qualify for the Farmland of Statewide Importance designation. These soil criteria include a much broader range of soils than the Prime Agricultural Land definition in Government Code §51201(c), with 70% of the soils that meet the Prime and Statewide Importance Farmland soil criteria having a LCC greater than II and 88% have SI ratings below 80.

1.2.3 Topography

Topography plays an important role in San Diego County, contributing to a variety of microclimates and agronomic conditions. For example, because cold air is heavier than warm air, topography directs cold air to valley bottoms, reducing frost damage on slopes. Avocado groves that thrive on steep, rocky slopes benefit from the effect that topography has on facilitating water drainage. The fractured rocks on steep slopes, considered unsuitable for agriculture according to traditional soil quality measures, provide rapid water and air drainage preventing frost damage and avocado root rot (*Phytophthora cinnamomi)*, the most frequently encountered disease of avocado trees.

In addition to the role that topography plays in air and water drainage, topography affects the range of crops that are feasible to produce at a site. A flatter site will more likely be able to support an agricultural operation than a steep slope. While avocadoes can thrive on steep slopes, those slopes are not likely feasible for other crops, reducing overall agricultural potential. Flatter sites also facilitate mechanization of production which can be important management and economic considerations for an agricultural operation.

The Tecate Divide

Topography separates the County into two major watershed basins defined by the Tecate Divide. The Tecate Divide is a brush-covered mountain range that stretches from the County's southern boundary with Mexico to the northern boundary with Riverside County. The Divide separates lands that descend to the Pacific Ocean in the west and to the Colorado Desert Basin in the east.

Land west of the Divide is characterized by significant urban land uses toward the coast, with rural residential land uses interspersed with small farms in the inland areas. West of the Divide, farms are generally higher value and smaller than farms located east of the divide, reflecting the availability of imported water and the high cost of land which encourages maximization of economic output.

East of the Divide agriculture primarily exists in and around the community of Borrego Springs. Borrego Springs is located in the northeast region of San Diego County, in the Colorado River Basin. Agriculture in the desert basin tends to occur on larger farms and takes advantage of an affordable but limited water resource, Borrego's groundwater desert basin. Groundwater in Borrego Springs allows agriculture to survive in an otherwise harsh desert environment. Borrego Springs also supports large portions of prime agricultural and alluvial soil, which is not as common in other of parts of the County and can be advantageous to desert agricultural production. However, Borrego Springs relies completely on a groundwater resource that is essentially non-renewable and currently in a state of overdraft.

1.2.4 Water Resources

Water quality, cost, and availability are key components of a productive agricultural industry. Locally derived water resources in San Diego County are limited. Rainfall is highly variable throughout the County, with coastal areas averaging approximately 10 inches per year, desert locations averaging from 3 to 12 inches per year, and the Laguna Mountains averaging 27 to 30 inches per year. The highest rainfall occurs in the Palomar and Cuyamaca Mountains where 33 to 35 inches fall on average per year. Except for extensive dryland farmed field crops, agriculture must be supplemented with imported water or groundwater resources for optimum production. The availability, cost, and quality of water resources are limiting factors for agricultural production in San Diego County**.**

Water Quality
Salinity or Total Dissolved Solids (TDS) is the concentration of mineral salts dissolved in water. A high concentration of sodium reduces soil moisture penetration, high concentrations of TDS can reduce crop yields, and a high concentration of chloride is toxic to plants (DWR, 2005). Salinity or TDS, occurring at levels above 500 milligrams per liter (mg/L) is problematic to many of the subtropical crops grown in the San Diego region as they do not produce well and irrigation management is more difficult when irrigated with high TDS water (San Diego County Water Authority website). In other words, as TDS levels rise above 500 mg/L, the water has diminishing value for agricultural use as it can restrict the range of crops that can be irrigated with the water source and increases cost of irrigation maintenance. Most of the imported water supply has average TDS content exceeding 500 mg/L. Approximately 80 percent of Municipal Water District (MWD) water deliveries come from the Colorado River, which has an average TDS of 700 mg/L while State Water Project (SWP) averages about 250 mg/L (Ibid). The MWD has adopted a 500 mg/L TDS objective, however they will not provide a guaranteed blend of SWP and Colorado River supplies, making long-term improvements in the salinity of imported supplies uncertain for growers (Ibid). The elevated concentrations of TDS in the imported water supply makes contributions of TDS from other sources compound the problem. Elevated concentrations of TDS can negatively impact both groundwater and recycled water resources, important water resources for the long term preservation of farming.

Water Cost and Availability
Water for agricultural use in the County will remain a serious constraint as users continue to demand larger quantities of imported water and as energy costs rise, contributing to increasing water costs. The supply of imported water is largely dependent on water deliveries from the Colorado River, rainfall and water deliveries from the north, and development of new water storage projects to supply projected demand. Seawater desalinization is another water supply option that is currently being considered by water providers. Overall, the high cost and increasing uncertainty of the availability and quality of agricultural water supply is a constraint for economically viable agriculture in San Diego County.

The most productive and highest value crops are grown within the County Water Authority (CWA) service area where imported water is available. Agriculture within the CWA occurs on smaller farms reflecting the increased population density, high land cost and greater cost of production, necessitating high value crop selections to maintain economic viability. East of the CWA service area, agriculture is dependent on groundwater resources or rainfall for water supply.

For agricultural lands reliant on imported water, economic viability is constrained by the cost of imported water. To illustrate and compare the water costs in San Diego to nearby farming counties, the cost for imported water from the Imperial Irrigation District (Imperial County) is $15 per acre foot (AF) while the average cost for agricultural water in San Diego County is $650 per AF (Imperial Irrigation District Website). Growers in Ventura County, an area similar to San Diego agriculturally, pay $379 per AF (San Diego County Water Authority website). Water cost is also affected by the price of energy. Many water districts have to pump water up to higher elevations for delivery, the cost of which has increased greatly with increases in the price of energy. These costs are passed directly to growers in the form of higher water rates. Growers themselves often need to pump water to higher elevations to reach their crop, resulting in additional overall water costs.

Farmers within the Metropolitan Water District service area, which includes San Diego County, can enroll in Interim Ag Water Program (IAWP) that provides a $127 discount per acre foot of water. In exchange for that discount enrolled farmers agree to take a 30% reduction in water deliveries in a time of drought or supply emergency before municipal and industrial users have their supplies reduced. While the IAWP discount is critically important to farmers, the interruptible status puts their crops at risk.

Groundwater Resources

The high cost of imported water makes the availability of onsite groundwater resources an important resource for producers.[4] When compared to the cost of imported water, groundwater is relatively inexpensive. The greatest cost associated with groundwater use is the initial capital investment required to drill and install a well or wells. Ongoing costs of groundwater after infrastructure has been installed are relatively low and are based on the costs of energy to pump the water and periodic maintenance. As a result, growers within the CWA service area with a groundwater well often supplement irrigation with well water to reduce overall water costs or rely completely on groundwater resources for irrigation, if the resource is adequate. Groundwater quality is also important. A well with high TDS or other specific constituents such as chloride can be problematic for crop production.

In the County there are three primary types of groundwater aquifers: fractured crystalline rock, alluvial and sedimentary aquifers, and desert basins. Fractured rock

[4] Some groundwater resources are pumped by water agencies and delivered to consumers on a fee basis. The discussion of groundwater resources in this section refers to groundwater resources derived from the site where an agricultural commodity is produced, not groundwater resources pumped by a water agency and delivered to a site.

underlies approximately 73% of the unincorporated area of the County, mostly in mountainous areas. The characteristics of fractured rock aquifers vary significantly. Wells drilled only a few tens of feet from one another may have significantly different water production rates because water-producing fracture locations and orientations are difficult to identify and predict. Fractured rock aquifers typically have much less storage capacity than alluvial and sedimentary aquifers. As a result, pumping from wells in fractured rock typically produces a greater decline in water levels than a similar pumping rate for wells located in alluvial and sedimentary aquifers. Wells in a fractured rock aquifer typically yield relatively low volumes of water and have a low rate of production when compared to other aquifer types. Many fractured rock wells have been drilled in the County to depths of over 1,000 feet.

Alluvial and sedimentary aquifers underlie approximately 13% of the unincorporated area of the County and have significant storage capacity. These aquifers are typically found in river and stream valleys, around lagoons, near the coastline, and in the intermountain valleys and are composed of either consolidated or unconsolidated gravel, sand, silt, and clay. Most of these aquifers have high water storage capacity although some have relatively thin saturated thickness and therefore limited storage. Alluvial and sedimentary aquifers can be underlain by fractured rock aquifers, which could potentially provide additional storage.

Desert basins are characterized by extremely limited recharge, but typically have large storage capacities. Desert basin wells typically yield relatively high volumes of water due to the coarse-grained nature of the alluvial sediments. Because desert basin wells may be capable of yielding in excess of 1,000 Gallons per Minute (GPM), and recharge rates can be extremely low, it is easy to pump more water from the basin than is naturally recharged. Excessive pumping that exceeds the rate of recharge results in a groundwater overdraft situation, which is not sustainable for long-term groundwater use.

Borrego Valley is located in the desert basin and is supplied by an aquifer characterized by limited recharge due to annual rainfall of approximately six inches. Groundwater recharge for the Valley is estimated to average approximately 5,000 acre-feet per year. Groundwater demand is high, in excess of 20,000 acre-feet per year and has continued to increase through the past 20 years, due to water uses from over 4,000 acres of agricultural land, golf courses, and continued residential growth. This high groundwater demand has resulted in an overdraft condition where groundwater extraction continually exceeds long-term groundwater recharge.

Water levels have been declining in Borrego Valley's groundwater basin for decades as a result of the overdraft condition. More than 500,000 acre-feet of groundwater has been removed from the aquifer over the past 50 years, and groundwater production at current rates is not sustainable. Water level declines in Borrego Valley are most significant in northern portion of the basin where agricultural use is concentrated. In this area of the aquifer, over 50 feet of water level decline has occurred since the County began collecting water level data in the 1980s. As water levels in the basin continue to decline, the sustainability of agricultural activities in the basin will decline due to

economic impacts such as increased costs of pumping water from deeper in the aquifer, the cost of replacing wells that go dry as water levels decline below the level of their pumps, and the potential need to treat groundwater due to deteriorating water quality in deeper parts of the aquifer.

1.2.5 Land Cost and Availability

The high price of land in San Diego County limits the ability of farmers to purchase land for agricultural expansion. The value of land in the most productive agricultural areas of the County is typically not driven by its agricultural potential; rather it is driven by the value of its potential for urban development or as a primary residence, making land purchase for agricultural expansion infeasible for a majority of producers. Important agricultural areas such as Valley Center, Fallbrook and Bonsall are interspersed with non-agricultural uses and have median home prices above $600,000 (DataQuick Real Estate News, 2006). The price of land directly affects the ability of farmers to expand their operations. Agricultural expansion is further constrained due to the costs associated with regulatory requirements to mitigate impacts to biological resources associated with agricultural expansion onto native habitats.

In 1997, the Agricultural Commissioner issued a memo (Attachment D), discussing the commercial viability of agriculture on two acre lots, indicating that 671 citrus farms of two acres or less existed in the County. The memo concludes “the cost of land in the County makes it prohibitive for many new farmers to begin an operation on a large parcel, so the ability to farm small parcels is crucial to the success of future agriculture in San Diego County.” To date, the conclusions of this memo still apply; land costs have continued to rise, making the ability to farm small parcels vital to continued agricultural productivity in the County.

2.0 EXISTING REGULATIONS AND STANDARDS

There are many laws, regulations, policies and programs that aim to protect, preserve and promote agriculture. The following discussion details the most relevant State and County regulations, policies and programs pertaining to agricultural land use as they relate to the processing of discretionary land use projects pursuant to the CEQA. Additional Federal and State regulations and agricultural conservation programs are included in Attachment E.

2.1 State Regulations and Programs

California Environmental Quality Act [Public Resources Code 21000-21178; Guidelines for Implementation of CEQA, Appendix G, California Code of Regulations, Title 14, §15000-15387. http://ceres.ca.gov/topic/env_law/ceqa/guidelines/]
Under CEQA lead agencies are required to consider a proposed project's impacts to agricultural resources. The CEQA Guidelines recommend focusing on analyzing impacts to: Farmland as defined by the Farmland Mapping and Monitoring Program developed by the California Department of Conservation; Williamson Act contracts; agricultural zoning; and agricultural conversion. The California LESA Model was developed to provide lead agencies with an optional methodology to ensure that potentially significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process.

Land Conservation (Williamson) Act [Government Code §51200-51297.4, http://www.leginfo.ca.gov and http://www.consrv.ca.gov/dlrp/site_index.htm]
Known formally as the California Land Conservation Act of 1965, it was designed as an incentive to retain prime agricultural land and open space in agricultural use, thereby slowing its conversion to urban and suburban development. The program entails a ten-year contract between the City or County and an owner of land: whereby, the land is taxed on the basis of its agricultural use rather than the market value. The land becomes subject to certain enforceable restrictions, and certain conditions need to be met prior to approval of an agreement.

The underlying goals of the Williamson Act are to protect agriculture and open space. In the Williamson Act, the legislature found that "the discouragement of premature and unnecessary conversion of agricultural land to urban uses is a matter of public interest" and that "agricultural lands have a definitive public value as open space" (Government Code, §51220[c][d]).

During the past 25 years, very few property owners have requested Williamson Act Contracts on their land within San Diego County. This lack of interest in Williamson Act Contracts may be due to the fact that Proposition 13 substantially slowed the increase in property taxes. According to information from the County Assessor's Office, only two contracts were executed in San Diego County between 1980 and 2005 and 40 parcels currently under a Williamson Act Contract are in the process of non-renewal. The non-renewal process takes ten years to complete, during which time property taxes are

incrementally raised to remove the tax benefit, and at the end of the ten year period restrictions to development are lifted.

The Right to Farm Act [Civil Code §3482.5, http://www.leginfo.ca.gov]
This Act is designed to protect commercial agricultural operations from nuisance complaints that may arise when the operation is conducting business in a "manner consistent with proper and accepted customs." The code specifies established operations that have been in business for three or more years that were not nuisances at the time they began, shall not be considered a nuisance as a result of a new land use.

In Souza v. Lauppe, 59 Cal.App.3d 865, 874-75 (1997), the Court explained that Civil Code Section 3482.5 (The Right to Farm Act) protects an agricultural operation if the following seven factors are met: the activity alleged to be a nuisance must be (1) an agricultural activity (2) conducted or maintained for commercial purposes (3) in a manner consistent with proper and accepted customs and standards (4) as established and followed by similar agricultural operations in the same locality; (5) the claim of nuisance arises due to any changed condition in or about the locality (6) after the activity has been in operation for more than three years; and the activity (7) was not a nuisance at the time it began.

Farmland Mapping and Monitoring Program (FMMP)
[http://www.consrv.ca.gov/dlrp/FMMP/index.htm]
The California Department of Conservation (DOC) FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called Prime Farmland. Maps are updated every two years, with current land use information gathered from aerial photographs, a computer mapping system, public review, and field reconnaissance. The minimum mapping unit is 10 acres. The DOC Prime Farmlands, Farmlands of Statewide Importance, and Unique Farmlands are referenced in the CEQA Guidelines, Appendix G as resources to consider in an evaluation of agricultural impacts.

2.2 Local Regulations, Policies, Standards, and Programs

San Diego County General Plan [http://ceres.ca.gov/planning/counties/San_Diego/plans.html]
The County's General Plan provides guidance for the protection, promotion and preservation of agriculture in San Diego County. Aspects of agriculture are discussed in the General Plan's Open Space Element, Land Use Element, Conservation Element, and Community Plans. The Open Space Element establishes goals to encourage agriculture use in suitable areas; foster compatibility between agricultural and non-agricultural uses; enhance the economic viability of agriculture; preserve productive agricultural areas; recognize the value of agricultural areas as open space; facilitate agricultural lands as greenbelts; and highlight the importance of a rural lifestyle. The Regional Land Use Element explains the permitted uses of the County's agricultural land use designations: (19) Intensive Agriculture and (20) General Agriculture. The emphasis of these two designations is to promote agricultural use. The Conservation

Element addresses agriculture's relationship with soils, climate, drainage, water availability, and economics in the County. The element established policies and action programs to monitor the agricultural conversion; and to analyze, improve and promote agriculture. The Community Plans focus on the protection, promotion and preservation of agriculture, on a community-by-community basis. The majority of the Community Plans only provide guidance on directing agricultural land use; however, some plans such as the Valley Center Community Plan have strong prohibitions on uses that would impact agriculture in their community.

San Diego County Agricultural Enterprises and Consumer Information Ordinance
[San Diego County Code of Regulatory Ordinances, §63.401 *et seq*. http://www.amlegal.com/sandiego_county_ca]
This ordinance is similar to the State Right to Farm Act discussed above. The ordinance defines and limits the circumstances under which agricultural enterprise activities, operations, and facilities will constitute a nuisance. The ordinance recognizes that the commercial agricultural industry in the County of San Diego is a significant element of the County's economy and a valuable open space/greenbelt resource for San Diego County residents. The ordinance establishes a procedure whereby prospective purchasers of property are notified of the inherent potential conditions associated with agricultural operations found throughout the unincorporated area. These conditions include, but are not limited to, noise, odors, dust, insects, rodents, and chemicals. In 2003 the ordinance was amended[5] to require that all sales of real property within the unincorporated area of the County receive a notice in writing that discloses the following information:

> "Agricultural operations are located throughout the unincorporated area of San Diego County and are often conducted on relatively small parcels. The subject property is also located in the unincorporated area and, as such, is likely to be located near an agricultural enterprise, activity, operation, or facility or appurtenances thereof (collectively, "agricultural use"). Occupants of the property to be purchased may be exposed to inconveniences, irritations or discomforts arising from the agricultural use, including but not limited to noise, odors, fumes, dust, smoke, insects, rodents, the operation of machinery of any kind (including aircraft) during any 24 hour period, the storage and disposal of manure, and the application by spraying or other means of agricultural chemicals, such as pesticides and fertilizers. Purchasers of the property may be required to accept such inconveniences, irritations and discomforts, unless the agricultural use constitutes a public or private nuisance under the provisions of Section 3482.5 of the Civil Code or Section 63.403 of the San Diego County Code. The agricultural use may be altered or expanded in the future."

The application of this ordinance is not to be construed to in any way modify or abridge the State law set out in California Civil Code, Section 3482.5, relative to agricultural nuisances.

[5] The 2003 amendment to the Agricultural Enterprises and Consumer Information Ordinance changed the optional requirement to notify prospective purchasers of property of potential agricultural nuisances, to a mandatory notification. The amendment also rendered the Agricultural Enterprise Program obsolete. The agricultural enterprise program is no longer an active program at AWM.

San Diego County Board of Supervisors Policy I-38 Agricultural Preserves [County of San Diego, Policies of the Board of Supervisors http://www.sdcounty.ca.gov/cob/policy/I-38.doc]
The Board of Supervisor Policy I-38 sets forth policies for the implementation of the California Land Conservation Act of 1965, known as the Williamson Act. In 1965 the State Legislature added to the Government Code Sections 51200 et. seq. which authorized the County to establish agricultural preserves. An agricultural preserve is an area devoted to agricultural use, open space use, recreational use, or any combination of such uses, and compatible uses which are designated by the County. Preserves are established for the purpose of defining the boundaries of those areas within which the County will be willing to enter into contracts pursuant to the Act. Landowners within a preserve may enter into a Contract with the County to restrict their land to the uses stated above whereby the assessment on their land will be based on its restricted use rather than on its market value. Board Policy I-38 establishes criteria for the establishment, modification and disestablishment of an agricultural preserve including processing requirements, application fees, and hearing requirements. The policy also establishes a minimum size for an agricultural preserve, requires that each preserve establish minimum ownership sizes that landowners must meet to be eligible for a contract, requires the application of Zoning Regulations, establishes eligibility criteria for filing an application for an agricultural preserve and contract with the County, and establishes criteria to cancel a contract including cancellation by eminent domain.

San Diego County Farming Program [http://sdfarmingprogram.org/]
The goals of the San Diego County Farming Program are to promote economically viable farming in San Diego County and to create land use policies and programs that recognize the value of working farms to regional conservation efforts. The Farming Program will showcase the distinctiveness of San Diego County farms and will provide recommendations to promote and encourage viable farming in the County, serving as a model for other urban counties. Development of a framework for the Farming Program is currently underway in a partnership with the County of San Diego, the San Diego County Farm Bureau, UC Cooperative Extension/Farm and Home Advisors, and the American Farmland Trust.

San Diego County Board of Supervisor's Policy I-133 Support and Encouragement of Farming in San Diego County [County of San Diego, Policies of the Board of Supervisors http://www.sdcounty.ca.gov/cob/policy/I-133.pdf]
In 2005, the Board of Supervisors adopted a policy to establish the County's support of agriculture. The policy established the Board's commitment, support, and encouragement of farming in San Diego County through establishment of partnerships with landowners and other stakeholders to identify, secure, and implement incentives that support the continuation of farming as a major industry in San Diego. The intent is to develop and implement programs designed to support and encourage farming in San Diego County.

San Diego County Purchase of Agricultural Conservation Easement (PACE) Program

On August 3, 2011, the Board of Supervisors directed staff to develop a Pilot Purchase of Agricultural Conservation Easement (PACE) Program as a component of the General Plan Update Implementation Plan. The PACE Program is intended to promote the long-term preservation of agricultural land in the County. The Program is based on the framework of what is traditionally referred to as a Purchase of Development Rights program. Under the PACE Program, willing agricultural property owners in the unincorporated County are compensated for placing a perpetual easement on their agricultural property that limits future land uses and extinguishes future development potential. As a result, the agricultural land is preserved and the property owner receives compensation that makes its continued agricultural use more viable. The Pilot Program permanently protected 738 acres of ranch and farmland, which exceeded the Program's original goal of protecting 500 acres.

In order to participate in the PACE Program, a property owner must meet three eligibility requirements: 1) has actively farmed and /or ranched the property for a minimum of two years, prior to formally applying for participation in the PACE Program; 2) has realized a density reduction as a result of the August 3, 2011 General Plan Update; and 3) prior to the 2011 adoption of the General Plan Update, had the ability to subdivide the property in compliance with the pre-August 3, 2011 General Plan. The Program eligibility criteria were established and publicly vetted during the General Plan Update process. Further, prior to Program implementation, the County established the PACE Advisory Group, which was comprised of key stakeholders, including the participants recognized herein, within the List of Preparers and Technical Reviewers.

PDS performed a marketing campaign in the Fall of 2011 to increase awareness and assess overall interest in the PACE Program. Over 7,000 notices were mailed to County property owners identified as potentially eligible for the Program. In addition to increasing property owners' awareness of the Program, the notices invited recipients to participate in an online survey. Data collected from the surveys were used to assess interest in the Program, and to gain preliminary property data from potential applicants. PDS marketing efforts also included the development of a PACE Program website and establishment of an informational hotline that fielded over 500 calls during its first two months of operation.

On September 17, 2014, the Board of Supervisors established the PACE Program as a permanent County Program. The permanent PACE Program includes a mitigation component, and associated mitigation credit fee. Therefore, PACE Program lands can be utilized as off-site mitigation for agricultural impacts resulting from private development projects. Similar mitigation programs are found in other California jurisdictions, such as Monterey and Yolo Counties.

PACE Program Mitigation Credits

The mitigation component of the PACE Program provides project applicants with an option to pay an in-lieu fee to the County of San Diego for purchase of PACE Program

mitigation credits to offset agricultural impacts. The in-lieu mitigation fees collected are utilized to acquire and protect additional agricultural land under the PACE Program and serve as an on-going funding stream for the Program. Each acre of land permanently protected with an agricultural conservation easement under the PACE Program equates to one (1) mitigation credit. Discretionary project applicants, requiring agricultural mitigation through the CEQA review process, could choose to purchase PACE mitigation credits, which reflect a 1:1 mitigation ratio. PACE mitigation credits are nonrefundable and nontransferable, and are available for purchase based on the Program's remaining allocable acreage. PACE mitigation credits must be purchased prior to approval of any Final Map, or issuance of any building permits.

3.0 DETERMINING THE IMPORTANCE OF AGRICULTURAL RESOURCES

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.

Where it is feasible for County staff to apply the LARA model to discretionary land use projects to determine the importance of agricultural resources, this will be completed by County staff instead of requesting an agricultural technical report from an outside consultant. If the site is determined to be an important agricultural resource pursuant to the LARA model and if staff can provide recommendations that would reduce the significance of potential impacts, such as project redesign to avoid important agricultural resources, these recommendations will be provided to the applicant in the project's scoping letter. For larger or more complex projects where County staff cannot determine based on available information that the proposed project would not cause significant impacts, the County may request that an outside consultant complete the LARA model and prepare a technical agricultural resources report to determine the significance of potential impacts.

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 LARA model approach to analyzing agricultural resources is consistent with direction provided in policies of the Open Space Element of the General Plan, which states:

> "When considering a subdivision request, or other development proposal, the determination of productive agricultural area shall be made based on existing agricultural uses, and on the potential for future agricultural production, and the contribution to the agricultural sector of our economy. Consideration shall be given, but shall not be limited to soil types, climate, the availability of water and its quality, and the existence of Williamson Act preserves ad contracts. On-site

> and adjacent land use designations and zoning, ownership and parcelization patterns, as well as existing land uses, and cropping history shall all be considered."

The LARA model considers soils, climate and water as primary model factors while also considering the presence of Williamson Act Contracts, other preserved lands, and existing land uses in the surrounding area. The land use consistency factor takes into account parcelization patterns while the presence of existing agricultural use and cropping history is considered because these factors are among those that define agricultural resources.

The evaluation of agricultural resources pursuant to the LARA model is focused on the underlying physical resources present on the project site and not on the economic loss of a particular agricultural commodity that may have been grown there. This is based on the requirements under CEQA to evaluate the changes to the physical environment that would occur as a result of the conversion of agriculture to a non-agricultural use and not to consider economic changes as significant effects on the environment. The quality of the site's soil in combination with water availability and climate defines the quality of the physical agricultural resource that CEQA requires lead agencies to evaluate. Due to the fact that agriculture is an industry driven by markets and individual landowner's economic decisions, while also constituting a physical resource to be evaluated pursuant to CEQA, it is useful to consider the nature of San Diego County agricultural production in relation to the requirements of CEQA for evaluation of these resources. The State CEQA Guidelines §15064(d) and §15064(e) state:

> "In evaluating the significance of the environmental effect of a project, the lead agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment which may be caused by the project." (§15064(d))

> "Economic and social changes resulting from a project shall not be treated as significant effects on the environment. Economic or social changes may be used, however, to determine that a physical change shall be regarded as a significant effect on the environment." (§15064(e))

This importance of differentiating important physical agricultural resources from important economic agricultural resources becomes particularly clear when considering how this concept may be applied to an evaluation of the County's highest value agricultural commodity, indoor flowering and foliage plants. Typically, this industry does not rely on native soils. These commodities are often grown in greenhouses and in various artificial or imported growing mediums. Would then, the conversion of a nursery operation located on poor quality soils be considered a physical impact on the environment, assuming the conversion would not aversely impact surrounding agricultural land uses? Assuming a lack of unique site features and a lack of high quality soils, the site should not be considered an important agricultural resource since valuable physical agricultural resources would not be lost. The loss of the nursery operation would constitute a land use change, likely in response to economic factors

that make continued production infeasible. It is also an economic change to the agricultural industry; however these effects should not be considered impacts to or the loss of physical resources under CEQA. In contrast, if the nursery operation were located on high quality soils, its loss could constitute a potentially significant adverse effect on an important agricultural resource (the high quality soils).

The LARA model focuses on evaluating the quality of a site's physical agricultural resources. This approach recognizes the fact that the agricultural industry will change in response to markets and economic conditions over time, but that impacts to agricultural lands with inherent physical value must be analyzed pursuant to CEQA. Ultimately, if a site is determined to be important pursuant to the LARA model, quality soil is the primary resource that should be preserved to avoid significant impacts to the agricultural resource. While many crops currently produced in San Diego County do not rely on high quality soils, preserving quality soils will maintain the long term integrity of the fundamental non-renewable natural resource that supports agricultural production. This is important due to the changing nature of agricultural commodity profitability and viability. For example, commodities currently produced in San Diego County that do not rely on high quality soils could become threatened by imported pests, disease, or changes in market conditions that make their production economically infeasible. If this were to occur, the availability of locally important agricultural soils would be essential for ongoing local agricultural viability. Furthermore, quality agricultural soils are the fundamental physical agricultural resource that CEQA requires lead agencies to evaluate and protect where feasible.

Table 1, State LESA and County LARA Agricultural Model Comparison, provides details regarding the various factors that are included in each model, explains why certain factors or factor weights included in the LESA model are not conducive to rating the importance of agricultural lands, and explains why certain other factors and/or factor weights are used in the LARA model.

Table 1. State LESA and County LARA Agricultural Model Comparison

Model Factors	State LESA Model	County LARA Model	Discussion
Primary Factors			
Soils	Model applies 50% weight to soil quality	Soil quality is one of the three required factors for a determination of importance	The LESA model soil quality rating is based solely on LCC and SI ratings, with an assignment of 50% weight to soil quality using these ratings. San Diego County has limited quantities of high quality soil as defined by LCC and SI ratings. The use of these soil ratings in the LESA model does not adequately account for locally important soils that may not be rated highly using the LCC and SI rating system. The LARA model uses a more inclusive definition of soil quality that is based on locally important soils as defined by the USDA NRCS. The USDA NRCS soil quality criteria have been developed for San Diego County to define the soil characteristics that must be met for a site to qualify for the FMMP Prime Farmland and Farmland of Statewide Importance designation.
Water	Model applies 15% weight to Water Resource Availability	Water is one of the three required factors for a determination of importance	In San Diego County, the availability of imported water and/or availability of a reliable and clean groundwater resource are essential for productive agriculture. The 15% weight assigned to water resource availability within the LESA model and the LESA scoring focus on drought conditions and irrigation infrastructure does not adequately reflect the various factors that affect water reliability locally. The LARA model incorporates various local factors into the water score including the location of a site within or outside of the CWA, presence of imported water infrastructure, the underlying groundwater aquifer type and the presence of a groundwater well. The LARA model water resource factor also allows consideration of the effects of water quality on the ultimate water score. While the LARA model water score is highly suited to the unique conditions of San Diego County, the LESA model is tailored to deal with conditions that affect areas such as California's Central Valley.
Climate	Climate is not included in the LESA model	Climate is one of the three required factors for a determination of importance	San Diego County's climate varies greatly from the coast to the desert and agricultural productivity also varies with the climate conditions. The moderating influence of the ocean is one of San Diego County's most valuable agricultural resources as this influence encourages low annual temperature variation which allows year round production. The coastal and transitional climates are also benefited by their proximity to transportation infrastructure, as compared to mountainous and desert areas further east.

Model Factors	State LESA Model	County LARA Model	Discussion
Complementary Factors			
Land Use Factors	15% weight assigned to the presence of surrounding agricultural lands; 5% weight assigned to the presence of protected resource lands	Surrounding Land Uses and Land Use Consistency are complementary factors in the model	Two land use factors are included as complementary factors in the LARA model: surrounding land use and land use consistency. The LARA model surrounding land use factor rates more highly sites that are surrounded by agricultural lands, protected resource lands, and rural residential lands than sites that are surrounded by fewer of these types of land uses. This recognizes that a site surrounded by compatible surrounding land uses will more likely be viable for ongoing agricultural use due to lower likelihood of incompatible land use conflicts. This factor is similar to the LESA model factors of surrounding agricultural lands and protected resource lands except that the LARA model includes rural residential lands as a compatible land use. Land use consistency is a second land use factor included in the LARA model that is not considered in the LESA model. This factor takes into account the range of parcel sizes that agriculture is conducted on by relating the project parcel size to surrounding parcel sizes. This is an important factor due to the large variation of environments where agriculture occurs and the need to tailor an evaluation of the resources to the specific land use conditions that exist in a particular location. Overall, the land use factors in the LARA model provide a better measure of local agricultural viability because they take into account the variability of farm sizes and recognize that agriculture occurs among non-agricultural land uses in San Diego County.
Project Size	Model applies 15% weight to project size	Project size is not included as a model factor	Project size is not included in the LARA model to account for the fact that agriculture commonly occurs on small parcel sizes in San Diego County. The size of the parcel in relationship to the size of surrounding parcels is a more important factor in determining agricultural viability in San Diego County. This is in contrast to the LESA model which assigns higher points to larger parcels, reflecting farming characteristics of the Central and Imperial Valleys, for example. Large farm size is not characteristic of agriculture in San Diego County and as such, farm size is not a useful measure of agricultural importance.
Topography	Topography not included in the LESA model	Included as a complementary factor in the LARA model	Varied topography is present in San Diego County, with agriculture occurring on various degrees of slope. To account for the greater flexibility and benefits of farming on flatter land, the LARA model includes topography (average slope) as a complementary factor.

3.1 LARA Model Instructions[6]

Application of the LARA model is intended for use in evaluating the importance of agricultural resources when it is determined that a discretionary project could adversely impact agricultural resources located onsite. The LARA model takes into account the following factors in determining importance of the agricultural resource:

Required Factors:	**Complementary Factors:**
Water	Surrounding Land Uses
Climate	Land Use Consistency
Soil Quality	Topography

Directions for determining the rating for each LARA model factor are provided in sections 3.1.1 through 3.1.6 of this document. Upon rating each factor, it is necessary to refer to Table 2, Interpretation of LARA Model Results, to determine the agricultural importance of the site.

Table 2. 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		

Data Availability

To complete the LARA model, various data sources are needed. The most efficient approach to completing the model is through analysis within a Geographic Information System (GIS). To facilitate this approach, the GIS data layers required to complete the LARA model are available upon request from PDS. Available data sources include: groundwater aquifer type, Generalized Western Plantclimate Zones or "Sunset Zones",

[6] Various data sources referenced in this document are available from PDS in hard copy format (maps) or in digital format for use within a Geographic Information System (GIS). Obtaining various data sources will be required to determine the importance of the resource.

and Prime Farmland and Farmland of Statewide Importance soil candidates. Other data sources are available from the SANGIS webpage at http://www.sangis.org/.

3.1.1 Water

The water rating is based on a combination of a site's CWA service status, the underlying groundwater aquifer type and the presence of a groundwater well (Table 3). Due to the variability of well yields and the potential for groundwater quality problems to adversely impact the viability of the well for agricultural purposes, the water factor allows for a reduction in the water rating based on site specific well yield and quality data, if that data is available (Table 4).

Table 3. Water Rating [7]

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*

*These water ratings may be reduced based on available groundwater quantity and quality information, in accordance with Table 4. If no additional groundwater quantity or quality data is available, the ratings above shall apply.

[7] 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.

Water Quality and Quantity Limitations

Site specific limitations to groundwater availability and quality exist and can lower the overall water rating of a site when data is available to support the limitation. Sites with imported water availability may not receive a lower water rating based on groundwater quality or yield data. Table 4 outlines potential water availability and quality limitations and the associated effect on the LARA model water rating.

Table 4. Groundwater Availability and Quality Effects on Water Rating

Groundwater Availability and Quality	Effect on Water Rating
The site has inadequate cumulative well yield (<1.9 GPM per acre of irrigated crops); TDS levels above 600 mg/L; or another documented agricultural water quality or quantity limitation exists	Reduces water rating by one level (i.e. from high to moderate or from moderate to low)

A determination of inadequate cumulative well yield as stated in Table 4 means that a site's well cannot produce at least enough water for each acre of irrigated crops at the site. At least 1.9 GPM is required per acre of irrigated crops, equating to production of 3 Acre Feet/Year (AFY) based on the following conversion factor: 1 AFY = 325,851 Gallons per Year / 365 days / 1440 minutes = 0.62 GPM. Cumulative well yield means that the combined yield of all wells on site may be summed to meet the required groundwater yield. As an example, if a site has 5 acres of irrigated crops, then production would need to be at least 9.5 GPM to produce enough water to irrigate the 5 acres, equating to approximately 15 AFY. If residence(s) exist on the project site, the groundwater analysis must demonstrate that an additional supply of 0.5 AFY can be achieved to account for residential water use associated with each existing onsite residence. To allow a reduction in the water quality score, TDS levels above 600 mg/L must be documented. If other documented water quality limitations exist that are not captured in the water quality measure of TDS, the water quality data must be provided and an associated water rating reduction justified. Although these requirements assume that water needs are consistent for a crop throughout the year while water requirements are typically higher in the dryer months, average annual required yield is used as the best available general measure of the adequacy of groundwater yields.

The quality and availability of imported water is not included as a factor to allow a reduction in the water rating due to an assumption that the MWD will continue to deliver water with the 500 mg/L TDS objective. However, it should be recognized that the degradation of the quality of Colorado River water is a known issue that could preclude the production of certain crops in the future. If in the future, the MWD is unable to meet their adopted water quality objectives, a similar reduction for imported water quality may need to be developed for consideration in the water score. Similarly, there is uncertainty regarding the continued future reliability of agricultural water deliveries based on various external issues that may affect local imported water supply such as protection of the Salton Sea and the stability of the Sacramento/San Joaquin Delta. As the impacts from external sources to local agricultural water deliveries become realized, the treatment of the water score in this document may need to be reevaluated.

Water Rating Explanation

Sites with availability of imported water always receive the highest water rating regardless of groundwater availability because the availability of imported water is essential for the long term viability of agriculture due to the limited natural rainfall and limited availability of groundwater resources in the County. Sites within the CWA service area that have no existing water meter, but that have water infrastructure connections to a site (in or near an adjacent street), are assigned a higher water rating than sites without existing water infrastructure connections. This is because the cost of extending off-site water infrastructure and obtaining a water meter is much higher than only obtaining a water meter and constructing onsite infrastructure connections to existing adjacent imported water infrastructure. Furthermore, the presence of existing imported water infrastructure adjacent to a site is a good indication that imported water is likely to become available to the site in the future (more likely than for a site far from infrastructure for imported water).

The underlying groundwater aquifer type and the presence of a well are two additional factors that affect the water rating. In general, sites underlain by an alluvial or sedimentary aquifer receive the highest ratings because these substrates have a much greater capacity to hold water than fractured crystalline rock. A site underlain by an alluvial or sedimentary aquifer with an existing well receives a higher rating than a site underlain by these geologic formations but having no existing well because of the cost associated with well installation. Well installation costs are added to the initial capital outlay required to begin an agricultural operation, thereby reducing the water rating if no well is present. The availability of groundwater in fractured crystalline rock is highly uncertain. However, a site underlain by fractured crystalline rock that has an existing well and is located adjacent to imported water infrastructure receives a moderate rating to take into account the cost of well installation, and the increased likelihood that imported water may become available at the site in the near future. Additionally, while groundwater yield in fractured crystalline rock is generally limited compared to other aquifer types, it can provide a good source of groundwater, especially in valley areas where there may be saturated residuum overlying the fractured crystalline rock. Sites with a well located on fractured crystalline rock, but without imported water infrastructure connections to the site, always receive a low rating because such sites would likely be reliant on a limited groundwater resource for the foreseeable future.

Nearly all agriculture in the desert basins is located in Borrego Valley, where documented groundwater overdraft conditions limit the long-term sustainability of agricultural use. A site located in a desert basin receives a low water rating due to the absence of imported water, and low groundwater recharge rates, which can easily result in groundwater overdraft conditions as documented in Borrego Valley, where extraction rates far exceed natural recharge. The Borrego Municipal Water District is taking measures to reduce water use in the basin through encouraging the fallowing of agricultural land. In addition, the County of San Diego requires proposed projects to mitigate for significant impacts to groundwater supply in accordance with CEQA. Mitigation may be achieved through the fallowing of agricultural land. These factors make preservation of agriculture in Borrego Valley infeasible in the long term when

considering the need to reduce overall groundwater use to protect the public health and the sustainability of the community.

Groundwater Quantity and Quality Explanation

The following discussion explains the reasoning behind the water rating reductions detailed in Table 4, Groundwater Availability and Quality Effects on Water Rating. The lack of a well with adequate yield (1.9 GPM for each acre of irrigated crops) reduces the water rating by one factor. This standard is based on the well yield needed to achieve production of 3 AFY per acre, an average crop irrigation requirement for crops produced locally (Table 5).

Table 5. Crop Water Use Averages

Crop	Typical Water Usage Per Acre (AFY)
Indoor Flowering and Foliage Plants	3-4
Ornamental Shrubs and Trees	3
Avocados	3
Bedding Plants	3
Cut Flowers	2-3
Tomatoes	2
Citrus	2.5-3
Poinsettias	3-4
Strawberries	3
Average	**3**

Source: UC Cooperative Extension, County of San Diego

A well with poor water quality (as measured by TDS levels above 600 mg/L or another documented water quality limitation) may reduce the water rating by one factor to account for agricultural limitations associated with using poor quality water for crop production. Groundwater with TDS concentrations above 600 mg/L is the guideline for allowing a reduction in the water factor based on available research on the effects of TDS on crop production, with specific focus on the effects on crops important to the San Diego region. In general, as TDS levels rise, water has diminishing value for agricultural use as it can restrict the range of crops that can be irrigated with the water and increases the cost of irrigation system maintenance.

According to the San Diego County Water Authority Agricultural Irrigation Water Management Plan, TDS levels above 500 mg/L are problematic for many of the subtropical crops produced in San Diego County, and TDS levels over 1,000 mg/l are virtually unusable for many of the subtropical crops grown here (2001). While TDS concentrations above 500 mg/L can be problematic for many subtropical crops, concentrations above 600 mg/L was selected as the guideline to take into account the already elevated TDS concentrations in imported water sources. Another study (Peterson, 1999) identified the TDS tolerance of selected crops. Field crops such as oat hay, wheat hay and barley were found to tolerate water with TDS levels up to 2,500

mg/L, but these are among the lowest value crops produced in the County. Strawberries were found to be intolerant to TDS levels greater than 500 mg/L; apples, grapes, potato, onion, and peppers slightly tolerant to TDS levels up to 800 mg/L; and cucumbers, tomatoes, and squash moderately tolerant to TDS levels up to 1,500 mg/L. The Florida Container Nursery BMP Guide prepared by the University of Florida Agricultural Extension (2006) identified TDS levels and the associated degree of problem that will be experienced for microirrigated container nursery production at different TDS levels. TDS of 525 mg/L or less was identified as producing no problems, TDS from 525 to 2100 mg/L having increasing problems, and TDS greater than 2100 mg/L having severe problems. High levels of TDS can be overcome through planting more salt resistant crops; however salt resistant crops are typically lower in value and would not produce the economic returns necessary to sustain a viable farming industry in San Diego County (high cost of production and land generally require production of high value crops). In general as TDS levels rise, crop yields decline, maintenance of irrigation systems becomes more difficult, and the range of crops (particularly high value crops) that can be supported is reduced.

In summary, TDS levels in groundwater above 600 mg/L substantially impair the water as a source of irrigation for agriculture, justifying a reduction in the water rating by one factor to account for the potential for reduced yields, increased difficulty in maintaining irrigation systems, and reduction in the range of crops that can be produced.

It is important to note that TDS is only one measure of water quality and does not differentiate between the various types of dissolved solids or contaminants that may be present in water. High levels of certain constituents can cause severe problems for agricultural production. For example, high chloride content can damage certain crops, while nitrates can cause problems for livestock. If specific documented limitations exist that reduce the viability of the water supply for agriculture, the water rating should be reduced. The quality of imported water is not considered because it is assumed that the MWD will deliver water with a maximum TDS of 500 mg/L, their adopted TDS objective for imported water deliveries.

3.1.2 Climate

Ratings associated with each Generalized Western Plantclimate Zone or “Sunset Zone” are included in Table 6, Climate Rating. The table identifies and describes each zone and justification for the associated rating.[8] Detailed descriptions of the Sunset Zones in San Diego County are included in Attachment B.

[8] All Sunset Zones in the County are not included in the table. Zone 22 is a small area that occurs entirely within Camp Pendleton, therefore no rating is assigned to this zone. Zone 24 is the maritime influenced zone. Only limited portions of unincorporated communities exist in this zone (County Islands in National City and the west Sweetwater area). Although this zone is valuable for certain high value crops, it is not assigned any importance rating due to the very small area of unincorporated land that occurs in this zone and the fact that the land is fully urbanized.

Table 6. Climate Rating

Climate (Sunset Zone) Description	Rating	Justification
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**	Zone 23 is rated high because this climate zone is the most favorable for growing some of the County's most productive crops. Year round mild temperatures allow year round production and the proximity to urban areas and infrastructure facilitates efficient delivery to market.
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**	Zone 21 is rated high because of the mild year round temperatures and lack of freezing temperatures that allow year round production of high value crops. The importance of this zone is also related to the conversion pressure that exists due to urban encroachment. Preserving agriculture in Zone 21 is essential to maintain the high returns per acre that are common in this County. Climate is the essential factor that allows high value production. The loss of significant agricultural lands in Zone 21 would eventually relegate agriculture to areas further east where most of the County's high value crops cannot be viably produced. Zone 21 is also favorable due to its location close to urban areas and transportation infrastructure which facilitates product delivery to market.
Zone 20 is a cold air basin that may be dominated by coastal influence for a day, week or month and then may be dominated for similar periods of time by continental air. Over a 20 year period, winter lows in Zone 20 ranged from 28 to 23 degrees F.	**High**	Zone 20 occurs the Ramona area. Citrus groves are common in Zone 20 in addition to a concentration of animal agriculture operations and vineyards. Most of Zone 20 falls within the 89,000-acre Ramona Valley viticultural area which was designated as its own appellation in 2006 and contains 17 vineyards currently cultivating an estimated 45 acres of wine grapes. The distinguishing factors of the Ramona Valley viticultural area include its elevation, which contrasts with the surrounding areas, and climatic factors related to its elevation and inland location. Due to the favorable climate, proximity to urban areas, and its potential to become a more widely recognized viticultural area, Zone 20 is rated as a climate of high importance.
Zone 19 is prime for citrus, and most avocadoes and macadamia nuts can also be grown here.	**High**	Zone 19 is rated high due to the suitability for growing the County's high value crops and its location close to urban areas.

Zone 18 is a mountainous zone subject to frosts. Citrus can be grown in Zone 18, but frosts require the heating of orchards to reduce fruit loss. Zone 18 is the home of Julian's apple orchards.	**Moderate**	Zone 18 is assigned a medium rating due to its frost susceptibility, reducing its potential for supporting year round production and frost sensitive crops. However, the ability to produce crops that require winter chilling makes it a climate zone of moderate importance.
Zone 13 covers low elevation desert areas (considered subtropical) and is the most extensive of the County's desert Plantclimate zones. Zone 13 includes the extensive agricultural uses in the Borrego Valley.	**Moderate**	Zone 13 is assigned a moderate rating due to the temperature extremes characteristic of this zone. These temperature extremes exclude some of the subtropicals grown in Zones 22 to 24, however numerous subtropicals with high heat requirements thrive in this climate such as dates, grapefruit, and beaumontia and thevetia (ornamentals).
Zone 11 is located below the high elevation Zone 3 and above the subtropical desert Zone 13.	**Low**	Zone 11 is assigned a low climate rating due the agricultural hazards of the climate including late spring frosts and desert winds.
Zone 3 occurs in the high elevation Palomar Mountains in addition to high elevation areas east of the Tecate Divide. These are locations where snow can fall and wide swings in temperature occur.	**Low**	Most of these lands are public lands, reducing their potential for commercial agriculture. The wide swings in temperature, including freezing temperatures in winter make this zone of low importance agriculturally. This zone is also far from transportation infrastructure; an important consideration for crop delivery to market.

While it is anticipated that the climate ratings would normally not be modified, it is important to acknowledge that microclimate conditions do exist that cannot be captured in the Sunset Zone definitions. For example, topography can create certain microclimate conditions such as frost susceptibility that could downgrade the climate importance of a site to marginal if frost tolerant crops cannot be grown at the site. Any downgrading or upgrading of a climate rating must be accompanied by site specific climate data to support the modification, and any identified climate limitations must be based on the range of crops that could be viable at the site. For example, if frost sensitive crops are the only crop identified to be viable at the site and the site would be subject to frequent frosts, this should be documented and a lower rating may be applied. It is not anticipated that climate modifications would be commonly used given the diversity of crops that a site would usually be able to support.

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. For example, the Sunset Zone designations take into account the USDA hardiness rating which identifies the lowest temperature at which a plant will thrive. Sunset Zones start with the USDA hardiness zones and add the effects of summer heat in ranking plant suitability for an area. The American Horticulture Society (AHS) heat zone map ranks plants for suitability to heat, humidity and dryness. The AHS heat zone map was developed under the direction of

Dr. H. Marc Cathey, who was instrumental in the organization of the USDA Plant Hardiness Map. Each AHS heat zone has "heat days," those days with temperatures of 86° F or above. 86° F is the point at which some plants suffer damage to cellular proteins. The USDA plant hardiness zone maps and/or the AHS heat zone map may be used to supplement the Sunset Zone information if the Sunset Zone descriptions are not accurate.

3.1.3 Soil Quality

The project's soil quality rating is based on the presence of Prime Farmland Soils or Soils of Statewide Significance (Attachment C) that are available for agricultural use and that have been previously used for agriculture. Land covered by structures, roads, or other uses that would preclude the use of the land for agriculture, are not typically considered in the soil quality rating. To determine the soil quality rating, the soil types on the project site must be identified. The soils data for the project site must be entered into Table 7, Soil Quality Matrix as detailed in the steps below:

Step 1.
Identify the soil types that are on the project site. Enter each soil type in Rows 1 through 13 of Column A. If the site has more soil types than available rows, add additional rows as needed.

Step 2.
Calculate the acreage of each soil type that occurs on the project site and enter the acreage of each in Column B. Enter the total acreage in Row 14, Column B. This number should equal the total acreage of the project site.

Step 3.
Calculate the acreage of each soil type that is unavailable for agricultural use[9] and enter the total in the corresponding rows of Column C.

Step 4.
Subtract the values in Column C from the acreages of each soil type identified in Column B**.** Enter the result in Column D.

[9] Soils unavailable for agricultural use include: 1) lands with existing structures (paved roads, homes, etc.) that preclude the use of the soil for agriculture, 2) lands that have been disturbed by activities such as legal grading, compaction and/or placement of fill such that soil structure and quality have likely been compromised (e.g., unpaved roads and parking areas), 3) lands that are primarily a biological habitat type that have never been used for agriculture, and 4) lands constrained by biological conservation easements, biological preserve, or similar regulatory or legal exclusion that prohibits agricultural use. The distinction between agriculture and biological resources is not always clear because agricultural lands commonly support sensitive biological species. Agricultural lands that incidentally support sensitive species should still be considered an agricultural resource; however, biological habitats that have never been used for agriculture should not be considered an agricultural resource. It is possible that non-native grasslands will be classified as both a biological resource and an agricultural resource since many non-native grasslands have been established based on a history of agricultural use.

Step 5.
Sum the acreage values in Column D and enter the total in Column D, Row 14.

Step 6.
Divide the acres of each soil type in Column D by the total acreage available for agricultural use (Column D, Row 14) to determine the proportion of each soil type available for agricultural use on the project site. Enter the proportion of each soil type in the corresponding row of Column E.

Step 7.
Determine whether each soil type is a soil candidate for Prime Farmland or Farmland of Statewide Importance. If yes, enter 1 in the corresponding row of Column F. If no, enter zero in the corresponding row of Column F.

Step 8.
Multiply Column E x Column F. Enter the result in the corresponding row of Column G.

Step 9.
Sum the values in Column G and enter the result in Column G, Row 15 to obtain the total soil quality matrix score.

Step 10.
Based on the total soil quality matrix score from Table 7, identify the corresponding soil quality rating using Table 8 Soil Quality Matrix Interpretation

Table 7. 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							
Row 2							
Row 3							
Row 4							
Row 5							
Row 6							
Row 7							
Row 8							
Row 9							
Row 10							
Row 11							
Row 12							
Row 13							
Row 14	Total		Total				
Row 15						***Soil Quality Matrix Score***	

Table 8. 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

Soil Quality Rating Justification

The presence of Prime Farmland Soils or Soils of Statewide Significance is used as the measure of quality soil in the LARA soil quality rating based on their use in defining soil candidates for the FMMP Farmland categories of Prime Farmland and Farmland of Statewide Importance. Soil candidates for the FMMP Prime Farmland designation are soils with the best combination of physical and chemical characteristics for the production of crops. Soil candidates for the FMMP Farmland of Statewide Importance designation are similar to the soil criteria for Prime Farmland, but include minor shortcomings, such as greater slopes or less ability to store soil moisture. Soil candidates for Farmland of Statewide Importance do not have any restrictions regarding permeability or rooting depth. Soil candidates for Farmland of Statewide Significance are included in this rating to capture quality soils with minor shortcomings that may not have been included, if the typical definition of Prime Agricultural Land as stated in Government Code Section 51201(c) was used. Soil criteria used in Government Code Section 51201(c) identifies any land with a LCC rating of I or II or a Storie Index Rating from 80 to 100 as land that meets the definition of prime agricultural land. Because San Diego County has limited quantities of soils that meet these criteria, locally defined NRCS soil candidates for Prime Farmland and Farmland of Statewide Importance are included to define quality soils in this locale given that 70% of these soils have LCC higher than I or II and 88% have SI ratings below 80. Details regarding the soil criteria that determine the applicability of a soil for the respective Farmland designation is included in Attachment C, Soil Candidate Criteria and Candidate Listing for Prime Farmland and Farmland of Statewide Importance.

Table 8, Soil Quality Matrix Interpretation, identifies high, moderate, or low importance ratings based on the soil quality matrix score from Table 7. The maximum possible soil quality matrix score is one and the minimum is zero because the score is based on the amount of the agricultural resources onsite that are Prime and Statewide Importance soil candidates. A site with a soil quality matrix score of 0.66 or higher means that two-thirds of the agricultural resources onsite have soils that meet the soil quality criteria for Prime Farmland or Farmland of Statewide Importance. A minimum of 10 contiguous acres is required for a site to be assigned the highest soil quality rating to reflect the need for high quality soils to be contiguous in order for them to be considered useful

agriculturally. If the site has a soil quality score from 0.33 to 0.66 or has 10 acres or more of contiguous soils that meet the soil quality criteria for Prime Farmland or Farmland of Statewide Importance, the site is assigned the moderate importance rating. If less than one-third of the site or less than 10 contiguous acres of the agricultural resources onsite have soils that meet the Prime or Statewide Importance soil criteria, the site is assigned the low importance rating for soil quality. A ten acre threshold is included in the ratings to capture the potential for a large project site to have a substantial quantity of high quality soils and still receive a low importance rating due to the project's size in relation to the acreage of quality soils. Ten acres is an appropriate acreage to use in this context because ten acres would typically be able to support a wide range of agricultural uses in San Diego County. Furthermore, to be eligible for a Williamson Act Contract in an Agricultural Preserve, the County of San Diego Board of Supervisor's Policy I-38 (Agricultural Preserves) recommends various minimum ownership sizes, with ten acres being the minimum, to be eligible for a contract. Ten acres is listed as the minimum size for various agricultural activities including poultry, tree crops, truck crops, and flowers. 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.

3.1.4 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. Surrounding land use is a complementary factor in the LARA model because the presence of compatible surrounding land uses can support the viability of an agricultural operation; however a lack of compatible surrounding land uses would not usually prohibit productive agriculture from taking place (depending on the type of production). Similarly, agriculture can be viable among urban uses, but its long term viability would generally be less than an agricultural operation conducting operations in an area dominated by agricultural uses because of lesser economic pressures to convert to urban uses. To determine the surrounding land use rating, the following information must be determined:

Step 1.
Calculate the total acreage of lands compatible with agricultural use[10] within the defined Zone of Influence (ZOI).[11] The location of agricultural lands can be determined using information from the DOC's Important Farmland Map Series, agricultural land use data available from the PDS, aerial photography, and/or direct site inspection. Land within a ZOI that is observed to be fallow or with a history of agricultural use will usually be considered agricultural land, unless there is evidence that it has been committed to a non-agricultural use (such as having an approved subdivision map). Planning & Development Services may consult the Department of Agriculture, Weights and Measures if there are disputed interpretations.

Step 2.
Calculate the percentage of the acreage within the project's ZOI that is compatible with agricultural use.

Step 3.
Based on the proportion of lands within the ZOI that are compatible with agricultural use, identify the appropriate surrounding land use rating in accordance with Table 9, Surrounding Land Use Rating.

Table 9. 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

Considering surrounding land uses within the ZOI is intended to provide a measurement of the long term sustainability of agriculture at the project site. Agriculture is generally

[10] Lands compatible with agricultural uses include existing agricultural lands, protected resource lands, and lands that are primarily rural residential. Protected resource lands are those lands with long-term use restrictions that are compatible with or supportive of agricultural uses including but not limited to Williamson Act contracted lands; publicly owned lands maintained as park, forest, open space, or watershed resources; and lands with agricultural, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban or industrial uses. For the purposes of this factor rating, rural residential lands include any residential development with parcel sizes of two acres or greater and that contain elements of a rural lifestyle such as equestrian uses, animal raising, small hobby type agricultural uses, or vacant lands. Residential parcels with swimming pools, children's play areas, second dwelling units, or other accessory uses that occupy a majority of the usable space of a residential parcel should not be identified as land compatible with agriculture.

[11] Attachment F details the steps required to determine the Zone of Influence (ZOI). The ZOI methodology is taken from the Department of Conservation's Land Evaluation Site Assessment (LESA) model and includes a minimum area of ¼ mile beyond project boundaries and includes the entire area of all parcels that intersect the ¼ mile boundary. The ZOI developed by the Department of Conservation is the result of several iterations during development of the LESA model for assessing an area that would generally be a representative sample of surrounding land use. For example, a 160 acre project site would have a ZOI that is a minimum of eight times greater (1280 acres) than the project itself.

compatible with other agricultural land uses because they are more likely be tolerant of the typical activities and nuisances associated with agricultural operations than urban land uses would be. Primarily rural residential lands are included as a land use compatible with agriculture because rural residential lands are already common among agricultural uses and most active farms also have residences on the site. Although not all types of agriculture are compatible with rural residential land uses (i.e. confined animal facilities); many typical San Diego County farming operations are compatible with rural residential land uses as is evidenced by the existing viability of agricultural operations that are located among rural residential land uses. For example, in many North County communities, small parcels (two acres, for example) with a single family residence and a small orchard or other farming or equestrian use are common. These residential uses, due to their direct involvement in agriculture or a rural lifestyle, would tend to be more compatible with agriculture than a high density development where homeowners would be less likely to be directly involved in rural lifestyle activities (e.g. agriculture, equestrian, animal raising, etc.). Occupants of higher density residential uses are more likely to be disturbed by noise, dust, pesticides or other nuisances that do not fit with the peaceful perceptions of living in the countryside.

3.1.5 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. In order to determine the land use consistency rating for the project, the following information must be determined:

Step 1.
Identify the median parcel size associated with the proposed project if the proposed project consists of at least three parcels. If the proposed project consists of two parcels, use an average. If the proposed project consists of only one parcel, then no median or average is needed.

Step 2.
Identify the median parcel size of the parcels located within the project's ZOI.

Step 3.
Considering the project's median parcel size and the ZOI median parcel size, identify the land use consistency rating in accordance with Table 10.

Table 10. 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

Land use consistency is used as a measure of importance to recognize the effect that surrounding urbanization has on the viability of ongoing agricultural uses and to recognize that as urbanization surrounds agricultural lands, opportunity costs[12] for agricultural operators increase, thus reducing the viability of an agricultural operation. A site surrounded by larger parcels indicates that the site is located in an area that has not already been significantly urbanized and the area is more likely to continue to support viable agricultural uses. On the other hand, a site surrounded by smaller parcels indicates a lower likelihood of ongoing commercial agriculture viability considering the greater expectations of land use incompatibilities that the site is likely to experience and the reduction in economic viability when considering forgone opportunity costs. The median parcel size is used instead of an average to account for the potential for a very large or very small parcel to exist that would skew the result if using an average.

3.1.6 Slope

To determine the Slope Rating for the site, the average slope for the area of the site that is available for agricultural use must be determined. Refer to Column D of Table 7, Soil Quality Rating Matrix, for the areas of the site considered available for agricultural use. When the average slope of the areas of the site that is available for agricultural use is determined, identify the corresponding topography rating as outlined in Table 11, below.

Table 11. Slope Rating

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

[12] Opportunity cost is an economic term. It means the cost of something in terms of an opportunity foregone (and the benefits that could be received from that opportunity), or the most valuable foregone alternative. For example, if a land owner decides to farm his land, the opportunity cost is the value of one or more alternative uses of that land, such as a residential subdivision. If he continues to farm the land, the opportunity cost is the revenue that he does not receive from building houses. Thus, as opportunity costs rise, the viability of continuing the current action (i.e. agricultural use) decreases. This conclusion is based on the fact that agricultural use of land is primarily an economic decision. When factors, such as increased opportunity costs, make use of the land for agriculture less profitable than other uses, the long term viability of agriculture decreases.

Slope is included as a complementary factor in the LARA model to account for the importance that slope plays in the viability of a piece of land for agricultural production, a flat site allowing a greater range of potential agricultural uses and facilitating mechanization of operations. Gentle topography has other benefits such as reduced difficulty in managing irrigation runoff and reduced soil erosion as compared to more steep sites. Topography is not a required factor for a determination of importance because topography limitations can be overcome at a cost if the expected return on investment is high enough to warrant the expense (i.e. container based production, mass grading).

4.0 TYPICAL ADVERSE EFFECTS AND GUIDELINES FOR DETERMINING SIGNIFICANCE

4.1 Typical Adverse Effects

Typical adverse effects to agricultural resources are best considered in relation to the various types of impacts that are considered under CEQA: direct, indirect and cumulative. Direct impacts are straightforward: important agricultural resources are converted to a non-agricultural use, significantly reducing or eliminating the productive capacity of the land. Indirect effects are widely varied and require careful analysis of particular site conditions and farming operations. Indirect effects include significant impacts to active agricultural operations, Williamson Act Contracts, or to the viability of important agricultural resources. Indirect effects can result from growth inducement and the associated extension of infrastructure that can change rural character and increase the likelihood of agriculture urban interface conflicts. Indirect impacts can be caused by significant economic impacts to active agricultural operations that compromise their on-going viability and result in increased likelihood of conversion. Significant cumulative impacts result when a project's impacts are considerable when viewed in connection with the effects of past, present and probable future projects. Cumulative impacts are difficult to assess given the market driven and adaptable nature of agriculture. For example, a loss of agricultural land may occur in one area, while new land is converted to agriculture use elsewhere. Similarly, changes in agricultural commodity market prices could result in a shift in the type of agricultural commodities produced locally. Changes in the agricultural industry that result from external market factors could appear to be significant cumulative impacts to agriculture when they may only be a result of market adaptation to external economic conditions.

4.1.1. Direct Impacts

Direct impacts occur when a project would adversely impact locally important agricultural soils on a site that is determined to be important pursuant to the County LARA model. In San Diego County, important agricultural soils include not only soils with the USDA LCC ratings of I and II or Storie Index ratings of 80 or higher, but also includes soils of lesser quality as defined by the soil candidate listing for Prime Farmland and Farmland of Statewide Importance compiled by the USDA NRCS for San Diego County. These soil definitions expand the range of agricultural soils that are

considered locally important based on the fact that soil quality in San Diego County is generally low, with very few soils having the above stated LCC and Storie Index ratings that define Prime Agricultural Land. By including the soil candidates that qualify for the FMMP Prime Farmland and Farmland of Statewide Importance category in the LARA model evaluation, an additional 168,505 acres[13] of land could potentially be considered an important agricultural resource than what would be considered important using the traditional soil quality definition of Prime Agricultural Land (soils having LCC I or II or SI of 80 or higher).

When considering the significance of direct impacts, the focus of a CEQA analysis is on impacts to physical resources. In the case of agriculture, the physical resources include those areas of the site that contain soil of a sufficiently high quality to support crop production. The FMMP soil criteria for Prime Farmland and Farmland of Statewide Importance are the measures used to define high quality soil. This approach recognizes the market driven nature of agriculture by focusing on the underlying physical resource in the analysis of impacts versus focusing on the actual agricultural commodity that may have been produced at a site. By focusing on underlying physical resources, this approach recognizes that conversion of a particular agricultural use may not be a significant environmental effect, if the agricultural use is not dependent on a valuable agricultural resource such as good soil.

4.1.2. Indirect Impacts

Various project features can cause significant indirect impacts to agriculture. One example is the placement of public trails on agricultural lands. Trails on agricultural lands can result in increased trespassing, theft, and disease to crops. Trails in avocado orchards can increase exposure and susceptibility to avocado root rot. Root rot is easily transmitted to avocadoes because the spores of the disease move naturally through the soil and are spread on horse hoofs and on the shoes of trail users (Platt and Zentmyer, no date).

A project proposed near an active agricultural use also has the potential to cause significant indirect effects to agricultural resources because of the potential incompatibility between the proposed use and existing agricultural activities. Adverse impacts caused by incompatible development near agricultural uses include, but are not limited to:

- Farm practice complaints;
- Pesticide use limitations;
- Liability concerns;
- Economic instability caused by urbanization and changing land values;
- Trespassing, theft, and vandalism;
- Damage to equipment, crops, and livestock;
- Crop and irrigation spraying limitations due to urban use encroachment;

[13] These acreage figures are based on USDA NRCS soil survey acreages and do not account for developed or restricted lands whose soils may not be available for agricultural use

- Introduction of urban use pollutants entering farm water sources;
- Competition for water;
- Development affecting recharge of groundwater;
- Soil erosion and storm water runoff emanating from urban use;
- Shading of crops from inappropriate buffering;
- Importation of pests and weeds from urban areas or introduced pest populations from unmaintained landscaping;
- Increased traffic;
- Effects of nighttime lighting on growth patterns of greenhouse crops;
- Interruption of cold air drainage.

The Farmland Protection Action Guide published by the Institute for Local Self Government (2002) summarizes the conflicts that occur at the agriculture urban interface as follows:

> "This situation is a common one: A fast-growing community approves a subdivision located on farmland, placing new homes right next to farms. Proximity to the bucolic landscape is one of the development's most attractive features. But the new homeowners are soon disillusioned by pesticide drift, night harvesting, odor, flies, dust and slow-moving tractors.
>
> Farmers also have concerns about adjacent development. Theft and vandalism increase when the surrounding area urbanizes. Imported pests and increased traffic also affect operations. As a result, farmers see the next wave of development as inevitable, and accordingly reduce investments in their operation. The operation becomes less profitable, real estate becomes more valuable, and soon another farmer is willing to entertain offers from developers.
>
> Farming and residential uses are fundamentally incompatible. When they are located next to one another, local agencies can anticipate significant complaints and problems. However, there are several strategies that local agencies can use to head off or reduce such problems, such as creating physical barriers and educating residents to create more appropriate expectations. Such approaches can improve both the quality of life in new subdivisions and farmers' ability to remain a viable part of the local agricultural economy."

As described above, conflicts at the agriculture urban interface flow in two directions: from existing agricultural use to a newly established non-agricultural use and from a newly established non-agricultural use, to existing agricultural use. Nuisances perceived by new non-agricultural uses near farms may include dust; insects, pests and vectors; lighting; noise; odor; seasonal harvesting; farm-worker housing, smoke; truck traffic; pollution, and pesticide use. Although the focus of this document is on the impacts to agricultural resources and not the impacts that farms may have on new residential or urban uses, the adverse effects perceived by new urban neighbors near farms must be recognized as a contributor to the degradation of the viability of surrounding farms, as detailed below.

Nuisances perceived by urban neighbors can trigger complaints about farming practices to the farmers themselves or to regulatory authorities. The conflicts can result in increased liabilities for farmers and legal challenges. Farmers may feel pressure to discontinue their agricultural operation as urban uses encroach, reducing investments in the operation or causing reduced productivity and income when complaints force changes in normal farming practices. Nuisance complaints filed with regulatory authorities may force agricultural operators to modify farm practices to comply with requirements and avoid monetary fines. In some cases, restrictions on pesticide use near residences or schools may force abandonment of portions of farm fields to meet buffer distances required by law.

Potentially significant indirect impacts must be identified during the planning process to ensure that a proposed project is designed to reduce or eliminate an impact before it would occur. Through effective planning, "mitigation by design," and implementation of appropriate land use policies and tools, some or all of the significant effects that may occur at the agriculture urban interface can be partially or fully mitigated.

4.1.3. Cumulative Impacts

The typical adverse effects discussed in previous sections may result in significant cumulative impacts when other projects in the area contribute to similar significant direct or indirect impacts to agricultural resources and those impacts are determined to be cumulatively considerable.

Growth inducement can also contribute to a significant cumulative impact to agricultural resources by removing barriers to growth in an agricultural area, ultimately causing the conversion of agricultural land. This may occur when infrastructure is extended to previously unserved areas; when a jurisdiction or district's Sphere of Influence is expanded; when density is increased above designated general plan or zoning limits; or when land use intensity is changed or increased. Growth often improves the attractiveness and feasibility of non-agricultural uses in historically rural and agricultural areas, resulting in agricultural conversion. Growth into agricultural areas can significantly impact agricultural lands by facilitating agricultural conversion through lower costs of development as urban level services become available. Growth also results in increased land values which increases pressure for agricultural uses to convert and makes agricultural expansion less economically feasible. Growth in an agricultural area can also significantly increase urban/agricultural interface conflicts in the long term, creating additional pressure to convert the agricultural use to a non-agricultural use.

4.2 Guidelines for Determining Significance

When a lead agency determines that a project may have a potentially significant adverse effect to agricultural resources, an agricultural resources technical report may be required to assess the significance of the potential impacts and to identify measures to reduce the significance of identified impacts. Where it is feasible for County staff to assess the significance of agricultural resource impacts and to provide recommendations for reducing the significance of potential impacts without completion of a technical report, County staff will provide such recommendations instead of requesting completion of a technical report. County staff will base their determinations and recommendations on these significance guidelines.

An affirmative response to or confirmation of any one of the following Guidelines will generally be considered a significant impact to Agricultural Resources as a result of project implementation, in the absence of scientific evidence to the contrary:

4.2.1 Impacts to important onsite agricultural resources

> ***The project site has important agricultural resources as defined by the LARA Model; and the project would result in the conversion of agricultural resources that meet the soil quality criteria for Prime Farmland or Farmland of Statewide Importance, as defined by the FMMP; and as a result, the project would substantially impair the ongoing viability of the site for agricultural use.***[14]

The following are examples of projects that would not typically substantially impair the ongoing viability of the site for agricultural use:

- Minor expansions or alterations of an existing use, such as uses approved under an administrative or minor use permit;
- Single family residence grading permits;
- Boundary adjustments and Certificates of Compliance;
- Agricultural intensification;
- Accessory or auxiliary uses such as wireless telecommunication facilities and installation of stormwater treatment or drainage facilities;
- Road improvements/widening and other minor public facility improvements; and
- Any project, including residential subdivisions, that would substantially avoid impacts to Prime and Statewide Importance soils while maintaining agricultural viability.

[14] Significance Guideline 4.2.1. This significance guideline recognizes that projects proposed on an important agricultural resource as defined by the LARA model may not result in significant impacts to the resource if the project avoids the important soil resources (Prime and Statewide importance soils) on the project site or if the project would not substantially impair the ongoing viability of the site for agricultural use.

The determination whether the project would substantially impair the viability of an important agricultural resources that meets the soil quality criteria for Prime or Statewide Importance is primarily based on the extent to which the project avoids the resources and the extent to which the remaining resource would be viable for agricultural use. A variety of interrelated factors need to be considered to determine the viability of a site for agricultural use; such as the size of the area, topographic relief, and surrounding land use. Consideration of the surrounding types of agricultural uses is also important as this will give an indication of the type, size and requirements of agricultural use typical for the area. Residential subdivisions that would result in parcel sizes that could support agriculture and that substantially avoid the important physical soil resources onsite would not usually impair the viability of the resource, based on the prevalence of small farms in the County and high land prices that promote high value production on small parcels. Agricultural resources are not considered avoided when they are placed within biological open space easements or other easements that would preclude the use of the land for agriculture. In addition, resources are not avoided when they are placed within a road right of way; in the location of proposed structures or paving, and generally within 15 feet of front and side yards of residences and within 30 feet from the rear yard of residences as a result of project implementation. An assumption is made that no agriculture will occur within the stated distances from residences based on the fact that an average homeowner will usually maintain landscaping and outdoor recreation areas around a residence.

4.2.2 Indirect Impacts to Agricultural Resources

a. The project proposes a non-agricultural land use within one-quarter mile of an active agricultural operation[15] or land under a Williamson Act Contract (Contract) and as a result of the project, land use conflicts between the agricultural operation or Contract land and the proposed project would likely occur and could result in conversion of agricultural resources to a non-agricultural use.[16]

b. The project proposes a school, church, day care or other use that

[15] Active Agricultural Operation is defined in Attachment A of this document.

[16] Significance Guideline 4.2.2.a. The extent to which the project proposes a use that is similar to those already present in the surrounding area is an important factor in considering the significance of the placement of a non-agricultural use in proximity to an agricultural operation. For example, if a residential subdivision consistent with existing densities in the surrounding area is proposed, the likelihood that the residential subdivision would constitute a significant indirect impact to agricultural resources is reduced based on the fact that similar land uses already exist in the area. On the other hand, if a high density residential subdivision is proposed that is not consistent with existing densities in the surrounding area, the proposed project would have a greater likelihood of resulting in indirect impacts to agricultural resources based on the likely introduction of increased traffic, new and improved roads (whose users may not appreciate agricultural trucks and traffic), and increased potential for land use conflicts that did not exist in the more rural environment prior to the project. In both scenarios however, the placement of the proposed use in relation to the surrounding active agricultural operation is of central importance to the determination of significance. A project proposed contiguous to an agricultural operation or Contract land would require greater scrutiny that a project separated from the agricultural operation or Contract land by other land uses.

involves a concentration of people at certain times within one mile of an agricultural operation or land under Contract and as a result of the project, land use conflicts between the agricultural operation or Contract land and the proposed project would likely occur and could result in conversion of agricultural resources to a non-agricultural use.[17]

c. The project would involve other changes to the existing environment, which due to their location or nature, could result in the conversion of offsite agricultural resources to a non-agricultural use or could adversely impact the viability of agriculture on land under a Williamson Act Contract.[18]

A determination of whether the project could cause a potentially significant impact in accordance with the above guidelines requires consideration of the customary agricultural activities associated with surrounding agricultural operations and the degree to which those activities would be compatible with the proposed project. The distance guidelines included within Significance Guidelines 4.2.2.a and 4.2.2.b. are based on the typical distances that land use conflicts would be expected to potentially occur based on the sensitivity of the proposed land use. For most types of agriculture, interface conflicts would usually be less than significant, if the land uses are separated by 300 feet (the distance required by several land use jurisdictions to address agriculture urban interface conflicts); however agricultural uses within one-quarter mile from the project site will be reviewed to determine if potential indirect impacts could occur to those operations. One-quarter mile is chosen as the minimum screening distance for identification of potential indirect impacts based on available literature on the typical distances that agricultural interface issues such as dust, noise, and conflicts with pesticide use typically occur.[19]

The type of agricultural uses surrounding the project site will affect the degree of agriculture interface conflicts that would be expected to occur. For example, orchard

[17] Significance Guideline 4.2.2.b. Projects that would have sensitive receptors (i.e. children, elderly, etc.) located near an agricultural operation or Williamson Act Contract land require additional scrutiny to ensure the uses will be compatible. The presence of a school can result in pesticide use limitations for agricultural operators, and the impact of those limitations must be assessed. It should be noted that the County of San Diego does not have jurisdiction over the approval of public schools, however large projects, such as subdivisions, may propose a location for a future public school. The environmental analysis of the project must include an assessment of the school's potential impacts to surrounding agricultural resources. The County does have jurisdiction over private schools proposed within its jurisdiction.

[18] Significance Guideline 4.2.2.c. This significance guideline is taken directly from the CEQA Guidelines, Appendix G, II(c) Agricultural Resources. It is similar to the two guidelines that precede it except that it is more general and does not include any distance guidelines. This guideline is included to capture potential indirect impacts to agricultural operations that may not be captured in the more specific Significance Guidelines 4.2.2.a and 4.2.2.b.

[19] The State of Queensland Planning Guidelines (1997) identifies 0.19 miles as an adequate separation for most nuisance issues such as dust, noise and pesticide use. Depending on the types of conflicts identified in addition to local conditions, the distance where conflicts could occur may be more or less than 0.19 miles. One-quarter mile is provided as a conservative screening tool.

crops such as avocadoes and citrus are often compatible with residential uses, while confined animal facilities can be highly incompatible with residential uses. The degree of compatibility of the agricultural use with non-agricultural uses will determine the distance that an evaluation of potential impacts will be required. For example, a project proposed near but not adjacent to orchard crops, will not usually result in significant indirect impacts to these resources. In contrast, projects proposed near but not adjacent to a confined animal facility, would more likely have significant indirect impacts to the agricultural use. Orchard crops such as avocadoes and citrus typically have fewer compatibility issues than nurseries, confined animal facilities, and row crop production due to lower chemical treatments, less farmworker presence, less truck traffic, and fewer odors. Where appropriate, available information and technical opinion from the Department of Agriculture, Weights and Measures will be obtained to aid in the determination of agricultural compatibility.

Any project that proposes a school must evaluate potential impacts within one mile from the project site because existing regulations can restrict certain normal agricultural activities within one mile of a school. Furthermore, when sensitive receptors and uses that would involve large concentrations of people are proposed near agriculture, the potential for agriculture interface conflicts increases significantly. Significance Guideline 4.2.2.c. is a more general guideline to address the variety of potential indirect impacts that may not be foreseen in the more specific significance guidelines.

4.2.3 Conflicts with Agricultural Zoning and Williamson Act Contracts[20]

The project conflicts with a Williamson Act Contract (Contract) or the provisions of the California Land Conservation Act of 1965 (Williamson Act).

The above significance guideline addresses conflicts with the Williamson Act. Any conflict with a Contract or the Williamson Act is significant because conflicts with Contract provisions and the Williamson Act are prohibited by law. Furthermore, no project may be approved that is in conflict with a Contract or the Williamson Act. Indirect impacts to offsite Williamson Act Contract land will be addressed in significance guideline 4.2.2.

4.2.4 Cumulative Impacts

The guidelines for determining the significance of cumulative impacts are based on the same guidelines used to determine the significance of project level impacts (Guidelines 4.2.1, 4.2.2, and 4.2.3) except the analysis considers the significance of the cumulative impact of the individual project impact in combination with the impacts caused by the projects in the cumulative study area that would also impact important agricultural resources. A project that is determined not to be an important agricultural resource under the LARA model, that would not have significant indirect impacts to agricultural

[20] Conflicts with zoning for agricultural use should not occur in the County of San Diego because there are no exclusive agricultural zones in the County. In general, a variety of land uses are permitted in agricultural zones either by right, subject to limitations, or by issuance of a conditional use permit.

resources, and that would not conflict with agricultural zoning or a Williamson Act Contract would not have the potential to contribute to a cumulative impact.

Cumulative impacts are those caused by the additive effects of other project's impacts to agricultural resources over time. A project's impact may not be individually significant, but the additive effect when viewed in connection with the impacts of past projects, present projects, and probable future projects may cause a significant cumulative impact to agricultural resources. If the project would impact agricultural resources, the project must assess the potential for significant cumulative impacts to occur. If the project would directly impact important onsite agricultural resources, the focus of the cumulative impact analysis should be on the cumulative direct impact to agricultural resources that the proposed project and other projects in the cumulative analysis area would cause. If the project could indirectly impact agricultural resources, the cumulative analysis should focus on the indirect impacts that the proposed project and other projects in the cumulative analysis area would cause when implemented.

To identify the significance of the potential cumulative impact to agriculture, both a quantitative and a qualitative analysis of the potential loss of agricultural resources must be undertaken. In general the qualitative analysis will evaluates the cumulative loss of agricultural resources based on past, present and future projects within a cumulative study area. More specific direction for completing the quantitative portion of the analysis of cumulative impacts is provided in the Report Formats. For the qualitative analysis, consideration should be given to the extent that the land within the cumulative study area is primarily agricultural versus residential or another dominant land use. Cumulative losses of agriculture in primarily agricultural communities is viewed as having a higher likelihood of contributing to a significant cumulative impact since the degradation of an entire agricultural community would usually be more severe than the loss of remnant portions of scattered agricultural land located among another more dominant land uses. Another qualitative consideration for the cumulative analysis is the extent that the land within the cumulative study area is experiencing development pressure to convert agricultural land to a non-agricultural use. The potential for conversion is evaluated based on the qualitative assessment of the past, present, and future projects that could impact agriculture. Careful consideration must be given both the potential direct and indirect agricultural conversion that could result from the cumulative projects. In general, if the agriculture in the cumulative study area is not under significant pressure to convert to non-agricultural uses, or a significant amount of lands would remain available for agricultural use after consideration of the potential cumulative impacts, the likelihood of the project having a significant cumulative impact is reduced.

5.0 STANDARD MITIGATION AND PROJECT DESIGN CONSIDERATIONS

In the event a potentially significant impact may occur, mitigation must be proposed or the project redesigned to lessen, avoid or compensate for the impact. As defined by the CEQA Guidelines Section 15370, mitigation includes measures to avoid, minimize or rectify impacts or to compensate for impacts by replacing or providing substitute resources. Agricultural resource mitigation measures and design considerations will depend on the specific resources and conditions for each project under consideration. The following discussion addresses a range of mitigation measures and design considerations that may be used to lessen or compensate for the identified impact.

5.1 Direct Impacts

5.1.1 Onsite Preservation

If a project would exceed Significance Guideline 4.2.1, redesign of the project will usually be required to minimize impacts to agricultural resources that meet the Prime and Statewide soil criteria and/or to provide a project design where agricultural use could remain viable. To the extent feasible, preservation of agricultural resources should occur onsite. As discussed in Section 4.1.1, soils that qualify for the Prime or Statewide Importance Farmland designations are the resources that should be avoided. Therefore, when a project exceeds Significance Guideline 4.2.1, mitigation or project design measures to minimize the project's direct impacts to agricultural resources is required. Table 12, Agricultural Preservation Requirements identifies minimum agricultural preservation ratios that would usually be adequate to mitigate for direct project impacts.

Table 12. Agricultural Preservation Requirements

Project Impact	Minimum Agricultural Preservation Ratio
The project will impact agricultural resources that meet the soil quality criteria for Prime Farmland and Farmlands of Statewide Importance	1:1

Preserved agricultural resources must remain viable for continued or future agricultural production. The following factors should be considered in determining the viability of the area to be preserved for agricultural use:

- The adequacy of the area to be preserved to accommodate agricultural use;
- Land use compatibility between preserved agricultural resources onsite and non-agricultural land uses located offsite or proposed onsite;
- The likelihood that the area to be preserved will remain available for agricultural use.[21]

To determine the adequacy of the area to be preserved for agricultural use, a variety of

[21] Preservation of agricultural resources ensures that the land would remain available for agricultural use; however, the choice to use the land for agriculture is the decision of the individual property owner.

site specific factors must be taken into account. For example, an area of the site with significant topography or rock outcroppings would not be considered adequate to accommodate agricultural use. Similarly, while it may be viable to preserve a five acre area of land within a residential parcel for agricultural use, preservation of one-half acre areas within individual residential parcels would not likely be considered viable.

Project Design Considerations

The following approaches should be considered in designing a project to preserve onsite agricultural resources:

- Locate proposed development (i.e. residential pads) in areas least suitable for agricultural use;
- Where the General Plan Designation allows, cluster residential parcels and provide larger agricultural parcels to protect long-term agricultural viability;
- Where the General Plan does not allow clustering, design lot configuration or reduce parcel yield to achieve agricultural preservation and agricultural viability;
- For planned developments, propose a common ownership parcel over quality agricultural lands to achieve preservation requirements;
- Locate development on the least productive agricultural soils wherever possible; and
- Minimize locating development on the most productive soils wherever possible.

Limited Building Zones (LBZ)

Where necessary, LBZ easements will be used as the typical mechanism to ensure that land on the project site will remain available for agricultural use. LBZ easements would typically restrict habitable structures, swimming pools, and other structures that would preclude the use of the land for agriculture. Accessory structures incidental to an agricultural use would be permitted. The requirement to apply a LBZ easement to preserve the availability of agricultural resources depends on the likelihood that the land would remain available for agricultural use without the easement. For example, a ten acre parcel with important onsite agricultural resources would not usually require a LBZ easement to protect the land as available for agriculture; however a one or two acre parcel would usually require a LBZ easement due to the higher likelihood that the land could be precluded from future agricultural use by future accessory structures such as second dwelling units or swimming pools. Where agricultural resource preservation is proposed on residential parcels smaller than two acres, a LBZ would typically be required. Where agricultural resource preservation is proposed on residential parcels larger than two acres, the need to apply a limited building zone will be considered, but is not usually anticipated to be required.

Justification for Onsite Preservation

Avoiding agricultural resources on residential parcels may be a viable mechanism to preserve agricultural resources due to the fact that in San Diego County, small farms typically support high value agriculture.

High land values make the purchase of large farms financially prohibitive for most farmers. Creating smaller parcels that could be used for agriculture may increase the economic feasibility of starting an agricultural operation, and therefore, aids in preserving onsite agriculture on a parcel-by-parcel basis.

"*The cost of land in the County makes it prohibitive for many new farmers to begin an operation on a large parcel so the ability to farm small parcels is crucial to the success of future agriculture in San Diego County."* (County Agricultural Commissioner in 1997)

The purchase of land for farming is increasingly both a farming decision and a decision regarding one's place of residence, as is demonstrated by the fact that in San Diego County, 77% of farmers live on farms and 90% of farms operate under full ownership versus operating as tenants or under leasehold (USDA NASS, 2002). These statistics combined with high land costs supports the rationale that residential subdivisions do not always constitute a significant adverse impact to agriculture. Therefore, if important soil resources are preserved, and it is demonstrated that farming would remain viable after development, onsite preservation of agriculture is justified.

Furthermore, the viability of farming, on residential parcels, is supported by the fact that in San Diego County there are no exclusive agricultural zones. Farming is permitted in any zone, providing flexibility for agricultural operations to occur where the resources and site conditions are favorable. This is in contrast to other areas of the state where large tracts of farmland exist with few non-agricultural land uses intermixed amongst farmland.

In San Diego County, farming typically occurs adjacent to and/or alongside residential land uses. The creation of smaller, more affordable, and viable agricultural parcels creates opportunities for farming when considering the cost of land in San Diego County and the fact that high value agriculture on small parcels is common.

The one-to-one agricultural resource preservation requirement shown in Table 12 is consistent with recommendations typically provided by the DOC to address impacts to agricultural resources under CEQA. The DOC "encourages the use of agricultural conservation easements on land of at least equal quality and size as partial compensation for the direct loss of agricultural land. If a Williamson Act contract is terminated, or if growth inducing or cumulative agricultural impacts are involved, we [DOC] recommend that this ratio be increased. We [DOC] highlight this measure because of its acceptance and use by lead agencies as mitigation under CEQA." (DOC, 2006).

While agricultural conservation easements are provided as an option for project proponents, it would generally be difficult to implement an agricultural conservation easement within a reasonable period of time on a project-by-project basis.

Without a program identifying where agricultural resource preservation and protection should occur; and without the ability to fund and administer such a program; implementation of agricultural conservation easements is difficult. Therefore, one to one agricultural resource preservation will generally be accomplished onsite, including within residential parcels, where such resources would be viable for agricultural use.

The approach to agricultural preservation in this case is consistent with policies found within the Land Use and Conservation and Open Space Elements of the San Diego County General Plan. Both Elements support residential and agricultural uses planned and/or existing side-by-side by allowing the use of lower density residential land designations to support continued agricultural operations.

The long-term preservation of agricultural land in San Diego County depends on numerous factors. One factor that significantly affects agriculture in the County is the planned distribution of land use and density established within the 2011 update to the San Diego County General Plan. The Vision, Guiding Principles, and Policies within the General Plan guide the growth of incompatible land uses as well as residential development in order to conserve agricultural resources as well as open space and biological resources. Further, the General Plan establishes policies to allow the utilization of a sustainable and/or conservation subdivision design to address lot sizes within developments in order to protect the opportunity for continued agricultural uses and production.

The County is also currently developing programs to promote more economically viable farming options within San Diego County and to create land use policies and programs to support agriculture. When the Farming Program is developed, it will be referenced in these guidelines and may provide additional means to mitigate impacts to agriculture.

Although avoidance and minimization of impacts to important agricultural resources as discussed in Section 5.1.1 is adequate to mitigate a project's impact to agricultural resources, other approaches to preserve and protect agriculture are also needed.

5.1.2 Agricultural Conservation Easements

A variety of agricultural mitigation mechanisms are available to mitigate impacts to agriculture resources. One option includes the purchase of an offsite agricultural conservation easement. Recognizing that in many cases conversion of agricultural lands is unavoidable, an increasing number of lead agencies require acquisition of conservation easements on other agricultural lands to mitigate the impact of conversion. The California DOC routinely states in its letters to lead agencies the following:

> "One of the tools…is the purchase of agricultural conservation easements on lands of at least equal quantity and size as a partial compensation for the direct loss of agricultural land. We highlight this measure because of its growing acceptance and use by lead agencies as mitigation under the California Environmental Quality Act (CEQA)."

The American Farmland Trust defines a conservation easement as:

> "a deed restriction landowners voluntarily place on their property to protect resources such as productive agricultural land, ground and surface water, wildlife habitat, historic sites or scenic views. They are used by landowners ("grantors") to authorize a qualified conservation organization or public agency ("grantee") to monitor and enforce the restrictions set forth in the agreement. Conservation easements are flexible documents tailored to each property and the needs of individual landowners. They may cover an entire parcel or portions of a property. The landowner usually works with the prospective grantee to decide which activities should be limited to protect specific resources. Agricultural conservation easements are designed to keep land available for farming."

The County of San Diego recognizes the value of agricultural conservation easements for the preservation of agricultural land. Therefore, a Purchase of Agricultural Conservation Easement Program (PACE) was developed and adopted in order to preserve agriculture through the purchase of easements and the mitigation component (Refer to Section 2.2 for additional information regarding the PACE Program).

The PACE Program enables mitigation for discretionary project applicants. The mitigation component provides project applicants with an option to pay an in-lieu fee to the County of San Diego for purchase of PACE Program mitigation credits to offset agricultural impacts. The in-lieu mitigation fees collected are utilized to acquire and protect additional agricultural land under the PACE Program and serve as an on-going funding stream for the Program. Each acre of land permanently protected with an agricultural conservation easement under the PACE Program equates to one (1) mitigation credit.

Discretionary project applicants, requiring agricultural mitigation through the CEQA review process, could choose to purchase PACE mitigation credits, which reflect a 1:1 mitigation ratio. PACE mitigation credits are nonrefundable and nontransferable, and are available for purchase based on the Program's remaining allocable acreage. PACE mitigation credits must be purchased prior to approval of any Final Map, or issuance of any building permits.

Outside of purchases made under the PACE Program, any other purchase of offsite agricultural conservation easements will have to be implemented on a project-by-project basis. Although it is significantly more complex to implement agricultural conservation easements as mitigation on a project-by-project basis, it is included as a mitigation option that a project proponent may explore.

To implement the purchase of an agricultural conservation easement for an individual project, the project proponent would first have to identify a landowner who is willing to sell an agricultural conservation easement of equal or greater value than the resource that is being impacted, as determined by the lead agency.

The price of the conservation easement is usually based on the fair market value of the

property minus its restricted value, as determined by a qualified appraiser. Rights that would be restricted and would be retained in the easement must be determined. To be accepted as a project mitigation measure the conservation easement would have to be identified, approved, and secured prior to discretionary project approval.

5.2 Indirect Impacts

When a project may have a potentially significant indirect impact to offsite agricultural operations or to onsite agricultural resources proposed for preservation or avoidance in accordance with Significance Guidelines 4.2.2.a through 4.2.2.d, the following project design elements should be considered to reduce the significance of identified impacts.

5.2.1 Project Design Elements

Indirect impacts to agricultural resources can occur from inadequate consideration of the proposed project design as it relates to offsite agricultural operations or to onsite agricultural resources proposed for preservation or avoidance. A variety of potential conflicts can occur between agricultural and non-agricultural land uses. The site specific conditions of each project must be evaluated to identify the potential conflicts that could occur. Once these potential conflicts have been identified, project design elements should be considered that would eliminate the potential conflicts. Some examples of design elements that may reduce potentially significant indirect impacts to agricultural resources are identified below:

- Do not locate trails adjacent to accessible (e.g., not fenced) farm fields;
- Design project access to direct future occupants away from active farms and not towards active farms;
- Incorporate appropriate fencing or other barriers to minimize trespass;
- Orient project features that would be considered high-use areas (balconies, backyards, parks, etc.) away from active farms;
- Incorporate internal compatibility buffers to separate agricultural parcel(s) from non-agricultural land uses to ensure long term viability of the onsite agricultural parcel(s);
- Locate parks away from agricultural uses so the agricultural uses would not be adversely affected;
- Restrict uses incompatible with agriculture in areas adjacent to areas intended for agricultural preservation; and
- Incorporate appropriate land use transitions such as reduced density near adjacent farmland to decrease the number of residents that abut farms.

The selection and application of project design elements should be based on the identified potentially significant indirect impacts that could occur as a result of the proposed project. The above list of project design elements is a guide and is not a comprehensive list of measures that may be used to reduce potentially significant indirect impacts.

Compatibility Buffers

Use of compatibility buffers between a proposed non-agricultural use and offsite agricultural operations or between proposed onsite non-agricultural uses and onsite preserved or avoided agricultural resources is the primary tool to increase compatibility between agricultural resources and non-agricultural uses. Compatibility buffers should be located on the site being developed, and be provided/funded by the proponent of that development. The establishment of compatibility buffers, where necessary, works toward achieving safe and livable communities in the County of San Diego by affording land use transitions to reduce real or perceived conflicts between agricultural operations and new non-agricultural neighbors. Establishment of compatibility buffers within Agricultural Use Designations is consistent with existing policies in the Open Space Element of the General Plan to "foster compatibility between agricultural uses and non-agricultural uses" and to "[consider] the impacts of increased residential density on the agricultural area, as well as the location of the non-agricultural uses and their relationship to agriculturally designated areas."

By designing projects with sensitivity to the ongoing surrounding agricultural operations and with sensitivity to the expectations of future homeowners, adverse impacts to agriculture at the agriculture urban interface can be minimized. Recognizing that no buffer width is scientifically proven to address the entire potential range of compatibility issues, buffers are, nonetheless, the best planning tool currently available to minimize interface conflicts. In a study of buffers in 16 counties and 6 cities, great variations were found among farmers and urban neighbors in the perceived effectiveness of different forms of buffers to limit specific negative impacts. Farmers generally found setbacks or open space buffers to be ineffective in dealing with trespass, vandalism, litter, theft, and dogs, while urban residents viewed them as generally effective in reducing impacts from agricultural chemical use, odor, and dust from farm operations (Handel, 1994). Given this research, where trespass is identified as a potential interface conflict, consideration should be given to providing barriers or fences, locating project access points away from farm fields, or providing no trespass signs where the project would most likely cause increased trespass.

The design and width of compatibility buffers should be based on the site specific conditions of topography, weather patterns, and the commodity uses in the area and should be related to the anticipated interface conflicts. For example, if offsite agricultural uses are separated by a topographic feature that provides an adequate buffer, additional project features to reduce a potential impact may not be required. If odor or chemical use was a potential interface issue and the project was located downwind from the project site, the potential for conflicts would be reduced, reducing requirements for site specific project design measures. The type of commodity production will affect the severity of potential interface conflicts because each agricultural commodity is managed differently (i.e. frequency of harvesting, truck traffic, chemical use, odors, etc.) and those management activities result in varying degrees of potential conflict. A specific required buffer width is not provided in these guidelines to allow for flexibility in project and buffer width design and to enable consideration of the variety of site specific conditions that would affect the adequacy of a compatibility buffer.

Compatibility buffers can be achieved in a variety of ways, including but not limited to, the following:

- Natural barriers created by landscape features such as waterways, topographic relief, or natural and/or planted vegetation;
- Physical barriers such as roads or walls;
- Multi-use barriers such as open space greenbelts, biological open space easements or stormwater detention facilities;
- Easements that restrict incompatible land uses such as habitable or accessory structures and swimming pools adjacent to offsite agriculture; and
- Incorporating land use transitions such as providing larger lots near farmland to increase long term compatibility.

5.2.2 Right to Farm Acts

State and local Right-to-Farm Acts have been implemented to establish the rights of agricultural activities to operate and not be considered a nuisance. State and local Right-to-Farm Acts, specifically, Civil Code §3482.5 (State Right to Farm Act) and the County Code of Regulatory Ordinances Section 64.401 (Agricultural Enterprises and Consumer Information Ordinance) may be referenced as mechanisms to help protect agriculture, but they may not be relied on to mitigate significant indirect impacts to agriculture.

According to the State Right to Farm Act, if a commercial agricultural use operates according to proper and accepted customs and standards, existed in a location for three years and was not a nuisance when it began, the agricultural use shall not become a private or public nuisance due to any changed condition in the locality. Moreover, the Right to Farm Act does not prohibit new neighbors from complaining about farm practices, filing complaints with regulatory authorities regarding agricultural practices, or hiring lawyers to challenge the rights of agricultural operators. Therefore, although the principle of the “Right to Farm Act” is that no agricultural activity shall be deemed a nuisance if it existed there for more than three years and was not a nuisance at the time it began, such legislation has had minimal effect in reducing the actual conflicts that occur at the agriculture urban edge (Wacker et. al, 2001).

In spite of right to farm laws, complaints and/or legal challenges to agricultural operations can reduce the viability of agricultural operations due to a variety of economic impacts to farmers that result from nuisance complaints. Farmers often respond to neighbor complaints by upgrading farm operations to eliminate nuisances or by abandoning use of portions of farm fields. Often, farm operation upgrades resulting from neighbor complaints have no benefit to the operation itself and are simply economic impacts that the farmer must bear as a result of new neighbors.

Therefore, while the Right to Farm Act and the County Consumer Information

Ordinance may be referenced in a discussion of existing regulation that protects the rights of agricultural operators, reliance on these Right to Farm laws alone in addressing the significance of indirect impacts is not adequate to reduce an identified adverse indirect effects to agricultural resources.

5.3 Cumulative Impacts

When a project may have a potentially significant cumulative impact to agricultural resources, additional agricultural preservation or offsite purchase of an agricultural conservation easement beyond a 1:1 preservation ratio may be required to mitigate for the cumulative loss of agricultural resources. The adequacy of mitigation for significant cumulative impacts will need to be determined on a case by case basis taking into consideration the value and extent of the resources that would be impacted and the mitigations proposed.

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Attachment A
Important Definitions

Agricultural Resource

Within this document, the term "agricultural resource" refers to any of the following:

- a site with an active agricultural operation;
- a site designated as, *and that meets the definition of,* an Important Farmland Category (Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance) as defined in the DOC's FMMP;
- a site with a history of agricultural production based on aerial photography or other data sources identifying agricultural land uses. Examples of other data sources that identify agricultural land use include data from the County Department of Agriculture Weights and Measures (AWM), the State Department of Water Resources (DWR) Land Use data, and vegetation data from the County Planning & Development Services (PDS).

Active Agricultural Operations

The term "active agricultural operation" refers to the routine and ongoing commercial operations associated with a farm, grove, dairy, or other agricultural business and shall includes: a) the cultivation and tillage of soil; crop rotation; fallowing for agricultural purposes; the production, cultivation, growing, replanting and harvesting of any agricultural commodity including viticulture, vermiculture, apiculture, or horticulture; b) the raising of livestock, fur bearing animals, fish or poultry, and dairying; c) any practices performed by a farmer on a farm as incident to or in conjunction with those farming or grove operations, including the preparation for market, delivery to storage or to market, or delivery to carriers for transportation to market; and d) ordinary pasture maintenance and renovation and dry land farming operations consistent with rangeland management. All such activities must be consistent with the economics of commercial agricultural operations and other similar agricultural activities.

Fallow Land

The California General Plan Glossary of Terms defines "fallow land" as follows: "Agricultural land that is not currently being cultivated but has been cultivated at least one year in the past five years unless:

1. The land is enrolled in a habitat conservation program that has been approved by a county, state or federal government agency; or
2. The land has not been cultivated in any of the past five years due to accepted farm management practices; or
3. The land has not been cultivated in any of the past five years because of enrollment in a federal program that requires it to remain unfarmed.

Important Agricultural Resource

An agricultural resource determined to be important pursuant to the County LARA model.

Attachment B
Areaclimates and "Sunset Zones" Descriptions

Four factors combine to make up the Generalized Western Plantclimate Zones ("Sunset Zones"); these include latitude, elevation, ocean vs. continental air mass influence, and local terrain topology. Latitude affects day-length, average temperature, and severity and length of winter. Elevation affects nighttime temperatures and severity and the length of winter while the ocean vs. continental air mass influence affects the severity of weather fluctuations and influences seasonal rainfall patterns. The presence of mountain or hill barriers between the ocean and inland zones can also affect how much influence ocean and continental air masses will have. Finally, local terrain topology affects the movement of cold air because cold air is heavier than warm air resulting in the collection and trapping of cold air in lowlands, valley centers, and river bottoms. These are called cold-air basins. Hillsides and tilted valley floors that allow easy drainage of cold air are called thermal belts. Above the thermal belts, winter temperatures can be even lower than in the cold-air basins. The Generalized Western Plantclimate Zones present in San Diego County are described below and grouped according to the five areaclimates present in the County: maritime, coastal, transitional, interior, and desert.

The Sunset Zones range from Zone 1 representing the coldest winters in the west to Zone 24 representing maritime influence. In San Diego County, Zones 3, 11, 13, and 18 through 24 are represented. Zone 24 falls within the Maritime Areaclimate, Zone 22 and 23 in the Coastal Areaclimate, Zone 20 and 21 in the Transitional Areaclimate, Zone 3, 18, and 19 in the Interior Areaclimate, and Zone 11 and 13 is in the Desert Areaclimate.

Maritime Areaclimate

The Maritime Areaclimate occupies a long, narrow belt along the ocean and is limited in width to a few hundred yards but can extend 5 or 6 miles inland where canyons or valleys open into the coastal plain. Zone 24 is the maritime influenced Plantclimate, which is completely dominated by the ocean. Incorporated Cities and Camp Pendleton occupy this zone in San Diego County with the only unincorporated communities in this zone being the westernmost portions of the unincorporated San Dieguito community, the County Islands within National City and the western portions of Bonita. Because of the cold air that descends out of the mouth of canyons, low temperatures in this Zone have ranged from 24° to 44° F over a 20-year period.

Coastal Areaclimate

The Coastal Areaclimate is continuous from north to south and lies inland from the shoreline strip, which is dominated exclusively by the Maritime influence. Topographically this area comprises an area of hills, mesas, and ridges extending from beaches and cliffs on the west to the seaward slopes of the low elevation mountains in the east.

Zone 22 is within the Coastal Areaclimate represented by the cold winter portions of the coastal climate that is influenced by the ocean about 85% of the time. It is either a cold-air basin in winter or a hilltop above the air-drained slopes. The coldest temperatures here occur in canyons and near canyon mouths where cold air drainage can cause frost damage. Winter lows have been recorded from 21° to 24° F. In San Diego County Zone 22 is limited to the northwestern most portion of the County, within Camp Pendleton.

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 avocadoes. Zone 23 encompasses some of San Diego County's most important agricultural areas, including Bonsall, Fallbrook, and Twin Oaks Valley. The role of topography in the success of avocado production in this zone is of particular note. Foothills and steep, rocky slopes provide ideal conditions for excellent air and water drainage; air drainage necessary to prevent freezes and rapid water drainage being essential for the prevention of root rot in avocadoes. Zone 23 lacks the summer heat necessary to grow crops such as apples, pears and peaches. Zone 23 temperatures are mild; however, severe winters have resulted in lows in some areas ranging from 23° to 38° F.

Transitional Areaclimate

The Transitional Areaclimate occupies a series of valleys partially screened from maritime influences by low mountains to the west, and limited by the western extension of the Peninsular Range to the east. These valleys may be dominated by coastal influence for a day, week or month and then may be dominated for similar periods by continental air. Zones 20 and 21 fall in this Areaclimate and have the same pattern of cold-air basins (Zone 20) and air drained thermal belts (Zone 21) as Zones 18 and 19 (Interior Areaclimates), however they get more ocean influence and therefore are better suited for plants that need moisture like fuchsias and tuberous begonias. These zones are a transitional area where climate boundaries often move 20 miles in 24 hours with the movements of marine or interior weather. Zone 21 is good for citrus and is the mildest zone that gets adequate winter chilling for some plants. Over a 20-year period, winter lows in Zone 20 ranged from 28° to 23° F while in Zone 21, low temperatures ranged from 23° to 36° F, with temperatures rarely dropping far below 30°. In San Diego County, the cold air basin of Zone 20 is generally located in the Ramona Community Planning area with the Zone 21 air drained thermal belt surrounding it, extending northward through North County Metro, Valley Center and Pala-Pauma and south through Alpine, Crest-Dehesa, and Jamul-Dulzura. Zone 21 covers the majority of the transitional areaclimate.

Interior Areaclimate

The Interior Areaclimate is dominated by continental air at least 85% of the time and is characterized by wide diurnal and seasonal temperature fluctuations. The air here is warm and dry in the summer. Topographically, this areaclimate consist of valleys and foothills, mountain valleys, and the seaward slopes of high mountains. Zone 3 is the

coldest of high-elevation and interior climates having minimum temperatures ranging from -24° F to 13° F and a growing season of about 160 days. Snow can fall in Zone 3 and the zone covers high elevations of the Palomar Mountains, east of Julian continuing south through the Cuyamaca and Laguna Mountains; and the Santa Rosa Mountains that extend south into the Anza Borrego State Park from Riverside County.

Zones 18 and 19 are interior climates with little influence from the Ocean. Zone 18 represents cold air basins above and below thermal belts of the interior valleys. Due to Zone 19 being favorably situated on slopes and hillsides where cold air drains off on winter nights to the cold air basins of Zone 18, winters are less severe than Zone 18. Zone 19 is prime for citrus, and most avocadoes and macadamia nuts can be grown here. Citrus can be grown in Zone 18, but frosts require the heating of orchards to reduce fruit loss. Over a 20-year period, winter lows in Zone 18 ranged from 10° to 28° F while in Zone 19, the lows ranged from 22° to 27° F.

Desert Areaclimate

The desert areaclimate begins at the line of high peaks in the Peninsular Range and extends east into the rain shadow created by the Peninsular Range. The desert areaclimate is dominated to a greater extent by continental air masses than the Interior Areaclimate, has high daytime summer temperatures with very low humidity, drying and occasional extremely winds; and slight, variable rainfall generally under 5 inches per year and often very unevenly distributed.

Zone 11 is limited to the northeastern portion of San Diego County below the mountainous Zone 3 areas and above the lower subtropical desert areas of Zone 13. Zone 11 is characterized by wide swings in temperature, both between summer and winter and between day and night. Winter lows of 0° to 11° F and high summer temperatures of 111° to 117° F have been recorded. Late spring frosts and desert winds are agricultural hazards of the climate. Zone 13 covers low elevation desert areas (considered subtropical) and is the most extensive of the County's desert Plantclimate Zones. These areas have mean daily maximum temperatures in the hottest month of 106° to 108° F. Winters are short with frosts to be expected from December 1 to February 15. The average low temperature is 37° F. These temperature extremes exclude some of the subtropicals grown in Zones 22 to 24; however numerous subtropicals with high heat requirements thrive in this climate such as dates, grapefruit, and beaumontia and thevetia (ornamentals).

Attachment C
Soil Candidate Criteria and Candidate Listing for Prime Farmland and Farmland of Statewide Importance in San Diego County

Prime Farmland Soil Criteria
Prime Farmland Soil Candidates
Farmland of Statewide Importance Soil Criteria
Farmland of Statewide Importance Soil Candidates

Prime Farmland Soil Criteria

WATER: The soils have xeric, ustic, or aridic (torric) moisture regimes in which the available water capacity is at least 4.0 inches (10 cm) per 40 to 60 inches (1.02 to 1.52 meters) of soil.

SOIL TEMPERATURE RANGE: The soils have a temperature regime that is frigid, mesic, thermic, or hyperthermic (pergelic and cryic regimes are excluded). These are soils that, at a depth of 20 inches (50.8 cm), have a mean annual temperature higher than 32° F (0° C). In addition, the mean summer temperature at this depth in soils with an O horizon is higher than 47° F (8° C); in soils that have no O horizon, the mean summer temperature is higher than 59° F (15° C).

ACID ALKALI BALANCE: The soils have a pH between 4.5 and 8.4 in all horizons within a depth of 40 inches (1.02 meters).

WATER TABLE: The soils have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivated crops common to the area to be grown.

SOIL SODIUM CONTENT: The soils can be managed so that, in all horizons within a depth of 40 inches (1.02 meters), during part of each year the conductivity of the saturation extract is less than 4 mmhos/cm and the exchangeable sodium percentage is less than 15.

FLOODING: Flooding of the soil (uncontrolled runoff from natural precipitation) during the growing season occurs infrequently, taking place less often than once every two years.

ERODIBILITY: The product of K (erodibility factor) multiplied by the percent of slope is less than 2.0.

PERMEABILITY: The soils have a permeability rate of at least 0.06 inch (0.15 cm) per hour in the upper 20 inches (50.8 cm) and the mean annual soil temperature at a depth of 20 inches (50.8 cm) is less than 59° F (15° C); the permeability rate is not a limiting factor if the mean annual soil temperature is 59° F (15° C) or higher.

ROCK FRAGMENT CONTENT: Less than 10 percent of the upper 6 inches (15.24 cm) in these soils consists of rock fragments coarser than 3 inches (7.62 cm).

ROOTING DEPTH: The soils have a minimum rooting depth of 40 inches (1.02 meters).

Prime Farmland Soil Candidates

THESE SOIL MAPPING UNITS MEET THE CRITERIA FOR PRIME FARMLAND AS OUTLINED IN THE U.S. DEPARTMENT OF AGRICULTURE'S LAND INVENTORY AND MONITORING (LIM) PROJECT FOR THE SAN DIEGO AREA SOIL SURVEY.

Symbol	Name
AtC	Altamont clay, 5 to 9 percent slopes
AwC	Auld clay, 5 to 9 percent slopes
BuB	Bull Trail sandy loam, 2 to 5 percent slopes
BuC	Bull Trail sandy loam, 5 to 9 percent slopes
CaB	Calpine coarse sandy loam, 2 to 5 percent slopes
CaC	Calpine coarse sandy loam, 5 to 9 percent slopes
ChA*	Chino fine sandy loam, 0 to 2 percent slopes
ChB*	Chino fine sandy loam, 2 to 5 percent slopes
CkA*	Chino silt loam, saline, 0 to 2 percent slopes
Co	Clayey alluvial land
CsB	Corralitos loamy sand, 0 to 5 percent slopes
CsC	Corralitos loamy sand, 5 to 9 percent slopes
EdC	Elder shaly fine sandy loam, 2 to 9 percent slopes
FaB	Fallbrook sandy loam, 2 to 5 percent slopes
FaC	Fallbrook sandy loam, 5 to 9 percent slopes
GoA*	Grangeville fine sandy loam, 0 to 2 percent slopes
GrA	Greenfield sandy loam, 0 to 2 percent slopes
GrB	Greenfield sandy loam, 2 to 5 percent slopes
GrC	Greenfield sandy loam, 5 to 9 percent slopes
HoC	Holland fine sandy loam, deep, 2 to 9 percent slopes
InA	Indio silt loam, 0 to 2 percent slopes
InB	Indio silt loam, 2 to 5 percent slopes
IsA	Indio silt loam, dark variant
Lu*	Loamy alluvial land
MlC	Marina loamy coarse sand, 2 to 9 percent slopes
MnA	Mecca coarse sandy loam, 0 to 2 percent slopes
MnB	Mecca coarse sandy loam, 2 to 5 percent slopes
MpA2	Mecca fine sandy loam, 0 to 2 percent slopes, eroded
RaA	Ramona sandy loam, 0 to 2 percent slopes
RaB	Ramona sandy loam, 2 to 5 percent slopes
RkA	Reiff fine sandy loam, 0 to 2 percent slopes
RkB	Reiff fine sandy loam, 2 to 5 percent slopes
SbA	Salinas clay loam, 0 to 2 percent slopes

SbC	Salinas clay loam, 2 to 9 percent slopes
ScA	Salinas clay, 0 to 2 percent slopes
ScB	Salinas clay, 2 to 5 percent slopes
VaA[#]	Visalia sandy loam, 0 to 2 percent slopes
VaB	Visalia sandy loam, 2 to 5 percent slopes
VaC	Visalia sandy loam, 5 to 9 percent slopes
VbB	Visalia gravelly sandy loam, 2 to 5 percent slopes
VbC	Visalia gravelly sandy loam, 5 to 9 percent slopes
WmB	Wyman loam, 2 to 5 percent slopes
207	Sorrento loam, 2 to 9 percent slopes
HcC	Hanford coarse sandy loam, 2 to 8 percent slopes

* Prime farmland if drained.
[#] Prime farmland if either protected from flooding or not frequently flooded during the growing season.

Farmland of Statewide Importance Soil Criteria

The soil candidate criteria for the FMMP Farmland of Statewide Importance designation are similar to the soil criteria for Prime Farmland but include minor shortcomings, such as greater slopes or less ability to store soil moisture. Soil candidates for Farmland of Statewide Importance do not have any restrictions regarding permeability or rooting depth. Soil candidates for the FMMP Farmland of Statewide Importance designation must meet all the following criteria:

WATER: The soils have xeric, ustic, or aridic (torric) moisture regimes in which the available water capacity is at least 3.5 inches (8.89 cm) within a depth of 60 inches (1.52 meters) of 16 soil; or within the root zone if it is less than 60 inches (1.52 meters) deep.

SOIL TEMPERATURE RANGE: The soils have a temperature regime that is frigid, mesic, thermic, or hyperthermic (pergelic and cryic regimes are excluded). These are soils that, at a depth of 20 inches (50.8 cm), have a mean annual temperature higher than 32° F (0° C). In addition, the mean summer temperature at this depth in soils with an O horizon is higher than 47° F (8° C); in soils that have no O horizon, the mean summer temperature is higher than 59° F (15° C).

ACID ALKALI BALANCE: The soils have a pH between 4.5 and 9.0 in all horizons within a depth of 40 inches (1.02 meters) or in the root zone if the root zone is less than 40 inches (1.02 meters) deep.

WATER TABLE: The soils have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivated crops common to the area to be grown.

SOIL SODIUM CONTENT: The soils can be managed so that, in all horizons within a depth of 40 inches (1.02 meters), or in the root zone if the root zone is less than 40 inches (1.02 meters) deep, during part of each year the conductivity of the saturation

extract is less than 16 mmhos/cm and the exchangeable sodium percentage is less than 25.

FLOODING: Flooding of the soil (uncontrolled runoff from natural precipitation) during the growing season occurs infrequently, taking place less often than once every two years

ERODIBILITY: The product of K (erodibility factor) multiplied by the percent of slope is less than 3.0.

ROCK FRAGMENT CONTENT
Less than 10 percent of the upper 6 inches (15.24 cm) in these soils consists of rock fragments coarser than 3 inches (7.62 cm).

Farmland of Statewide Importance Soil Candidates

THESE SOIL MAPPING UNITS MEET THE CRITERIA FOR FARMLAND OF STATEWIDE IMPORTANCE AS OUTLINED IN THE U.S. DEPARTMENT OF AGRICULTURE'S LAND INVENTORY AND MONITORING (LIM) PROJECT FOR THE SAN DIEGO AREA SOIL SURVEY.

Symbol	Name
AtD	Altamont clay, 9 to 15 percent slopes
AtD2	Altamont clay, 9 to 15 percent slopes, eroded
AuC	Anderson very gravelly sandy loam, 5 to 9 percent slopes
AvC	Arlington coarse sandy loam, 2 to 9 percent slopes
BlC	Bonsall sandy loam, 2 to 9 percent slopes
BlC2	Bonsall sandy loam, 2 to 9 percent slopes, eroded
BlD2	Bonsall sandy loam, 9 to 15 percent slopes, eroded
BmC	Bonsall sandy loam, thick surface, 2 to 9 percent slopes
BnB	Bonsall-Fallbrook sandy loams, 2 to 5 percent slopes
BoC	Boomer loam, 2 to 9 percent slopes
BsC	Bosanko clay, 2 to 9 percent slopes
CaC2	Calpine coarse sandy loam, 5 to 9 percent slopes, eroded
CaD2	Calpine coarse sandy loam, 9 to 15 percent slopes, eroded
CbB	Carlsbad gravelly loamy sand, 2 to 5 percent slopes
CbC	Carlsbad gravelly loamy sand, 5 to 9 percent slopes
CbD	Carlsbad gravelly loamy sand, 9 to 15 percent slopes
CfB	Chesterton fine sandy loam, 2 to 5 percent slopes
CfC	Chesterton fine sandy loam, 5 to 9 percent slopes
CfD2	Chesterton fine sandy loam, 9 to 15 percent slopes, eroded
CsD	Corralitos loamy sand, 9 to 15 percent slopes
DaC	Diablo clay, 2 to 9 percent slopes
DaD	Diablo clay, 9 to 15 percent slopes
EsC	Escondido very fine sandy loam, 5 to 9 percent slopes

EvC	Escondido very fine sandy loam, deep, 5 to 9 percent slopes
FaC2	Fallbrook sandy loam, 5 to 9 percent slopes, eroded
GrD	Greenfield sandy loam, 9 to 15 percent slopes
HmD	Holland fine sandy loam, 5 to 15 percent slopes
HrC	Huerhuero loam, 2 to 9 percent slopes
HrC2	Huerhuero loam, 5 to 9 percent slopes, eroded
IoA	Indio silt loam, saline, 0 to 2 percent slopes
KcC	Kitchen Creek loamy coarse sand, 5 to 9 percent slopes
KcD2	Kitchen Creek loamy coarse sand, 9 to 15 percent slopes, eroded
LeC	Las Flores loamy fine sand, 2 to 9 percent slopes
LeC2	Las Flores loamy fine sand, 5 to 9 percent slopes, eroded
LeD	Las Flores loamy fine sand, 9 to 15 percent slopes
LeD2	Las Flores loamy fine sand, 9 to 15 percent slopes, eroded
LpB	Las Posas fine sandy loam, 2 to 5 percent slopes
LpC	Las Posas fine sandy loam, 5 to 9 percent slopes
LpC2	Las Posas fine sandy loam, 5 to 9 percent slopes, eroded
MoA	Mecca sandy loam, saline, 0 to 2 percent slopes
MvA	Mottsville loamy coarse sand, 0 to 2 percent slopes
MvC	Mottsville loamy coarse sand, 2 to 9 percent slopes
MvD	Mottsville loamy coarse sand, 9 to 15 percent slopes
PeA	Placentia sandy loam, 0 to 2 percent slopes
PeC	Placentia sandy loam, 2 to 9 percent slopes
PeC2	Placentia sandy loam, 5 to 9 percent slopes, eroded
PfA	Placentia sandy loam, thick surface, 0 to 2 percent slopes
PfC	Placentia sandy loam, thick surface, 2 to 9 percent slopes
RaC	Ramona sandy loam, 5 to 9 percent slopes
RaC2	Ramona sandy loam, 5 to 9 percent slopes, eroded
RkC	Reiff fine sandy loam, 5 to 9 percent slopes
RoA	Rositas fine sand, 0 to 2 percent slopes
RrC	Rositas fine sand, hummocky, 5 to 9 percent slopes
RsA	Rositas loamy coarse sand, 0 to 2 percent slopes
RsC	Rositas loamy coarse sand, 2 to 9 percent slopes
RsD	Rositas loamy coarse sand, 9 to 15 percent slopes
SuA	Stockpen gravelly clay loam, 0 to 2 percent slopes
SuB	Stockpen gravelly clay loam, 2 to 5 percent slopes
TuB	Tujunga sand, 0 to 5 percent slopes
VsC	Vista coarse sandy loam, 5 to 9 percent slopes
WmC	Wyman loam, 5 to 9 percent slopes
136	Capistrano sandy loam, 9 to 15 percent slopes
FfC2	Fallbrook fine sandy loam, 2 to 8 percent slopes, eroded
HcD2	Hanford coarse sandy loam, 8 to 15 percent slopes, eroded
MmD2	Monserate sandy loam, 8 to 15 percent slopes, eroded

Also available online at:
http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/soils/SANDIEGO_ssurgo.pdf

Attachment D
Agricultural Commissioner's Memo

KATHLEEN A. THUNER
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS
AND MEASURES

County of San Diego

DEPARTMENT OF AGRICULTURE, WEIGHTS & MEASURES
5555 Overland Ave., Bldg. 3, San Diego, CA 92123-1292

AGRICULTURE
(619) 694-2739
FAX
(619) 565-7046
WEIGHTS & MEASURES
(619) 694-2778

June 2, 1997

TO: David Nagel
Department of Planning and Land Use

FROM: Kathleen A. Thuner

COMMERCIAL VIABILITY OF TWO ACRE LOTS—TM 5091 (BARRETT/HIBBARD)

Recently you contacted this office concerning the viability of two acre parcels for agriculture in the (19) Intensive Agriculture land use designation. Specifically, you requested information pertaining to the allowance for two acre parcel sizes when "the land is planted, and has been planted, for at least the previous one-year period, in one or more commercial crops that remain commercially viable on two acre lots."

The overall value of citrus per acre in San Diego County in 1996 was $5,078. For purposes of comparison, the dollar values per acre in San Diego County range from a low of about $5 (range) to a high of $588,310 (indoor decoratives).

According to our pesticide operator identification database, citrus farms in San Diego County that have registered to use pesticides are as small as 1/10th of an acre. Our records show that there are currently 671 citrus farms of two or fewer acres.

It is also important to note that "commercial viability" does not necessarily imply the ability to support oneself from income solely derived from the farm. Nationwide and in San Diego County as well, farmers traditionally have additional income from other sources. In San Diego County, only 36% of farmers list farming as their primary occupation. In California that figure stands at 52%; nationwide it is 54%.

San Diego County's 1.1 billion dollar agricultural industry is composed of many small farms—4,298 of them are nine or fewer acres. Recent trends indicate that pattern will continue. The average farm size in San Diego County has been falling and is currently only 21% of the average farm size statewide. The cost of land in the county makes it prohibitive for many new farmers to begin an operation on a large parcel, so the ability to farm small parcels is crucial to the success of future agriculture in San Diego County.

I hope this information is helpful. If you have additional questions, please contact Jennifer Tierney of my staff at (S50) 694-3122.

Sincerely,

KATHLEEN A. THUNER
Agricultural Commissioner/
Sealer of Weights and Measures

Attachment E
Federal and State Regulations and Agricultural Conservation Programs

Federal

National Environmental Policy Act as amended [Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, § 4(b), Sept. 13, 1982 http://ceq.eh.doe.gov/nepa/regs/nepa/nepaeqia.htm.]
Federal agencies that implement the National Environmental Policy Act (NEPA) are required to consider conversion of farmland and loss of prime agricultural soils when assessing environmental impacts of proposed federal projects.

Farmland Protection Policy Act [Pub. L. 97-98, US Code, Title 7, Chapter 73, §4201 *et seq*. http://www4.law.cornell.edu/uscode/7/ch73.html; and http://water.usgs.gov/eap/env_guide/farmland.html.]
Congress initiated the Farmland Protection Policy Act (FPPA) to address the substantial decrease in the amount of open farmland. As a part of the FPPA, Federal programs that contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses are to be minimized. Additionally, Federal programs shall be administered in a manner that, as practicable, will be compatible with state and local government and private programs and policies to protect farmland.

Land Evaluation and Site Assessment System [http://www.info.usda.gov/nrcs/fpcp/lesa.htm]
The USDA, Natural Resources Conservation Service (NRCS), developed a LESA system to assist state and local officials to make sound decisions about land use. Combined with forest measures and rangeland parameters, LESA can provide a technical framework to numerically rank land parcels through local resource evaluation.

State

Open Space Subvention Act [Government Code, Title 2, Division 4, Part 1, Chapter 3, §16140-16154http://www.leginfo.ca.gov; and http://www.consrv.ca.gov/dlrp/site_index.htm]
The Open Space Subvention Act allows local governments to receive an annual subvention of forgone property tax revenues from the state due to a reduction in property taxes on open space lands and often linked to the Williamson Act.

California Farmland Conservancy Program [California Code of Regulations, Title 14, Division 2, Chapter 6, and Public Resources Code §10200 to 10277 http://www.leginfo.ca.gov]
The California Farmland Conservancy Program (CFCP) is a voluntary program that seeks to encourage the long-term, private stewardship of agricultural lands through the use of agricultural conservation easements. The CFCP, formerly known as the Agricultural Land Stewardship Program, was created in 1996, and provides grant funding for projects which use and support agricultural conservation easements for protection of agricultural lands.

Land Evaluation Site Assessment Model [http://www.consrv.ca.gov/dlrp/LESA/LESA.htm]
LESA is a point-based approach for rating the relative importance of agricultural land resources based upon specific measurable features. The California LESA Model was

developed to provide lead agencies with an optional methodology to ensure that potentially significant conversions of agricultural land are quantitatively and consistently considered in the environmental review process (Public Resources Code Section 21095), including CEQA reviews. The California Agricultural LESA Model evaluates soil resource quality, project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, the factors are rated, weighted, and combined, resulting in a single numeric score. The project score becomes the basis for making a determination of a project's potential significance. The California Department of Conservation encourages local agencies to develop local agricultural models to account for the variability of local agricultural resources and conditions.

Attachment F
Defining a Project's Zone of Influence (ZOI)

Consideration of the surrounding agricultural land uses and protected resource lands is designed to provide a measurement of the level of agricultural land uses and protected lands in close proximity to the project site. The definition and methodology for defining the ZOI is the result of work conducted during the development of the California LESA Model, through an iterative review and sampling process that determined this distance would generally be a representative sample of surrounding land use. In a simple example, a single one quarter mile square project (160 acres) would have a ZOI that is a minimum of eight times greater (1280 acres) than that of the parcel itself. The direction below for defining the ZOI requires reference to the ZOI figure found on the following page.

Step 1

Locate the proposed project on an appropriate map. Outline the boundary of the proposed project site.

Step 2

Determine the smallest rectangle that will completely contain the project site (see next page, Rectangle A).

Step 3

Create a second rectangle (see next page, Rectangle B) that extends 0.25 mile (1320 feet) beyond Rectangle A on all sides.

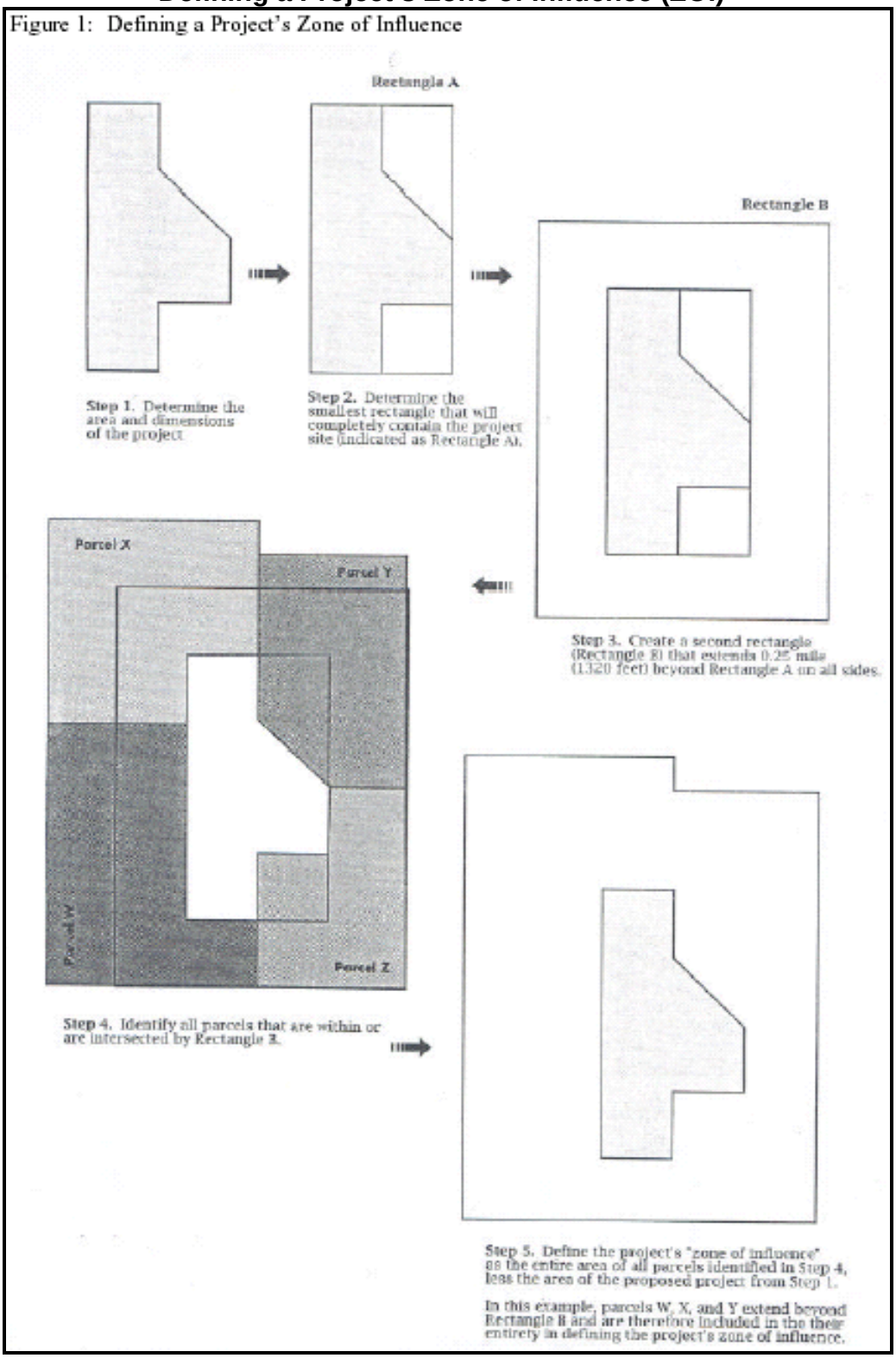
Step 4

Identify all parcels that are within *or* are intersected by Rectangle B.

Step 5

Define the project site's ZOI as the entire area of all parcels identified in Step 4, less the area of the proposed project from Step 1. (In the illustration provided in on the next page, Parcels W, X, and Y extend beyond Rectangle B and are therefore included in their entirety in defining the project site's ZOI.)

Defining a Project's Zone of Influence (ZOI)[22]



California Department of Conservation, September 1997

[22] This figure illustrates the approach to measuring a ZOI as defined in the California Agricultural Land Evaluation and Site Assessment (LESA) Instruction Manual.

Attachment G
SUMMARY OF MODIFICATIONS AND REVISIONS

The Guidelines for Determining Significance for Agricultural Resources were originally approved on March 19, 2007. The following is a summary of revisions made since original document approval.

First Revision – June 23, 2015

Revisions to the Guidelines for Determining Significance

a) Changed references from Department of Planning and Land Use to Planning & Development Services throughout the document to reflect the department's name change.
b) Added the Department of Agriculture, Weights & Measures as a coordinating department in the consideration of the approval of this document.
c) Added PACE and PDS to the list of acronyms.
d) Updated data and statistics in Section 1.2.
e) Added the PACE Program and PACE Program Mitigation Credits discussions under Section 2.2.
f) Updated the General Plan policies referenced in Section 5.1.1 and clarified the language within this section.
g) Added reference regarding the PACE Program in Section 5.1.2.
h) Updated the website address listed in Attachment C.
i) Added Attachment G summarizing the modifications and revisions to the Guidelines for Determining Significance.

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